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Keeping the child in mind: Can we improve the quality of child protection medical assessments in a culturally diverse, metropolitan setting?

Journal:	<i>BMJ Paediatrics Open</i>
Manuscript ID	bmjpo-2017-000125
Article Type:	Original article
Date Submitted by the Author:	31-May-2017
Complete List of Authors:	Hotton, Paul; South Western Sydney Local Health District, Department of Community Paediatrics Raman, Shanti; South Western Sydney Local Health District, Community Paediatrics; University of New South Wales - Randwick Campus, School of Women's & Children's Health
Keywords:	Child Abuse, Forensic Medicine, Children's Rights, Health services research, Accident & Emergency

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Keeping the child in mind: Can we improve the quality of child protection medical assessments in a culturally diverse, metropolitan setting?

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bmjpo: first published as 10.1136/bmjpo-2017-000125 on 30 November 2017. Downloaded from <http://bmjpaedsopen.bmj.com/> on April 9, 2024 by guest. Protected by copyright.

Abstract

Objective: Child maltreatment (CM) is a major public health problem globally. While there is evidence for medical examination in the assessment of CM, little is known about the quality of clinical assessments for CM. South Western Sydney (SWS) has a large metropolitan population with many vulnerable sub-groups. We aimed to describe acute presentations of CM in SWS over a three year period—with a focus on the quality of the clinical assessments. We wanted to determine if the cases assessed fulfilled established minimum standards for clinical assessment of CM, and if the assessments were performed in a child-friendly manner.

Design: We gathered data from the acute child protection database on all children <16 years referred for assessment between 2013 and 2015. We performed simple descriptive analysis on the data. We measured the assessment, report writing and follow-up against criteria for minimum standards for CM assessments, and identified if assessments were child-friendly from available clinical information.

Results: There were 304 children referred; 279 seen for acute assessment; most (73%) were for sexual abuse (SA), 75 (27%) were for physical abuse/neglect (PAN). Most assessments were multi-disciplinary and used protocols; half were not followed up; a-third were performed after-hours, a third had no carer present during assessments.

Conclusions: We identified strengths and weaknesses in current CM assessments in our service. Locally relevant standards for CM assessments are achievable in the acute setting, more challenging is addressing appropriate medical and psychosocial follow-up for these children. While we have established baseline domains for measuring a child-friendly approach to CM assessments, more should be done to ensure these vulnerable children are assessed in a timely, child-friendly manner, with appropriate follow-up.

Keywords: Child abuse, Medical assessments, Child-friendly, Quality healthcare, health services

What is known about the subject

- Children who have been maltreated have known health and developmental concerns.
- A comprehensive medical assessment is an essential component of a multi-agency child maltreatment assessment.
- There is wide variation in the quality of and access to child maltreatment clinical assessments

What this study adds

- Locally relevant standards for clinical assessment of child maltreatment in the acute setting can be achieved if clinicians are well supported.
- Achieving appropriate medical and psycho-social follow-up of children following acute child maltreatment assessments is challenging.
- We have established simple baseline domains for the measurement of child-friendly child maltreatment assessments; more can be done to uphold children’s rights in acute settings.

Introduction

Since Henry Kemp drew global attention to physical abuse of children with the ‘battered child syndrome’, there has been an expansion in the literature within the field of child maltreatment (CM).¹⁻³ Violence against children in all its various manifestations is now acknowledged as a global public health and social welfare problem,⁴ with known significant short, medium and long term health consequences.⁵⁻⁹ Even in 1962, the role of medical professionals in their “duty and responsibility to the child to require a full evaluation of the problem”, was identified.¹ Over recent decades, there has been an increased understanding of the health needs of maltreated children,^{10, 11} and expansion in clinical and forensic assessment guidelines.¹²⁻¹⁵

A comprehensive medical assessment is an acknowledged essential component of a multi-agency investigation of CM.¹² There is now good evidence for performing comprehensive medical assessments for acute presentations of CM, not just for forensic purposes but because of the high yield of health concerns identified.¹⁶⁻¹⁸ Despite the plethora of guidelines available, little is known about the quality dimensions of these assessments. While there have been many attempts made to improve the quality of detection of CM in EDs and frontline services,^{19, 20} there has been little reported on improving the quality of medical assessments for acute CM presentations. Rose et al reported from their New Zealand study of child sexual assault, wide regional variation in the proportion of children and adolescents receiving a medical assessment, and variation in the quality of the service structure.¹⁷ Some work has gone into assessing quality in hospital services with a strong focus on children’s rights,²¹ but little is known about how child-centred or children’s rights promoting child protection medical assessments are.

South Western Sydney (SWS) Local Health District is the largest, most populous region in Australia, with a substantial child and youth population.²² It is a rapidly growing metropolitan population in the state of New South Wales; with a culturally and linguistically diverse population and many sub groups who are socially and economically at risk within its boundaries.²³ Raman et al,²⁴ previously identified and published locally relevant minimum standards for clinical assessment of child physical abuse and neglect (PAN) from a quality audit conducted in SWS. The authors highlighted wide variation in clinical practice in acute assessment and follow-up of children presenting at their most vulnerable to frontline clinical

services. Following that audit, the Community Paediatrics team in SWS made improvements to the clinical assessment processes. A model of collaborative multi-disciplinary clinical assessments for acute CM was established in one hospital (a non-tertiary pediatric hospital) setting; the partnership included community paediatricians, social workers, sexual assault physicians and hospital-based paediatricians.

Our aims were to describe the acute presentations of CM to this collaborative clinical service over a three year period. We wanted to determine if the cases assessed fulfilled previously established minimum standards for clinical assessment of CM within our service to see if service improvements had taken place.²⁴ We also wanted to see if the assessments were conducted in a child-friendly manner, within the constraints of an acute clinical setting. The results of this audit would further feed back into clinical service improvements in SWS, thereby contributing to and sustaining the quality improvement process.²⁵

Methods

As part of ongoing quality improvement initiatives in child protection, we audited acute presentations of CM to the unique collaborative clinical service in SWS, between the years 2013 to 2015. We collated data gathered from the acute child protection databases for all referrals for acute assessments to one hospital service in SWS of children and youth (<16 years old) between January 1st 2013 to 31 December 2015; including PAN and sexual assault (SA). This data was derived from two databases; one established by Community Paediatricians (CP) and the other from SA Services. Those children that appeared in both databases for the same assessment were categorized as a joint assessment conducted collaboratively by CP and SA physicians.

We reviewed all the clinical reports, clinical notes and follow up plans of children seen for CM assessments. Demographics, referral details, forensic, clinical and social outcomes were recorded from the available data. We used the conclusion of the medical or forensic notes and reports to classify the findings of the medical examination. The health needs identified in the reports were classified as medical, developmental/learning, and behavioral/mental health or a combination of two or all areas. The referring services were contacted to find out what happened to the children following their acute assessments. The assessments were then

reviewed to see whether certain minimum standards were achieved, taken from the previously established criteria:²⁴

- *All children presenting with suspected significant CM or referred by Community Services are assessed by a pediatric trained doctor, social worker, ± nurse as appropriate.*
- *All clinical assessments to follow clinical protocol*
- *Assessments to be discussed with most senior Consultant*
- *If child protection report is to be generated, it needs to be counter-signed by Consultant*
- *Protocols and report to be filed in the medical record*
- *Paediatric and psychosocial follow-up to be available to all children identified with abuse and neglect, across the region*

The medical records of the child, both hospital and sexual assault records were reviewed to see if medical and psychosocial follow up had occurred or not. If the follow up had not occurred the notes were reviewed to see if an appointment had been offered, yet the child failed to attend. The reports and CM assessments were reviewed to assess how child friendly they were. The indicators we were able to use included length of time to assessment, whether assessments were conducted within hours (Monday to Friday; 8am to 5pm) or after-hours, and whether there was the presence of a carer or support person with the child during assessment.

Relevant data extracted from the databases were entered into an Excel spreadsheet and simple descriptive analysis of the data was carried out using IBM SPSS Statistics for Windows, V23. Chi square tests and two-sample t tests were used to determine difference in proportions and difference in means.

Ethics approval was obtained via the lead Human Research Ethics Committee at Liverpool Hospital.

Results

Over the 3 year period (2013-2015), 304 cases were referred for an acute CM assessment, of which 25 (8%) were phone consultations. There were 279 cases seen for an acute assessment, 204 cases (73%) were seen for SA and 75 cases (27%) were for PAN assessments. Of the 279 cases, 15 cases (5%) seen were siblings of an index child and one child was seen for neglect. A detailed description of the demographics, referral and assessment findings of the children have been presented before.²⁶ Mean age of all types of assessments was 8.1 years; mean age of children presenting for SA assessments was 9.3 years, for PAN was 4.8 years (highly significant, two-sample t test t= 7.48, p<0.0001). The majority of the children seen for CM assessment were identified as Anglo –Australian (27%) with high numbers of Aboriginal and Pacific Islander children. Ethnicity was not documented in 37% percent of SA assessments carried out by the SA doctors. Police and/or child protection agencies made 82% of the referrals for acute assessments. A third of the SA assessments were joint (CP/SA) assessments. A third of all assessments were for forensic purposes.

Other health concerns were identified in 151 (54%) of the 279 children examined; learning difficulties were identified in 28 children (19%); 21 children (14%) had unmet mental health concerns. All three health concerns were seen in 25 children (17%). For SA assessments, joint assessments were better at identifying health concerns for children than those assessments carried out by SA physicians solely ($\chi^2 = 72.33, p<0.001$).

Table 1 shows the medical follow up of unmet health concerns; the majority (94%) of children with medical concerns were referred for medical follow up with 70% of them being seen. Seven children with unknown follow up were all placed in out-of-home-care (OOHC). Eight (22%) of the 37 children that failed to attend follow up were placed in OOHC and 21 (57%) of them went home with their family but with ongoing statutory child protection agency involvement.

