PEER REVIEW HISTORY

BMJ Paediatrics Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

| TITLE (PROVISIONAL) | Trends in investigations of abuse or neglect referred by hospital personnel in Ontario |
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| AUTHORS | Fallon, Barbara; Filippelli, Joanne; Joh-Carnella, Nicolette; Miller, Steven: Denburg, Avram |

VERSION 1 - REVIEW

| REVIEWER | Reviewer name: Ruth Gilbert Institution and Country: UCL Great Ormond Street Institute of Child Health Competing interests: NOne declared |
|-----------------|---|
| REVIEW RETURNED | 19-Oct-2018 |

GENERAL COMMENTS The series of OIS surveys, based on multistage samples of families referred and investigated by child welfare services, offer an excellent opportunity to evaluate the changing reasons and sources of referrals. The methods appear to be consistent and relatively robust at each sweep. 1. This is a descriptive report of changes over time in rates of reporting overall and from hospitals. This is informative but, with a bit more analysis, the report could provide more detail relevant to services and policy. 2. The study confines reports to hospital referrals, however, a key value of the study could be to document shifts in referral sources by age and other characteristics. For example, as recognition of child neglect and risk of neglect increases, , one might expect to see more reports from community health services such as maternity, primary care or home visiting, before children present to hospital. Yet the 'professionals' group is not subdivided into health or other professionals. Could the results tables (eg T3) be extended to do this? 3. Table 3 shows a near 4 fold increase in reporting by other professionals, why is this? 4. Table 4 shows large changes in investigations for children <1y. It is important for policy and services to know whether this is explained by prenatal or perinatal referrals from hospitals (accepting that some maternity referrals may come from community services (points 2 and 3). 5. Increases in adolescents may be through another mechanism, potentially asylum seekers of exploitation. However, the categories used for type of maltreatment do not include these forms of child maltreatment. More discussion of this group is warranted. 6. Table 5 reports actions based on investigations. This is interesting but is confined to hospital referrals. This is hard to interpret without presenting overall patterns over time and according to the different referral sources and ages. 7. A definition of child maltreatment as operationalised by welfare investigation is needed.

| 8. More clarity in the introduction and discussion regarding how a descriptive study over 20 years could inform policy and practice is needed. The justification for focussing just on hospital referrals, without comparison of referrals from other sources, is not clear. 9. Could the authors comment on when results will be available for 2018? |
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| 10. Implications: Some discussion on extensions of existing or future sweeps of the survey could be helpful, based on the limitations. For example, survey responses could be linked to hospital and child welfare longitudinal administrative data (past and future) to evaluate patterns of health care before and after children are referred. |
| 11. Page 12. The statements in what this study adds should focus on what is added from the results. The first 2 statements relate to methods. |

| REVIEWER | Reviewer name: Eirini Koutoumanou |
|-----------------|-----------------------------------|
| | Institution and Country: UCL |
| | Competing interests: None |
| REVIEW RETURNED | 24-Oct-2018 |

This is a clear and well written report on the changes of numbers of hospital referrals in Ontario. The authors have been careful not to exaggerate their results and make over-statements not justified via their data. Their discussion section is mainly a collection of statements already known in the field about the reporting of maltreatment and its general importance in the population; not necessarily driven by the available/reported data though. They conclude by labelling this report as foundational for future

They conclude by labelling this report as foundational for future research, which I can't argue against but I'd suggest that the editor team reviews this paper's overall clinical significance and relevance to the journal's objectives.

Below are few comments on some points that I believe require clarification.

- Could the authors please clarify if the p-values presented on tables 2 onwards, compare each wave with the previous one, e.g. OIS 1998 vs OIS 1993?
- How come confidence intervals are presented only in table 2?
- I was surprised to see that even though SPSS Statistics v24 was used for analysis, a separate programme, WesVar 5.1 was used to produce tests of significance. I'd be interested to hear the reason for that from the authors.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer name: Ruth Gilbert

Institution and Country: UCL Great Ormond Street Institute of Child Health

The series of OIS surveys, based on multistage samples of families referred and investigated by child welfare services, offer an excellent opportunity to evaluate the changing reasons and sources of referrals. The methods appear to be consistent and relatively robust at each sweep.

COMMENTS/ SUGGESTIONS RESPONSE

>This is a descriptive report of changes over time in rates of reporting overall and from hospitals. This is informative but, with a bit more analysis, the report could provide more detail relevant to services and policy.

Response: Thank you for bringing our attention to this point.

> The study confines reports to hospital referrals, however, a key value of the study could be to document shifts in referral sources by age and other characteristics. For example, as recognition of child neglect and risk of neglect increases, one might expect to see more reports from community health services such as maternity, primary care or home visiting, before children present to hospital. Yet the 'professionals' group is not subdivided into health or other professionals. Could the results tables (eg T3) be extended to do this?