Insert table 1 here

Table 2 reports on various aspects of the clinical assessments judged against the predetermined criteria. Standards that were achieved for most assessments were that they were multi-disciplinary, used protocol and had reports generated. SA reports that were not generated were due to child refusing medical examination and/or the case determined to be not consistent with abuse. All reports that were generated were countersigned and placed into

the medical records for that child. Both medical and psychosocial follow up was less successful. Of the 53 children not offered a follow up medical assessment after their CM assessment, 30 (57%) had examinations that were not concerning or consistent with abuse and had no other unmet health needs identified.

Insert table 2 here

Table 3 examines measureable aspects of the CM assessments that were child-friendly. After-hours assessments were more likely to be for SA ($\chi^2 = 14.71, p < 0.001$), with half the SA assessments being conducted after hours. This was mainly for forensic need with 54 (78%) of 69 after hours SA assessments completed for a forensic purpose. Three (38%) of the eight PAN assessments conducted after hours were for forensic purposes. Over half of the children presenting for PAN assessments were unaccompanied by a carer/guardian, there was a significant difference compared to SA assessments ($\chi^2 = 19.76, p < 0.001$).

Insert table 3 here

Discussion

We believe that this is the first attempt to appraise the quality dimensions of child protection medical assessments in a district level, non-tertiary paediatric service. While there are established guidelines for peer review for paediatricians working clinically in child protection,²⁷ improving the overall quality of multi-disciplinary clinical assessments in child protection has not been reported. Our evaluation found that the acute CM assessments undertaken in our service, fulfilled many of the previously identified locally relevant standards established for quality, but fell short in following children up from a health and wellbeing perspective. Importantly we attempted to establish some baseline criteria for assessing how child-friendly this clinical service was. Reading et al,²⁸ argued strenuously for incorporating a children's rights view to widen the perspective on child maltreatment, thereby combining public-health and protective responses to CM. Certainly more can and should be done in this space.

We have already reported on the age, gender and ethnicity differentials in our clinic population.²⁶ Almost 40% of SA assessments undertaken by SA physicians did not have ethnicity documentation. We feel strongly that ethnicity and/or cultural identity documentation is an essential aspect of the quality of the paediatric health record. Over half the children assessed for CM, had other health concerns identified, in keeping with other studies.^{16, 29} In our service, joint assessments, i.e. those involving paediatricians and forensic physicians were more likely to identify other CM concerns in our study; suggesting that multidisciplinary collaborative assessments involving paediatricians, social workers and forensic physicians were better at identifying co-existing health concerns, as has been shown elsewhere.³⁰ It is likely that there were more unmet health and developmental concerns in those children assessed for SA. The majority of children that had an unmet health concern identified had medical follow up initiated as a result of the CM assessment which is similar to other studies;^{16, 18} and findings from Thomas's study²⁹ showed over half of the unmet health needs identified at CM assessments were met in follow-up.

Minimum standards that we had previously identified for clinical CM assessments were mostly achieved in the acute setting; a pleasing result suggesting that many recommendations for CM assessments that had been put in place following the Raman et al 2014 study²⁴ were implemented and working. Clinical assessments for CM in our service were found to be comprehensive, multi-disciplinary, protocol driven and had senior consultant support. What

remains a concern is the low numbers of both medical and psychosocial follow-up. However, follow-up of unmet health concerns was 70% and just under 60% of assessments that were not offered follow-up, had no reason for follow-up. Follow-up remains an important part of CM assessments as there is a high risk of recurrence of maltreatment,^{31, 32} and there are known long term health and developmental consequences of CM.^{5, 7, 8,33}

The majority of the assessments occurred within the recommended 24 - 72 hours, at an average of one and a half days. Joint assessments took longer to arrange; mostly due to the fact that these assessments were for historical sexual abuse. Over half the SA assessments were conducted after-hours; this was dictated by the need for a forensic examination including the collection of forensic samples. Getting forensic DNA may improve chances of substantiating the allegation of SA and lead to improvements in the overall criminal justice outcomes. We identified that just under a quarter of SA assessments and 62% of PAN assessments that occurred after hours could have been deferred to the following morning. Clearly the service could improve in this regard and advocate for the child's physical and emotional needs during these difficult assessments. What is of greater concern is that nearly a third of all CM assessments and half of all PAN assessments had no accompanying carer or guardian present to provide emotional support to the child, or indeed to provide an adequate medical history for the child. Improvements in collaboration between services are warranted.

Limitations

This collaborative child protection clinical service in SWS is a unique service for CM assessments and therefore it may not reflect practice elsewhere. We had to rely on what was documented in the clinical records and documentation can be notoriously variable.³⁴ Although follow-up in general was poor, it would seem that those with unmet health concerns identified may have been more proactively followed up. Children that had normal SA examinations with no other issues may have been referred and seen at another health service, such as sexual health centres. Likewise, some of the children that were placed in OOHC may have changed residential location and may have got their health needs addressed elsewhere.

Conclusions

This is the first study of its kind describing the quality dimensions of child protection assessments carried out in frontline health services in a culturally diverse, metropolitan region. The findings from this quality improvement project have already influenced clinical practice in child protection in this region.³⁵ We have demonstrated that locally relevant standards for CM assessments in the acute setting are achievable, more challenging is addressing appropriate medical and psychosocial follow-up for these children. We know that children who have suffered abuse and neglect are more at risk of having their rights violated,^{36, 37} therefore need special consideration in health settings. We have established some baseline domains for measurement for a child-friendly approach to CM assessments, and we can improve our own service delivery via better collaborative multi-disciplinary action. However further work is certainly warranted in improving the understanding of how the best interests of vulnerable children can be served in the acute assessment setting, particularly incorporating the views of children and young people themselves.

Table 1: Medical follow-up of health and developmental concerns

Health Concerns	Attended follow-up assessment	Offered follow-up, failed to attend	No follow-up appointment offered	Unknown if follow-up occurred
Medical n = 40	27 (68%)	9 (22%)	0 (0%)	4 (10%)
Learning n = 28	19 (68%)	6 (21%)	1 (4%)	2 (7%)
Behaviour n = 21	17 (81%)	4 (19%)	0 (0%)	0 (0%)
2 Concerns n = 37	26 (70%)	10 (27%)	1 (3%)	0 (0%)
3+ concerns n = 25	16 (64%)	8 (32%)	0 (0%)	1 (4%)
Total Health Concerns n = 151	105 (70%)	37 (24%)	2 (1%)	7 (5%)

Table 2: Assessing if minimum standards were achieved in child maltreatment clinical assessments

Criteria	SA n = 134	Joint n = 70	PAN n = 75	CM (total) n = 279
Trained Doctor completed assessment	134 (100%)	70 (100%)	75 (100%)	279 (100%)
Case discussed with most Senior Doctor	134 (100%)	70 (100%)	75 (100%)	279 (100%)
Social Worker present	134 (100%)	70 (100%)	62 (83%)	265 (95%)
Protocol used	130 (97%)	70 (100%)	75 (100%)	275 (99%)
Report generated	114 (85%)	70 (100%)	75 (100%)	259 (93%)
Attended Medical follow-up assessment	45 (34%)	35 (50%)	40 (53%)	120 (43%)
<i>Offered follow-up but failed to attend</i>	37 (28%)	20 (29%)	18 (24%)	75 (27%)
<i>No follow-up appointment offered</i>	27 (20%)	14 (20%)	12 (16%)	53 (19%)
<i>Unknown</i>	25 (19%)	1 (1%)	5 (7%)	31 (11%)
Attended Psychological follow-up assessment	73 (55%)	24 (34%)	4 (5%)	101 (36%)
<i>Offered a follow-up but failed to attend</i>	38 (28%)	14 (20%)	3 (4%)	55 (19%)
<i>No follow-up appointment offered</i>	17 (13%)	24 (34%)	68 (90%)	109 (39%)
<i>Unknown</i>	6 (4%)	8 (12%)	0 (0%)	14 (5%)

SA: sexual assault

PAN: physical abuse and neglect

CM: child maltreatment

Table 3: Were acute child maltreatment clinical assessments child-friendly?

	SA n = 134	Joint n = 70	PAN n = 75	CM (total) n = 279
Mean time- referral to assessment (days)	0.64	3.57	0.88	1.44
Assessments done after-hours	67 (50%)*	2 (3%)	8 (11%)	77 (28%)
Number with no carer/guardian present	19 (14%)	28 (40%)	38 (51%)*	85 (30%)

* p value < 0.001

SA: sexual assault

PAN: physical abuse and neglect

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BMJ Paediatrics Open

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Journal:	<i>BMJ Paediatrics Open</i>
Manuscript ID	bmjpo-2017-000125.R1
Article Type:	Original article
Date Submitted by the Author:	14-Sep-2017
Complete List of Authors:	Raman, Shanti; South Western Sydney Local Health District, Community Paediatrics; University of New South Wales - Randwick Campus, School of Women's & Children's Health Hotton, Paul; South Western Sydney Local Health District, Department of Community Paediatrics
Keywords:	Child Abuse, Forensic Medicine, Children's Rights, Health services research, Accident & Emergency

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**An audit of child maltreatment medical assessments in a culturally diverse,
metropolitan setting**

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Word Count: 3092

Abstract

Objective: Child maltreatment (CM) is a major public health problem globally. While there is evidence for the value of medical examination in the assessment of CM, little is known about the quality of clinical assessments for CM. South Western Sydney (SWS) has a large metropolitan population with many vulnerable sub-groups. We aimed to describe acute presentations of CM in SWS over a three year period—with a focus on the quality of the clinical assessments. We wanted to determine if the cases assessed fulfilled established minimum standards for clinical assessment of CM, and if the assessments were performed in a child-friendly manner.

Design: We gathered data from the acute child protection database on all children <16 years referred for assessment between 2013 and 2015. We performed simple descriptive analysis on the data. We measured the assessment, report writing and follow-up against criteria for minimum standards for CM assessments, and identified if assessments were child-friendly from available clinical information.

Results: There were 304 children referred; 279 seen for acute assessment; most (73%) were for sexual abuse, 75 (27%) were for physical abuse/neglect. Over half the assessments identified other health concerns, joint assessments performed by paediatric and forensic doctors were better at identifying these health concerns than solo assessments. Most assessments were multi-disciplinary and used protocols; half were not followed up; a-third were performed after-hours, a third had no carer present during assessments.

Conclusions: We identified strengths and weaknesses in current CM assessments in our service. Locally relevant standards for CM assessments are achievable in the acute setting, more challenging is addressing appropriate medical and psychosocial follow-up for these children. While we have established baseline domains for measuring a child-friendly approach to CM assessments, more should be done to ensure these vulnerable children are assessed in a timely, child-friendly manner, with appropriate follow-up.

Keywords: Child abuse, Medical assessments, Child protection, Child-friendly, Quality healthcare, health services

What is known about the subject

- Children who have been maltreated have known health and developmental concerns.
- A comprehensive medical assessment is an essential component of a multi-agency CM assessment.
- There is wide variation in the quality of and access to CM clinical assessments

What this study adds

- Locally relevant standards for clinical assessment of CM in the acute setting can be achieved if clinicians are well supported.
- Joint assessments and multi-disciplinary assessments are better at identifying other health concerns than solo assessments.
- Achieving appropriate medical and psycho-social follow-up of children following acute CM assessments is challenging.
- We have established simple baseline domains for the measurement of child-friendly CM assessments; more can be done to uphold children’s rights in acute settings.

Introduction

Since Henry Kempe drew global attention to physical abuse of children with the ‘battered child syndrome’, there has been an expansion in the literature within the field of child maltreatment (CM).¹⁻³ There is now clear acknowledgement that CM is a global public health and social welfare problem, with known significant short, medium and long term health consequences.⁴⁻⁸ As early as 1962, the role of medical professionals in their “duty and responsibility to the child to require a full evaluation of the problem”, was identified.¹ Over recent decades, there has been an increased understanding of the health needs of maltreated children,^{9,10} and expansion in clinical and forensic assessment guidelines.¹¹⁻¹⁴

A comprehensive medical assessment is an acknowledged essential component of a multi-agency investigation of CM.¹¹ There is now good evidence for performing comprehensive medical assessments for acute presentations of CM, not just for forensic purposes but because of the high yield of health concerns identified.¹⁵⁻¹⁷ Despite the plethora of guidelines available, little is known about the quality dimensions of these assessments. While there have been many attempts made to improve the quality of detection of CM in EDs and frontline services,^{18,19} there has been little reported on improving the quality of medical assessments for acute CM presentations. Rose et al reported from their New Zealand study of child sexual assault, wide regional variation in the proportion of children and adolescents receiving a medical assessment, and variation in the quality of the service structure.¹⁶ Upholding children’s rights is acknowledged as an essential component of paediatric quality of care, and some work has gone into assessing quality in paediatric hospital services with a focus on children’s rights.²⁰ Dimensions of children’s rights include the assessment of equity of access, timeliness, effectiveness, safety, continuity of care, non-discrimination, child-friendly environment, communication, culturally appropriate and holistic care. Australian standards for the provision of child, adolescent and family-friendly health service facilities are available,²¹ but they tend to be focused on children’s wards, play facilities and separation between children or adolescents and adults in hospitals. Little is known about how child-centred or children’s rights promoting CM medical assessments are.

South Western Sydney (SWS) Local Health District is the largest, most populous health district in New South Wales (NSW), Australia, with a substantial child and youth population.²² It is a rapidly growing metropolitan population in the state of NSW; with the

largest culturally and linguistically diverse population and many sub groups who are socially and economically at risk within its boundaries.²³ Raman et al,²⁴ previously identified and published locally relevant minimum standards for clinical assessment of child physical abuse and neglect (PAN) from a quality audit conducted in SWS. The authors highlighted wide variation in clinical practice in acute assessment and follow-up of children presenting at their most vulnerable to frontline clinical services. Following that audit, the Community Paediatrics team in SWS made improvements to the clinical assessment processes. A model of collaborative multi-disciplinary clinical assessments for acute CM was established in one hospital (a non-tertiary pediatric hospital) setting; the partnership included community paediatricians, social workers, sexual assault physicians and hospital-based paediatricians.

Our aims were to describe acute presentations of CM to this collaborative clinical service over a three year period. We wanted to determine if the cases assessed fulfilled previously established minimum standards for clinical assessment of CM within our service to see if service improvements had taken place.²⁴ We also wanted to see if the assessments were conducted in a child-rights promoting or child-friendly manner, within the constraints of an acute clinical setting. The results of this audit would further feed back into clinical service improvements in SWS, thereby contributing to and sustaining the quality improvement process.²⁵

Methods

As part of ongoing quality improvement initiatives in child protection, we audited acute presentations of CM to the unique collaborative clinical service in SWS, between the years 2013 to 2015. We collated data gathered from the acute child protection databases for all referrals for acute assessments to one hospital service in SWS of children and youth (<16 years old) between January 1st 2013 to 31 December 2015; including PAN and sexual assault (SA). These data were derived from two databases; one established by Community Paediatricians (CP) and the other from SA Services. PAN assessments were carried out by paediatricians, SA assessments were carried out either by SA doctors (forensic physicians) alone, especially if they were urgent, or collaboratively by CP and SA doctors either due to the age of the child or due to complexity of the clinical presentation. Those children that

appeared in both databases for the same assessment were categorized as a joint assessment conducted collaboratively by CP and SA physicians.

We reviewed all the clinical reports, clinical notes and follow up plans of children seen for CM assessments. Demographics, referral details, forensic, clinical and social outcomes were recorded from the available data. We used the conclusion of the medical or forensic notes and reports to classify the findings of the medical examination. The health needs identified in the reports were classified as medical, developmental/learning, and behavioral/mental health or a combination of two or all areas. The referring services were contacted to find out what happened to the children following their acute assessments. The assessments were then reviewed to see whether certain minimum standards were achieved, taken from the previously established criteria (Box 1):²⁴

Box 1: Minimum Standards for the clinical assessment of child maltreatment

- *All children presenting with suspected significant CM or referred by Community Services are assessed by a pediatric trained doctor, social worker, ± nurse as appropriate.*
- *All clinical assessments to follow clinical protocol*
- *Assessments to be discussed with most senior Consultant*
- *If child protection report is to be generated, it needs to be counter-signed by Consultant*
- *Protocols and report to be filed in the medical record*
- *Paediatric and psychosocial follow-up to be available to all children identified with abuse and neglect, across the region*

The medical records of the child, both hospital and sexual assault records were reviewed to see if medical and psychosocial follow up had occurred or not. If the follow up had not occurred the notes were reviewed to see if an appointment had been offered, yet the child was not brought to the appointment. The reports and CM assessments were reviewed to assess how child friendly they were. We identified timeliness, appropriateness of assessment, presence of parent or carer from relevant tools and standards which pertain to children's rights in healthcare.²¹ The indicators we were able to use included length of time to assessment, whether assessments were conducted within hours (Monday to Friday; 8am to 5pm) or after-hours, and whether there was the presence of a carer or support person with the child during assessment.

Relevant data extracted from the databases were entered into an Excel spreadsheet and simple descriptive analysis of the data was carried out using IBM SPSS Statistics for Windows, V23. Chi square tests and two-sample t tests were used to determine difference in proportions and difference in means.

Ethics approval was obtained via the lead Human Research Ethics Committee at Liverpool Hospital.

Results

Over the 3 year period (2013-2015), 304 cases were referred for an acute CM assessment, of which 25 (8%) were phone consultations. There were 279 cases seen for an acute assessment, 204 cases (73%) were seen for suspected SA and 75 cases (27%) were for suspected PAN assessments. Of the 279 cases, 15 cases (5%) seen were siblings of an index child and one child was seen for neglect. A detailed description of the demographics, referral and assessment findings of the children have been presented before.^{26,27} Median age of presentation for all types of assessments was 7 years (Interquartile Range (IR) of 3 -13 years); median age of children presenting for all SA assessments was 10 years (IR 4 – 14 years), for PAN was 3.5 years (Mann-Whitney U Test Z score = 6.84, p<0.0001). The majority of the children seen for CM assessment were identified as Anglo –Australian (n=77, 27%), with high numbers of Aboriginal (n=39, 14%) and Pacific Islander (n=35, 13%) children. Ethnicity was not documented in 37% percent of sole SA assessments. Police and/or child protection agencies made 82% of the referrals for acute assessments. A third of the SA assessments were joint (CP/SA) assessments. A third of all assessments were for forensic purposes.

Other health concerns were identified in 151 (54%) of the 279 children examined; learning difficulties were identified in 28 children (19%); 21 children (14%) had behavioural problems. Health concerns identified included growth and nutrition problems, dental caries, incomplete immunisation, pneumonia, hearing problems, visual problems, skin infections, and current gastroenteritis. Physical health, learning difficulties and mental health concerns (3+ concerns) co-existed in 25 children (17%). For SA assessments, joint assessments (86%)

identified more health concerns or were more likely to identify health concerns, than those performed by sole SA doctors (26%), ($\chi^2 = 72.33$, $p < 0.001$).

Table 1 shows the medical follow up of unmet health concerns; the majority (94%) of children with medical concerns were referred for medical follow up with 70% of them being seen. All seven children with unknown follow up were placed in out-of-home-care (OOHC). Eight (22%) of the 37 children that were not brought to follow up were placed in OOHC and 21 (57%) of them went home with their family but with ongoing statutory child protection agency involvement.