Response:Thank you for this suggestion. For our analyses, we were interested in looking specifically at hospital referrals. Looking at other health professionals is an interesting research question for future studies. We identified the dearth in the literature specifically around hospitals and child welfare services and approached the literature with this research question. We can write a subsequent paper with this excellent question.

>Table 3 shows a near 4 fold increase in reporting by other professionals, why is this?

Response:Thank you for asking this. As mentioned in the discussion, the overall increase in rates of reported and investigated child maltreatment was due in part to lowering of thresholds for risk of harm and intervention (p.12). We also added this sentence: 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 shows large changes in investigations for children <1y. It is important for policy and services to know whether this is explained by prenatal or perinatal referrals from hospitals (accepting that some maternity referrals may come from community services (points 2 and 3).

Response: This is an interesting point and research question. Unfortunately, our data collected in this study cannot address this distinction. We have added this as a limitation (p.14).

>Increases in adolescents may be through another mechanism, potentially asylum seekers of exploitation. However, the categories used for type of maltreatment do not include these forms of child maltreatment. More discussion of this group is warranted.

Response:Thank you for this suggestion. Additional analyses were run looking specifically at maltreatment type by age category. Adolescents (aged 12-15), similar to other age groups, were most likely to be referred for risk investigations (30% of hospital referred adolescents to child welfare). Sexual abuse investigations (including exploitation) represented just 13% of these investigations. As this is not substantially different from other age groups, this additional information was not included in the manuscript.

>Table 5 reports actions based on investigations. This is interesting but is confined to hospital referrals. This is hard to interpret without presenting overall patterns over time and according to the different referral sources and ages.

Response:Thank you for this suggestion. While it would be interesting to look at overall patterns over time and according to different referral sources and ages, our analyses focused specifically on hospital referrals.

There is considerable variation in the nature of the referral depending on the referral source. Due to this variation, it is difficult to make direct comparisons between hospitals and all other referrals sources as an aggregate.

> A definition of child maltreatment as operationalised by welfare investigation is needed.

Response:Thank you for this suggestion. The first sentence of the methods was changed to read: The OIS is a cyclical provincial study that occurs every five years and measures the incidence of reported and investigated child maltreatment.

More clarity in the introduction and discussion regarding how a descriptive study over 20 years could inform policy and practice is needed. The justification for focussing just on hospital referrals, without comparison of referrals from other sources, is not clear.

Response:Thank you for this suggestion. As a group of authors, we had a particular interest in hospital referrals, as professionals from hospitals and universities. As stated in the introduction (p.3), 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.

>Could the authors comment on when results will be available for 2018?

Response:Thank you for this question. This sentence was added to the methods section: "To date, there have been five cycles of the OIS, and results from the sixth cycle (OIS-2018) will be available in 2020."

Implications: Some discussion on extensions of existing or future sweeps of the survey could be helpful, based on the limitations. For example, survey responses could be linked to hospital and child welfare longitudinal administrative data (past and future) to evaluate patterns of health care before and after children are referred.

Response:This is an excellent idea. Unfortunately, presently there is no way to link hospital data in Ontario. These statements were added to the discussion to address this point: 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.

Page 12. The statements in what this study adds should focus on what is added from the results. The first 2 statements relate to methods.

Response:Thank you for pointing this out. This has been modified so that the additions are related to results specifically.

Reviewer: 2

Reviewer name: Eirini Koutoumanou

Institution and Country: UCL

This is a clear and well written report on the changes of numbers of hospital referrals in Ontario. The authors have been careful not to exaggerate their results and make over-statements not justified via their data. Their discussion section is mainly a collection of statements already known in the field about the reporting of maltreatment and its general importance in the population; not necessarily driven by the available/reported data though.

They conclude by labelling this report as foundational for future research, which I can't argue against but I'd suggest that the editor team reviews this paper's overall clinical significance and relevance to the journal's objectives.

Below are few comments on some points that I believe require clarification.

COMMENTS/ SUGGESTIONS RESPONSE

>Could the authors please clarify if the p-values presented on tables 2 onwards, compare each wave with the previous one, e.g. OIS 1998 vs OIS 1993?

Please see the final two sentences in the methods section: "WesVar 5.1 software was used to Response: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."

>How come confidence intervals are presented only in table 2?

Response:Cls were presented only for the main table for clarity and readability.

> I was surprised to see that even though SPSS Statistics v24 was used for analysis, a separate programme, WesVar 5.1 was used to produce tests of significance. I'd be interested to hear the reason for that from the authors. WesVar 5.1 was used to produce tests of significance because of the ability to use replicate weights.

Response: This method of weighting is not possible in SPSS.