Insert table 1 here

Table 2 reports on various aspects of the clinical assessments judged against the predetermined criteria. Standards that were achieved for most assessments were that they were multi-disciplinary, used protocol and had reports generated. SA reports that were not generated were due to child refusing medical examination and/or the case determined to be not consistent with abuse. All reports that were generated were countersigned by the senior consultant and placed into the medical records for that child. Both medical and psychosocial follow up was less successful. Overall, 195/279 (70%) children were offered a follow up medical appointment, and of those, 120 (62%) attended. Following the solo SA assessments, 82/134 (61%) were offered and 45/82 (55%) attended; of the joint SA assessments, 55/70 (79%) were offered and 35/55 (64%) attended; of PAN assessments, 58/75 (77%) were offered and 40/58 (69%) attended. Of the 53 children not offered a follow up medical assessment after their CM assessment, 30 (57%) had examinations that were not concerning or consistent with abuse and had no other unmet health needs identified. Two (11%) of the 53 children not offered medical follow up did have unmet health needs identified. Overall 156 (56%) of children seen acutely were offered psychological follow up, of those 101 (65%) attended. Following the solo SA assessments, 111/134 (82%) were offered psychological follow up and 73 (66%) attended; following joint SA assessments 38/70 (54%) were offered psychological follow up and 24 (63%) attended. By contrast, 7 of the 75 (9%) presenting for PAN assessments were offered psychosocial follow-up, there was a statistical difference compared to SA assessments ($\chi^2 = 90.3$, $p < 0.001$).

Insert table 2 here

Table 3 examines measureable aspects of the CM assessments that were child-friendly. The majority of CM assessments occurred within the recommended 24 - 72 hours, average was within 24 hours. After- hours assessments were more likely to be for SA ($\chi^2 = 14.71$, $p < 0.001$), with half the SA assessments being conducted after hours. This was mainly for forensic need, with 54 (78%) of 69 after hours SA assessments completed for a forensic purpose. Three (38%) of the eight PAN assessments conducted after hours were for forensic purposes. Over half of the children presenting for PAN assessments were unaccompanied by a carer or support person during the assessment, there was a significant difference compared to SA assessments ($\chi^2 = 19.76$, $p < 0.001$).

Insert table 3 here

Discussion

We believe that this attempt to appraise the quality dimensions of CM medical assessments in a busy, metropolitan, non-tertiary paediatric service is unique. While there are established guidelines for peer review for paediatricians working clinically in child protection,²⁸ improving the overall quality of multi-disciplinary clinical assessments has not been reported. Our evaluation found that the acute CM assessments undertaken in our service, fulfilled many of the previously identified locally relevant standards established for quality, but fell short in achieving our objectives of adequate and appropriate follow up, both medically and psychologically. Importantly we attempted to establish some baseline criteria for assessing how child-friendly this clinical service was, using available audit data on timeliness and appropriateness of the assessment, and whether the child was supported by the presence of a parent or parent figure. Reading et al,²⁹ argued strenuously for incorporating a children's rights view to widen the perspective on CM, thereby combining public-health and protective responses to CM. Certainly more can and should be done in this space.

We have already reported on the age, gender and ethnicity differentials in our clinic population.^{26,27} Almost 40% of SA assessments undertaken by SA physicians did not have ethnicity documentation. We feel strongly that ethnicity and/or cultural identity documentation is an essential aspect of the quality of the paediatric health record. Over half the children assessed for CM, had other health concerns identified, in keeping with other studies.^{15,30} In our service, joint assessments, i.e. those involving paediatricians and forensic physicians were more likely to identify other health concerns; suggesting that multidisciplinary collaborative assessments involving paediatricians, social workers and

forensic physicians were better at identifying co-existing health concerns, as has been shown elsewhere.³¹ Forensic assessments for SA performed as solo examinations had a shorter mean time to assessment, suggesting that the main focus was on achieving the forensic medical examination in a timely manner. It is likely that there were more unmet health and developmental concerns in those children assessed for SA. The majority of children that had an unmet health concern identified had medical follow up initiated as a result of the CM assessment which is similar to other studies.^{15,17} Findings from Thomas's study³⁰ showed over half of the unmet health needs identified at CM assessments were met in follow-up.

Minimum standards that we had previously identified for clinical CM assessments were mostly achieved in the acute setting; a pleasing result suggesting that many recommendations for CM assessments that had been put in place following the Raman et al 2014 study²⁴ were implemented and working. Clinical assessments for CM in our service were found to be comprehensive, multi-disciplinary, protocol driven and had senior consultant support. What remains a concern is the low numbers of both medical and psychosocial follow-up. One in five children seen for acute CM assessment was not offered medical follow up and two in five were not offered follow up psychological counselling. Of those that were offered follow-up, almost two-thirds attended medical and psychosocial follow-up. Follow-up of unmet health concerns was 70%, and just under 60% of assessments that were not offered follow-up, had no identified medical reason for follow-up. Follow-up remains an important part of CM assessments as there is a high risk of recurrence of maltreatment,^{32,33} and there are known long term health and developmental consequences of CM.^{4,6,7,34}

The majority of the assessments occurred within the recommended 24 - 72 hours. Joint assessments took longer to arrange; mostly due to the fact that these assessments were for historical sexual abuse. Over half the SA assessments were conducted after-hours; this was dictated by the need for a forensic examination including the collection of forensic samples. Getting forensic DNA may improve chances of substantiating the allegation of SA and lead to improvements in the overall criminal justice outcomes. Children are often brought to hospitals in the middle of the night unannounced by child protection statutory agencies and occasionally with no carer present. So health services have no initial control over when the child presents or who they present with. We identified that just under a quarter of SA assessments and 62% of PAN assessments that occurred after hours could have been deferred to the following morning, based on whether there was acute forensic need. Clearly the service could improve in this regard and advocate for the child's physical and emotional needs

during these difficult assessments. What is of greater concern is that nearly a third of all CM assessments and half of all PAN assessments had no accompanying carer or guardian present to provide emotional support to the child, or indeed to provide an adequate medical history for the child. This can add challenges to the service including obtaining consent and interpreting examination findings. While clinical staff would not be in a position to dictate who accompanies the child or in what manner the child is brought in, improvements in collaboration between health and welfare services are warranted to ensure that children are appropriately supported emotionally.

Limitations

This collaborative child protection clinical service in SWS is a unique service for CM assessments and therefore it may not reflect practice elsewhere. We had to rely on what was documented in the clinical records and documentation can be notoriously variable.³⁵ Although follow-up in general was poor, it would seem that those with unmet health concerns identified may have been more proactively followed up. Children that had normal SA examinations with no other issues may have been referred and seen at another health service, such as sexual health centres. Likewise, some of the children that were placed in OOHC may have changed residential location and may have got their health needs addressed elsewhere. Nevertheless, the 15 children that were placed in OOHC who did not attend follow up, represent a failure of health and welfare systems collaborating in the best interests of the child. This is certainly an amenable issue if health and welfare services both acknowledged that medical and psychosocial follow up was a key performance indicator for their sectors, and a measure of holistic care for vulnerable children.

Conclusions

The findings from this quality improvement project have already influenced clinical practice in child protection in this region.³⁶ We have demonstrated that locally relevant standards for CM assessments in the acute setting are achievable, more challenging is addressing appropriate medical and psychosocial follow-up for these children. Our audit demonstrates that multi-disciplinary or joint forensic/paediatric/social work examinations are better at identifying and responding to children’s health needs, and therefore are in the best interests of the child. We know that children who have suffered abuse and neglect are more at risk of having their rights violated,^{37,38} and need special consideration in health settings. We have

established some baseline domains for measurement for a child-friendly approach to CM assessments, and we can improve our own service delivery via better collaborative multi-disciplinary action. However further work is certainly warranted in improving the understanding of how the best interests of vulnerable children can be served in the acute assessment setting, particularly incorporating the views of children and young people themselves.

A) Funding statement:

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

B) Competing Interests Statement:

We declare that there are no competing interests

C) Contributorship Statement:

SR planned, conceived and designed the study, helped with data analysis and did the writing up

PH helped with planning, did all the data gathering and analysis, helped with writing up.

Table 1: Medical follow-up of identified health and developmental concerns

Health Concerns	Attended follow-up assessment	Offered follow-up, was not brought	No follow-up appointment offered	Unknown if follow-up occurred
Medical n = 40	27	9	0	4
Learning difficulties n = 28	19	6	1	2
Behavioural problems n = 21	17	4	0	0
2 Concerns n = 37	26	10	1	0
3+ concerns n = 25	16	8	0	1
Total Heath Concerns n = 151	105 (70%)	37 (24%)	2 (1%)	7 (5%)

Table 2: Assessing if minimum standards were achieved in child maltreatment clinical assessments

Criteria	Sole SA n = 134	Joint SA n = 70	PAN n = 75	CM (total) n = 279
Trained Doctor completed assessment	134 (100%)	70 (100%)	75 (100%)	279 (100%)
Social Worker present	134 (100%)	70 (100%)	62 (83%)	265 (95%)
Protocol used	130 (97%)	70 (100%)	75 (100%)	275 (99%)
Case discussed with most Senior Doctor	134 (100%)	70 (100%)	75 (100%)	279 (100%)
Report generated	114* (100%)	70 (100%)	75 (100%)	259* (100%)
Attended Medical follow-up assessment	45 (34%)	35 (50%)	40 (53%)	120 (43%)
<i>Offered follow-up but was not brought</i>	37 (28%)	20 (29%)	18 (24%)	75 (27%)
<i>No follow-up appointment offered</i>	27 (20%)	14 (20%)	12 (16%)	53 (19%)
<i>Unknown</i>	25 (19%)	1 (1%)	5 (7%)	31 (11%)
Attended Psychological follow-up assessment	73 (55%)	24 (34%)	4 (5%)	101 (36%)
<i>Offered a follow-up but was not brought</i>	38 (28%)	14 (20%)	3 (4%)	55 (19%)
<i>No follow-up appointment offered</i>	17 (13%)	24 (34%)	68 (90%)	109 (39%)
<i>Unknown</i>	6 (4%)	8 (12%)	0 (0%)	14 (5%)

SA: sexual assault

PAN: physical abuse and neglect

CM: child maltreatment

*Only reports that were needed were generated

Table 3: Were acute child maltreatment clinical assessments child-friendly?

	Sole SA n = 134	Joint SA n = 70	PAN n = 75	CM (total) n = 279
Median time- referral to assessment (days)	0	1	0	0
Interquartile range (IQR) in days	0 - 0	0 - 5	0 - 1	0 – 1
Assessments done after-hours	67 (50%)*	2 (3%)	8 (11%)	77 (28%)
Number with no carer/support person present	19 (14%)	28 (40%)	38 (51%)*	85 (30%)

* *p* value < 0.001

SA: sexual assault

PAN: physical abuse and neglect

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BMJ Paediatrics Open

An audit of child maltreatment medical assessments in a culturally diverse, metropolitan setting

Journal:	<i>BMJ Paediatrics Open</i>
Manuscript ID	bmjpo-2017-000125.R2
Article Type:	Original article
Date Submitted by the Author:	16-Oct-2017
Complete List of Authors:	Raman, Shanti; South Western Sydney Local Health District, Community Paediatrics; University of New South Wales - Randwick Campus, School of Women's & Children's Health Hotton, Paul; South Western Sydney Local Health District, Department of Community Paediatrics
Keywords:	Child Abuse, Forensic Medicine, Children's Rights, Health services research, Accident & Emergency

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**An audit of child maltreatment medical assessments in a culturally diverse,
metropolitan setting**

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Word Count: 3092

Abstract

Objective: Child maltreatment (CM) is a major public health problem globally. While there is evidence for the value of medical examination in the assessment of CM, little is known about the quality of clinical assessments for CM. South Western Sydney (SWS) has a large metropolitan population with many vulnerable sub-groups. We aimed to describe acute presentations of CM in SWS over a three year period—with a focus on the quality of the clinical assessments. We wanted to determine if the cases assessed fulfilled established minimum standards for clinical assessment of CM, and if the assessments were performed in a child-friendly manner.

Design: We gathered data from the acute child protection database on all children <16 years referred for assessment between 2013 and 2015. We performed simple descriptive analysis on the data. We measured the assessment, report writing and follow-up against criteria for minimum standards for CM assessments, and identified if assessments were child-friendly from available clinical information.

Results: There were 304 children referred; 279 seen for acute assessment; most (73%) were for sexual abuse, 75 (27%) were for physical abuse/neglect. Over half the assessments identified other health concerns, joint assessments performed by paediatric and forensic doctors were better at identifying these health concerns than solo assessments. Most assessments were multi-disciplinary and used protocols; half were not followed up; a-third were performed after-hours, a third had no carer present during assessments.

Conclusions: We identified strengths and weaknesses in current CM assessments in our service. Locally relevant standards for CM assessments are achievable in the acute setting, more challenging is addressing appropriate medical and psychosocial follow-up for these children. While we have established baseline domains for measuring a child-friendly approach to CM assessments, more should be done to ensure these vulnerable children are assessed in a timely, child-friendly manner, with appropriate follow-up.

Keywords: Child abuse, Medical assessments, Child protection, Child-friendly, Quality healthcare, health services

What is known about the subject

- Children who have been maltreated have known health and developmental concerns.
- A comprehensive medical assessment is an essential component of a multi-agency CM assessment.
- There is wide variation in the quality of and access to CM clinical assessments

What this study adds

- Locally relevant standards for clinical assessment of CM in the acute setting can be achieved if clinicians are well supported.
- Joint assessments and multi-disciplinary assessments are better at identifying other health concerns than solo assessments.
- Achieving appropriate medical and psycho-social follow-up of children following acute CM assessments is challenging.
- We have established simple baseline domains for the measurement of child-friendly CM assessments; more can be done to uphold children’s rights in acute settings.

Introduction

Since Henry Kempe drew global attention to physical abuse of children with the ‘battered child syndrome’, there has been an expansion in the literature within the field of child maltreatment (CM).¹⁻³ There is now clear acknowledgement that CM is a global public health and social welfare problem, with known significant short, medium and long term health consequences.⁴⁻⁸ As early as 1962, the role of medical professionals in their “duty and responsibility to the child to require a full evaluation of the problem”, was identified.¹ Over recent decades, there has been an increased understanding of the health needs of maltreated children,^{9,10} and expansion in clinical and forensic assessment guidelines.¹¹⁻¹⁴

A comprehensive medical assessment is an acknowledged essential component of a multi-agency investigation of CM.¹¹ There is now good evidence for performing comprehensive medical assessments for acute presentations of CM, not just for forensic purposes but because of the high yield of health concerns identified.¹⁵⁻¹⁷ Despite the plethora of guidelines available, little is known about the quality dimensions of these assessments. While there have been many attempts made to improve the quality of detection of CM in EDs and frontline services,^{18,19} there has been little reported on improving the quality of medical assessments for acute CM presentations. Rose et al reported from their New Zealand study of child sexual assault, wide regional variation in the proportion of children and adolescents receiving a medical assessment, and variation in the quality of the service structure.¹⁶ Upholding children’s rights is acknowledged as an essential component of paediatric quality of care, and some work has gone into assessing quality in paediatric hospital services with a focus on children’s rights.²⁰ Dimensions of children’s rights include the assessment of equity of access, timeliness, effectiveness, safety, continuity of care, non-discrimination, child-friendly environment, communication, culturally appropriate and holistic care. Australian standards for the provision of child, adolescent and family-friendly health service facilities are available,²¹ but they tend to be focused on children’s wards, play facilities and separation between children or adolescents and adults in hospitals. Little is known about how child-centred or children’s rights promoting CM medical assessments are.

South Western Sydney (SWS) Local Health District is the largest, most populous health district in New South Wales (NSW), Australia, with a substantial child and youth population.²² It is a rapidly growing metropolitan population in the state of NSW; with the

largest culturally and linguistically diverse population and many sub groups who are socially and economically at risk within its boundaries.²³ Raman et al,²⁴ previously identified and published locally relevant minimum standards for clinical assessment of child physical abuse and neglect (PAN) from a quality audit conducted in SWS. The authors highlighted wide variation in clinical practice in acute assessment and follow-up of children presenting at their most vulnerable to frontline clinical services. Following that audit, the Community Paediatrics team in SWS made improvements to the clinical assessment processes. A model of collaborative multi-disciplinary clinical assessments for acute CM was established in one hospital (a non-tertiary pediatric hospital) setting; the partnership included community paediatricians, social workers, sexual assault physicians and hospital-based paediatricians.

Our aims were to describe acute presentations of CM to this collaborative clinical service over a three year period. We wanted to determine if the cases assessed fulfilled previously established minimum standards for clinical assessment of CM within our service to see if service improvements had taken place.²⁴ We also wanted to see if the assessments were conducted in a child-rights promoting or child-friendly manner, within the constraints of an acute clinical setting. The results of this audit would further feed back into clinical service improvements in SWS, thereby contributing to and sustaining the quality improvement process.²⁵

Methods

As part of ongoing quality improvement initiatives in child protection, we audited acute presentations of CM to the unique collaborative clinical service in SWS, between the years 2013 to 2015. We collated data gathered from the acute child protection databases for all referrals for acute assessments to one hospital service in SWS of children and youth (<16 years old) between January 1st 2013 to 31 December 2015; including PAN and sexual assault (SA). These data were derived from two databases; one established by Community Paediatricians (CP) and the other from SA Services. PAN assessments were carried out by paediatricians, SA assessments were carried out either by SA doctors (forensic physicians) alone, especially if they were urgent, or collaboratively by CP and SA doctors either due to the age of the child or due to complexity of the clinical presentation. Those children that

appeared in both databases for the same assessment were categorized as a joint assessment conducted collaboratively by CP and SA physicians.

We reviewed all the clinical reports, clinical notes and follow up plans of children seen for CM assessments. Demographics, referral details, forensic, clinical and social outcomes were recorded from the available data. We used the conclusion of the medical or forensic notes and reports to classify the findings of the medical examination. The health needs identified in the reports were classified as medical, developmental/learning, and behavioral/mental health or a combination of two or all areas. The referring services were contacted to find out what happened to the children following their acute assessments. The assessments were then reviewed to see whether certain minimum standards were achieved, taken from the previously established criteria (Box 1):²⁴

Box 1: Minimum Standards for the clinical assessment of child maltreatment

- *All children presenting with suspected significant CM or referred by Community Services are assessed by a pediatric trained doctor, social worker, ± nurse as appropriate.*
- *All clinical assessments to follow clinical protocol*
- *Assessments to be discussed with most senior Consultant*
- *If child protection report is to be generated, it needs to be counter-signed by Consultant*
- *Protocols and report to be filed in the medical record*
- *Paediatric and psychosocial follow-up to be available to all children identified with abuse and neglect, across the region*

The medical records of the child, both hospital and sexual assault records were reviewed to see if medical and psychosocial follow up had occurred or not. If the follow up had not occurred the notes were reviewed to see if an appointment had been offered, yet the child was not brought to the appointment. The reports and CM assessments were reviewed to assess how child friendly they were. We identified timeliness, appropriateness of assessment, presence of parent or carer from relevant tools and standards which pertain to children's rights in healthcare.²¹ The measures for how "child-friendly" CM assessments were included:

1. length of time to assessment
2. whether assessments were conducted within hours (Monday to Friday; 8am to 5pm) or after-hours

3. whether there was the presence of a carer or support person with the child during assessment.

Relevant data extracted from the databases were entered into an Excel spreadsheet and simple descriptive analysis of the data was carried out using IBM SPSS Statistics for Windows, V23. Chi square tests and two-sample t tests were used to determine difference in proportions and difference in means.

Ethics approval was obtained via the lead Human Research Ethics Committee at Liverpool Hospital.

Results

Over the 3 year period (2013-2015), 304 cases were referred for an acute CM assessment, of which 25 (8%) were phone consultations. There were 279 cases seen for an acute assessment, 204 cases (73%) were seen for suspected SA and 75 cases (27%) were for suspected PAN assessments. Of the 279 cases, 15 cases (5%) seen were siblings of an index child and one child was seen for neglect. A detailed description of the demographics, referral and assessment findings of the children have been presented before.^{26,27} Median age of presentation for all types of assessments was 7 years (Interquartile Range (IR) of 3 -13 years); median age of children presenting for all SA assessments was 10 years (IR 4 – 14 years), for PAN was 3.5 years (Mann-Whitney U Test Z score = 6.84, p<0.0001). The majority of the children seen for CM assessment were identified as Anglo –Australian (n=77, 27%), with high numbers of Aboriginal (n=39, 14%) and Pacific Islander (n=35, 13%) children. Ethnicity was not documented in 37% percent of sole SA assessments. Police and/or child protection agencies made 82% of the referrals for acute assessments. A third of the SA assessments were joint (CP/SA) assessments. A third of all assessments were for forensic purposes.

Other health concerns were identified in 151 (54%) of the 279 children examined; learning difficulties were identified in 28 children (19%); 21 children (14%) had behavioural problems. Health concerns identified included growth and nutrition problems, dental caries, incomplete immunisation, pneumonia, hearing problems, visual problems, skin infections, and current gastroenteritis. Physical health, learning difficulties and mental health concerns

(3+ concerns) co-existed in 25 children (17%). For SA assessments, joint assessments (86%) identified more health concerns or were more likely to identify health concerns, than those performed by sole SA doctors (26%), ($\chi^2 = 72.33$, $p < 0.001$).

Table 1 shows the medical follow up of unmet health concerns; the majority (94%) of children with medical concerns were referred for medical follow up with 70% of them being seen. All seven children with unknown follow up were placed in out-of-home-care (OOHC). Eight (22%) of the 37 children that were not brought to follow up were placed in OOHC and 21 (57%) of them went home with their family but with ongoing statutory child protection agency involvement.

Insert table 1 here

Table 2 reports on various aspects of the clinical assessments judged against the predetermined criteria. Standards that were achieved for most assessments were that they were multi-disciplinary, used protocol and had reports generated. SA reports that were not generated were due to child refusing medical examination and/or the case determined to be not consistent with abuse. All reports that were generated were countersigned by the senior consultant and placed into the medical records for that child. Both medical and psychosocial follow up was less successful. Overall, 195/279 (70%) children were offered a follow up medical appointment, and of those, 120 (62%) attended. Following the solo SA assessments, 82/134 (61%) were offered and 45/82 (55%) attended; of the joint SA assessments, 55/70 (79%) were offered and 35/55 (64%) attended; of PAN assessments, 58/75 (77%) were offered and 40/58 (69%) attended. Of the 53 children not offered a follow up medical assessment after their CM assessment, 30 (57%) had examinations that were not concerning or consistent with abuse and had no other unmet health needs identified. Two (11%) of the 53 children not offered medical follow up did have unmet health needs identified. Overall 156 (56%) of children seen acutely were offered psychological follow up, of those 101 (65%) attended. Following the solo SA assessments, 111/134 (82%) were offered psychological follow up and 73 (66%) attended; following joint SA assessments 38/70 (54%) were offered psychological follow up and 24 (63%) attended. By contrast, 7 of the 75 (9%) presenting for PAN assessments were offered psychosocial follow-up, there was a statistical difference compared to SA assessments ($\chi^2 = 90.3$, $p < 0.001$).

Insert table 2 here

Table 3 examines measureable aspects of the CM assessments that were child-friendly. The majority of CM assessments occurred within the recommended 24 - 72 hours, average was within 24 hours. After- hours assessments were more likely to be for SA ($\chi^2 = 14.71$, $p < 0.001$), with half the SA assessments being conducted after hours. This was mainly for forensic need, with 54 (78%) of 69 after hours SA assessments completed for a forensic purpose. Three (38%) of the eight PAN assessments conducted after hours were for forensic purposes. Over half of the children presenting for PAN assessments were unaccompanied by a carer or support person during the assessment, there was a significant difference compared to SA assessments ($\chi^2 = 19.76$, $p < 0.001$).

Insert table 3 here

Discussion

We believe that this attempt to appraise the quality dimensions of CM medical assessments in a busy, metropolitan, non-tertiary paediatric service is unique. While there are established guidelines for peer review for paediatricians working clinically in child protection,²⁸ improving the overall quality of multi-disciplinary clinical assessments has not been reported. Our evaluation found that the acute CM assessments undertaken in our service, fulfilled many of the previously identified locally relevant standards established for quality, but fell short in achieving our objectives of adequate and appropriate follow up, both medically and psychologically. Importantly we attempted to establish some baseline criteria for assessing how child-friendly this clinical service was, using available audit data on timeliness and appropriateness of the assessment, and whether the child was supported by the presence of a parent or parent figure. Reading et al,²⁹ argued strenuously for incorporating a children's rights view to widen the perspective on CM, thereby combining public-health and protective responses to CM. Certainly more can and should be done in this space.

We have already reported on the age, gender and ethnicity differentials in our clinic population.^{26,27} Almost 40% of SA assessments undertaken by SA physicians did not have ethnicity documentation. We feel strongly that ethnicity and/or cultural identity documentation is an essential aspect of the quality of the paediatric health record. Over half the children assessed for CM, had other health concerns identified, in keeping with other studies.^{15,30} In our service, joint assessments, i.e. those involving paediatricians and forensic physicians were more likely to identify other health concerns; suggesting that multidisciplinary collaborative assessments involving paediatricians, social workers and

forensic physicians were better at identifying co-existing health concerns, as has been shown elsewhere.³¹ Forensic assessments for SA performed as solo examinations had a shorter mean time to assessment, suggesting that the main focus was on achieving the forensic medical examination in a timely manner. It is likely that there were more unmet health and developmental concerns in those children assessed for SA. The majority of children that had an unmet health concern identified had medical follow up initiated as a result of the CM assessment which is similar to other studies.^{15,17} Findings from Thomas's study³⁰ showed over half of the unmet health needs identified at CM assessments were met in follow-up.

Minimum standards that we had previously identified for clinical CM assessments were mostly achieved in the acute setting; a pleasing result suggesting that many recommendations for CM assessments that had been put in place following the Raman et al 2014 study²⁴ were implemented and working. Clinical assessments for CM in our service were found to be comprehensive, multi-disciplinary, protocol driven and had senior consultant support. What remains a concern is the low numbers of both medical and psychosocial follow-up. One in five children seen for acute CM assessment was not offered medical follow up and two in five were not offered follow up psychological counselling. Of those that were offered follow-up, almost two-thirds attended medical and psychosocial follow-up. Follow-up of unmet health concerns was 70%, and just under 60% of assessments that were not offered follow-up, had no identified medical reason for follow-up. Follow-up remains an important part of CM assessments as there is a high risk of recurrence of maltreatment,^{32,33} and there are known long term health and developmental consequences of CM.^{4,6,7,34}

The majority of the assessments occurred within the recommended 24 - 72 hours. Joint assessments took longer to arrange; mostly due to the fact that these assessments were for historical sexual abuse. Over half the SA assessments were conducted after-hours; this was dictated by the need for a forensic examination including the collection of forensic samples. Getting forensic DNA may improve chances of substantiating the allegation of SA and lead to improvements in the overall criminal justice outcomes. Children are often brought to hospitals in the middle of the night unannounced by child protection statutory agencies and occasionally with no carer present. So health services have no initial control over when the child presents or who they present with. We identified that just under a quarter of SA assessments and 62% of PAN assessments that occurred after hours could have been deferred to the following morning, based on whether there was acute forensic need. Clearly the service could improve in this regard and advocate for the child's physical and emotional needs

during these difficult assessments. What is of greater concern is that nearly a third of all CM assessments and half of all PAN assessments had no accompanying carer or guardian present to provide emotional support to the child, or indeed to provide an adequate medical history for the child. This can add challenges to the service including obtaining consent and interpreting examination findings. While clinical staff would not be in a position to dictate who accompanies the child or in what manner the child is brought in, improvements in collaboration between health and welfare services are warranted to ensure that children are appropriately supported emotionally.

Limitations

This collaborative child protection clinical service in SWS is a unique service for CM assessments and therefore it may not reflect practice elsewhere. We had to rely on what was documented in the clinical records and documentation can be notoriously variable.³⁵ Although follow-up in general was poor, it would seem that those with unmet health concerns identified may have been more proactively followed up. Children that had normal SA examinations with no other issues may have been referred and seen at another health service, such as sexual health centres. Likewise, some of the children that were placed in OOHC may have changed residential location and may have got their health needs addressed elsewhere. Nevertheless, the 15 children that were placed in OOHC who did not attend follow up, represent a failure of health and welfare systems collaborating in the best interests of the child. This is certainly an ameliorable issue if health and welfare services both acknowledged that medical and psychosocial follow up was a key performance indicator for their sectors, and a measure of holistic care for vulnerable children.

Conclusions

The findings from this quality improvement project have already influenced clinical practice in child protection in this region.³⁶ We have demonstrated that locally relevant standards for CM assessments in the acute setting are achievable, more challenging is addressing appropriate medical and psychosocial follow-up for these children. Our audit demonstrates that multi-disciplinary or joint forensic/paediatric/social work examinations are better at identifying and responding to children’s health needs, and therefore are in the best interests of the child. We know that children who have suffered abuse and neglect are more at risk of having their rights violated,^{37,38} and need special consideration in health settings. We have

established some baseline domains for measurement for a child-friendly approach to CM assessments, and we can improve our own service delivery via better collaborative multi-disciplinary action. However further work is certainly warranted in improving the understanding of how the best interests of vulnerable children can be served in the acute assessment setting, particularly incorporating the views of children and young people themselves.

A) Funding statement:

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

B) Competing Interests Statement:

We declare that there are no competing interests

C) Contributorship Statement:

SR planned, conceived and designed the study, helped with data analysis and did the writing up

PH helped with planning, did all the data gathering and analysis, helped with writing up.

Table 1: Medical follow-up of identified health and developmental concerns

Health Concerns	Attended follow-up assessment	Offered follow-up, <i>was not brought*</i>	No follow-up appointment offered	Unknown if follow-up occurred
Medical alone n = 40	27 (68%)	9 (23%)	0	4 (10%)
Learning difficulties alone n = 28	19 (68%)	6 (21%)	1 (3%)	2 (7%)
Behavioural problems alone n = 21	17 (81%)	4 (19%)	0	0
2 Concerns n = 37	26 (70%)	10 (35%)	1 (3%)	0
3+ concerns n = 25	16 (64%)	8 (32%)	0	1 (4%)
Total Health Concerns n = 151	105 (70%)	37 (24%)	2 (1%)	7 (5%)

*the term “was not brought” preferred to “did not attend”, as these are dependent children

Table 2: Assessing if minimum standards were achieved in child maltreatment clinical assessments

Criteria	Sole SA n = 134	Joint SA n = 70	PAN n = 75	CM (total) n = 279
Trained Doctor completed assessment	134 (100%)	70 (100%)	75 (100%)	279 (100%)
Social Worker present	134 (100%)	70 (100%)	62 (83%)	265 (95%)
Protocol used	130 (97%)	70 (100%)	75 (100%)	275 (99%)
Case discussed with most Senior Doctor	134 (100%)	70 (100%)	75 (100%)	279 (100%)
Report generated	114* (100%)	70 (100%)	75 (100%)	259* (100%)
Attended Medical follow-up assessment	45 (34%)	35 (50%)	40 (53%)	120 (43%)
<i>Offered follow-up but was not brought</i>	37 (28%)	20 (29%)	18 (24%)	75 (27%)
<i>No follow-up appointment offered</i>	27 (20%)	14 (20%)	12 (16%)	53 (19%)
<i>Unknown</i>	25 (19%)	1 (1%)	5 (7%)	31 (11%)
Attended Psychological follow-up assessment	73 (55%)	24 (34%)	4 (5%)	101 (36%)
<i>Offered a follow-up but was not brought</i>	38 (28%)	14 (20%)	3 (4%)	55 (19%)
<i>No follow-up appointment offered</i>	17 (13%)	24 (34%)	68 (90%)	109 (39%)
<i>Unknown</i>	6 (4%)	8 (12%)	0 (0%)	14 (5%)

SA: sexual assault

PAN: physical abuse and neglect

CM: child maltreatment

*Only reports that were needed were generated

Table 3: Were acute child maltreatment clinical assessments child-friendly?

	Sole SA n = 134	Joint SA n = 70	PAN n = 75	CM (total) n = 279
Median time- referral to assessment (days)	0	1	0	0
Interquartile range (IQR) in days	0 - 0	0 - 5	0 - 1	0 – 1
Assessments done after-hours	67 (50%)*	2 (3%)	8 (11%)	77 (28%)
Number with no carer/support person present	19 (14%)	28 (40%)	38 (51%)*	85 (30%)

* *p* value < 0.001

SA: sexual assault

PAN: physical abuse and neglect

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BMJ Paediatrics Open

An audit of child maltreatment medical assessments in a culturally diverse, metropolitan setting

Journal:	<i>BMJ Paediatrics Open</i>
Manuscript ID	bmjpo-2017-000125.R3
Article Type:	Original article
Date Submitted by the Author:	07-Nov-2017
Complete List of Authors:	Raman, Shanti; South Western Sydney Local Health District, Community Paediatrics; University of New South Wales - Randwick Campus, School of Women's & Children's Health Hotton, Paul; South Western Sydney Local Health District, Department of Community Paediatrics
Keywords:	Child Abuse, Forensic Medicine, Children's Rights, Health services research, Accident & Emergency

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**An audit of child maltreatment medical assessments in a culturally diverse,
metropolitan setting**

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Word Count: 3136

Abstract

Objective: Child maltreatment (CM) is a major public health problem globally. While there is evidence for the value of medical examination in the assessment of CM, little is known about the quality of clinical assessments for CM. South Western Sydney (SWS) has a large metropolitan population with many vulnerable sub-groups. We aimed to describe acute presentations of CM in SWS over a three year period—with a focus on the quality of the clinical assessments. We wanted to determine if the cases assessed fulfilled established minimum standards for clinical assessment of CM, and if the assessments were performed in a child-friendly manner.

Design: We gathered data from the acute child protection database on all children <16 years referred for assessment between 2013 and 2015. We performed simple descriptive analysis on the data. We measured the assessment, report writing and follow-up against criteria for minimum standards for CM assessments, and identified if assessments were child-friendly from available clinical information.

Results: There were 304 children referred; 279 seen for acute assessment; most (73%) were for sexual abuse, 75 (27%) were for physical abuse/neglect. Over half the assessments identified other health concerns; joint assessments performed by paediatric and forensic doctors were better at identifying these health concerns than solo assessments. Most assessments were multi-disciplinary and used protocols; half were not followed up; a-third were performed after-hours; a third had no carer present during assessments.

Conclusions: We identified strengths and weaknesses in current CM assessments in our service. Locally relevant standards for CM assessments are achievable in the acute setting, more challenging is addressing appropriate medical and psychosocial follow-up for these children. While we have established baseline domains for measuring a child-friendly approach to CM assessments, more should be done to ensure these vulnerable children are assessed in a timely, child-friendly manner, with appropriate follow-up.

Keywords: Child abuse, Medical assessments, Child protection, Child-friendly, Quality healthcare, Health services

What is known about the subject

- Children who have been maltreated have known health and developmental concerns.
- A comprehensive medical assessment is an essential component of a multi-agency CM assessment.
- There is wide variation in the quality of, and access to, CM clinical assessments

What this study adds

- Locally relevant standards for clinical assessment of CM in the acute setting can be achieved if clinicians are well supported.
- Joint assessments and multi-disciplinary assessments are better at identifying other health concerns than solo assessments.
- Achieving appropriate medical and psycho-social follow-up of children following acute CM assessments is challenging.
- We have established simple baseline domains for the measurement of child-friendly CM assessments; more can be done to uphold children’s rights in acute settings.

Introduction

Since Henry Kempe drew global attention to physical abuse of children with the ‘battered child syndrome’, there has been an expansion in the literature within the field of child maltreatment (CM).¹⁻³ There is now clear acknowledgement that CM is a global public health and social welfare problem, with known significant short, medium and long term health consequences.⁴⁻⁸ As early as 1962, the role of medical professionals in their “duty and responsibility to the child to require a full evaluation of the problem”, was identified.¹ Over recent decades, there has been an increased understanding of the health needs of maltreated children,^{9,10} and expansion in clinical and forensic assessment guidelines.¹¹⁻¹⁴

A comprehensive medical assessment is an acknowledged essential component of a multi-agency investigation of CM.¹¹ There is now good evidence for performing comprehensive medical assessments for acute presentations of CM, not just for forensic purposes but because of the high yield of health concerns identified.¹⁵⁻¹⁷ Despite the plethora of guidelines available, little is known about the quality dimensions of these assessments. While there have been many attempts made to improve the quality of detection of CM in Emergency Departments (EDs) and frontline services,^{18,19} there has been little reported on improving the quality of medical assessments for acute CM presentations. Rose et al reported from their New Zealand study of child sexual assault, wide regional variation in the proportion of children and adolescents receiving a medical assessment, and variation in the quality of the service structure.¹⁶ Upholding children’s rights is acknowledged as an essential component of paediatric quality of care, and some work has gone into assessing quality in paediatric hospital services with a focus on children’s rights.²⁰ Dimensions of children’s rights include the assessment of equity of access, timeliness, effectiveness, safety, continuity of care, non-discrimination, child-friendly environment, communication, culturally appropriate and holistic care. Australian standards for the provision of child, adolescent and family-friendly health service facilities are available,²¹ but they tend to be focused on children’s wards, play facilities and separation between children or adolescents and adults in hospitals. Little is known about how child-centred or children’s rights promoting CM medical assessments are.

South Western Sydney (SWS) Local Health District is the largest, most populous health district in New South Wales (NSW), Australia, with a substantial child and youth population.²² It is a rapidly growing metropolitan population in the state of NSW; with a large

culturally and linguistically diverse population and many sub groups who are socially and economically at risk within its boundaries.²³ Raman et al,²⁴ previously identified and published locally relevant minimum standards for clinical assessment of child physical abuse and neglect (PAN) from a quality audit conducted in SWS. The authors highlighted wide variation in clinical practice in acute assessment and follow-up of children presenting at their most vulnerable to frontline clinical services. Following that audit, the Community Paediatrics team in SWS made improvements to the clinical assessment processes. A model of collaborative multi-disciplinary clinical assessments for acute CM was established in one hospital (a non-tertiary pediatric hospital) setting; the partnership included community paediatricians, social workers, sexual assault physicians and hospital-based paediatricians.

Our aims were to describe acute presentations of CM to this collaborative clinical service over a three year period. We wanted to determine if the cases assessed fulfilled previously established minimum standards for clinical assessment of CM within our service to see if service improvements had taken place.²⁴ We also wanted to see if the assessments were conducted in a child-rights promoting or child-friendly manner, within the constraints of an acute clinical setting. The results of this audit would further feed back into clinical service improvements in SWS, thereby contributing to and sustaining the quality improvement process.²⁵

Methods

As part of ongoing quality improvement initiatives in child protection, we audited acute presentations of CM to the unique collaborative clinical service in SWS, between the years 2013 to 2015. We collated data gathered from the acute child protection databases for all referrals for acute assessments to one hospital service in SWS of children and youth (<16 years old) between January 1st 2013 to 31 December 2015; including PAN and sexual assault (SA). These data were derived from two databases; one established by Community Paediatricians (CP) and the other from SA Services. PAN assessments were carried out by paediatricians, SA assessments were carried out either by SA doctors (forensic physicians) alone, especially if they were urgent, or collaboratively by CP and SA doctors either due to the age of the child or due to complexity of the clinical presentation. Those children that

appeared in both databases for the same assessment were categorized as a joint assessment conducted collaboratively by CP and SA physicians.

We reviewed all the clinical reports, clinical notes and follow up plans of children seen for CM assessments. Demographics, referral details, forensic, clinical and social outcomes were recorded from the available data. We used the clinical findings of the medical or forensic notes and reports to classify the medical examination across several dimensions. The health needs identified in the reports were classified as medical, developmental/learning, and behavioral/mental health or a combination of two or all areas. The referring services were contacted by the researchers to find out what happened to the children following their acute assessments. The assessments were then reviewed to see whether certain minimum standards were achieved, taken from the previously established criteria (Box 1).²⁴

Box 1: Minimum Standards for the clinical assessment of child maltreatment

- *All children presenting with suspected significant CM or referred by Community Services are assessed by a pediatric trained doctor, social worker, ± nurse as appropriate.*
- *All clinical assessments to follow clinical protocol*
- *Assessments to be discussed with most senior Consultant*
- *If child protection report is to be generated, it needs to be counter-signed by Consultant*
- *Protocols and report to be filed in the medical record*
- *Paediatric and psychosocial follow-up to be available to all children identified with abuse and neglect, across the region*

The medical records of the child, both hospital and sexual assault records were reviewed to see if medical and psychosocial follow up had occurred or not. If the follow up had not occurred, the notes were reviewed to see if an appointment had been offered, yet the child was not brought to the appointment. The reports and CM assessments were reviewed to assess how child friendly they were. We identified timeliness, appropriateness of assessment, presence of parent or carer, from relevant tools and standards which pertain to children's rights in healthcare.²¹ The measures used to determine how "child-friendly" a CM assessment was included:

1. length of time to assessment,

2. whether assessments were conducted within hours (Monday to Friday; 8am to 5pm) or after-hours,
3. a carer or support person was present with the child during assessment.

Relevant data extracted from the databases were entered into an Excel spreadsheet and simple descriptive analysis of the data was carried out using IBM SPSS Statistics for Windows, V23. Chi square tests and two-sample t tests were used to determine difference in proportions and difference in means.

Ethics approval was obtained via the lead Human Research Ethics Committee at Liverpool Hospital.

Results

Over the 3 year period (2013-2015), 304 cases were referred for an acute CM assessment, of which 25 (8%) were phone consultations. There were 279 cases seen for an acute assessment, 204 cases (73%) were seen for suspected SA and 75 cases (27%) were for suspected PAN assessments. Of the 279 cases, 15 cases (5%) seen were siblings of an index child and one child was seen for neglect. A detailed description of the demographics, referral and assessment findings of the children have been presented before.^{26,27} Median age of presentation for all types of assessments was 7 years (Interquartile Range (IR) of 3 -13 years); median age of children presenting for all SA assessments was 10 years (IR 4 – 14 years), for PAN was 3.5 years (Mann-Whitney U Test Z score = 6.84, p<0.0001). The majority of the children seen for CM assessment were identified as Anglo –Australian (n=77, 27%), with high numbers of Aboriginal (n=39, 14%) and Pacific Islander (n=35, 13%) children. Ethnicity was not documented in 37% percent of sole SA assessments. Police and/or child protection agencies made 82% of the referrals for acute assessments. A third of the SA assessments were joint (CP/SA) assessments. A third of all assessments were for forensic purposes.

Other health concerns were identified in 151 (54%) of the 279 children examined; learning difficulties were identified in 28 children (19%); 21 children (14%) had behavioural problems. Health concerns identified included growth and nutrition problems, dental caries, incomplete immunisation, pneumonia, hearing problems, visual problems, skin infections,

and current gastroenteritis. Physical health, learning difficulties and mental health concerns (3+ concerns) co-existed in 25 children (17%). For SA assessments, joint assessments (86%) identified more health concerns or were more likely to identify health concerns, than those performed by sole SA doctors (26%), ($\chi^2 = 72.33$, $p < 0.001$).

Table 1 shows the medical follow up of unmet health concerns; the majority (94%) of children with medical concerns were referred for medical follow up with 70% of them being seen. All seven children with unknown follow up were placed in out-of-home-care (OOHC). Eight (22%) of the 37 children that were not brought to follow up were placed in OOHC and 21 (57%) of them went home with their family but with ongoing statutory child protection agency involvement.

Insert table 1 here

Table 2 reports on various aspects of the clinical assessments judged against the predetermined criteria. Standards that were achieved for most assessments were that they were multi-disciplinary, used protocol, and had reports generated. SA reports that were not generated were due to child refusing medical examination and/or the case determined to be not consistent with abuse. All reports that were generated were countersigned by the senior consultant and placed into the medical records for that child. Both medical and psychosocial follow up was less successful. Overall, 195/279 (70%) children were offered a follow up medical appointment, and of those, 120 (62%) attended. Following the solo SA assessments, 82/134 (61%) were offered and 45/82 (55%) attended; of the joint SA assessments, 55/70 (79%) were offered and 35/55 (64%) attended; of PAN assessments, 58/75 (77%) were offered and 40/58 (69%) attended. Of the 53 children not offered a follow up medical assessment after their CM assessment, 30 (57%) had examinations that were not concerning or consistent with abuse and had no other unmet health needs identified. Two (11%) of the 53 children not offered medical follow up did have unmet health needs identified. Overall 156 (56%) of children seen acutely were offered psychological follow up, of those 101 (65%) attended. Following the solo SA assessments, 111/134 (82%) were offered psychological follow up and 73 (66%) attended; following joint SA assessments 38/70 (54%) were offered psychological follow up and 24 (63%) attended. By contrast, 7 of the 75 (9%) presenting for PAN assessments were offered psychosocial follow-up, there was a statistical difference compared to SA assessments ($\chi^2 = 90.3$, $p < 0.001$).

Insert table 2 here

Table 3 examines measureable aspects of the CM assessments that were child-friendly. The majority of CM assessments occurred within the recommended 24 - 72 hours, average was within 24 hours. After-hours assessments were more likely to be for SA ($\chi^2 = 14.71$, $p < 0.001$), with half the SA assessments being conducted after-hours. This was mainly for forensic need, with 54 (78%) of 69 after hours SA assessments completed for a forensic purpose. Three of the eight (38%) PAN assessments conducted after-hours were for forensic purposes. Over half of the children presenting for PAN assessments were unaccompanied by a carer or support person during the assessment, there was a significant difference compared to SA assessments ($\chi^2 = 19.76$, $p < 0.001$).

Insert table 3 here

Discussion

We believe that this attempt to appraise the quality dimensions of CM medical assessments in a busy, metropolitan, non-tertiary paediatric service is unique. While there are established guidelines for peer review for paediatricians working clinically in child protection,²⁸ improving the overall quality of multi-disciplinary clinical assessments has not been reported. Our evaluation found that the acute CM assessments undertaken in our service fulfilled many of the previously identified locally relevant standards established for quality, but fell short in achieving our objectives of adequate and appropriate follow-up, both medical and psychological. Importantly, we attempted to establish some baseline criteria for assessing how child-friendly this clinical service was, using available audit data on timeliness and appropriateness of the assessment, and whether the child was supported by the presence of a parent or parent figure. Reading et al,²⁹ argued strenuously for incorporating a children's rights view to widen the perspective on CM, thereby combining public-health and protective responses to CM. Certainly more can and should be done in this space.

We have already reported on the age, gender and ethnicity differentials in our clinic population.^{26,27} Almost 40% of SA assessments undertaken by SA physicians did not have ethnicity documentation. We feel strongly that ethnicity and/or cultural identity documentation is an essential aspect of the quality of the paediatric health record. Over half the children assessed for CM, had other health concerns identified, in keeping with other studies.^{15,30} In our service, joint assessments (i.e. those involving both paediatricians and

forensic physicians) were more likely to identify other health concerns; suggesting that multidisciplinary collaborative assessments involving paediatricians, social workers and forensic physicians were better at identifying co-existing health concerns, as has been shown elsewhere.³¹ Forensic assessments for SA performed as solo examinations had a shorter mean time to assessment, suggesting that the main focus was on achieving the forensic medical examination in a timely manner. It is likely that there were more unmet health and developmental concerns in those children assessed for SA. The majority of children that had an unmet health concern identified had medical follow up initiated as a result of the CM assessment which is similar to other studies.^{15,17} Findings from Thomas's study³⁰ showed over half of the unmet health needs identified at CM assessments were met in follow-up.

Minimum standards that we had previously identified for clinical CM assessments were mostly achieved in the acute setting; a pleasing result suggesting that many recommendations for CM assessments that had been put in place following the Raman et al 2014 study²⁴ were implemented and working. Clinical assessments for CM in our service were found to be comprehensive, multi-disciplinary, protocol driven and had senior consultant support. What remains a concern is the low numbers of both medical and psychosocial follow-up. One in five children seen for acute CM assessment was not offered medical follow up and two in five were not offered follow up psychological counselling. Of those that were offered follow-up, almost two-thirds attended medical and psychosocial follow-up. Follow-up of unmet health concerns was 70%, and just under 60% of assessments that were not offered follow-up, had no identified medical reason for follow-up. Follow-up remains an important part of CM assessments as there is a high risk of recurrence of maltreatment,^{32,33} and there are known long term health and developmental consequences of CM.^{4,6,7,34}

The majority of the assessments occurred within the recommended 24 - 72 hours. Joint assessments took longer to arrange; mostly due to the fact that these assessments were for historical sexual abuse. Over half the SA assessments were conducted after-hours; this was dictated by the need for a forensic examination including the collection of forensic samples. Getting forensic DNA may improve chances of substantiating the allegation of SA and lead to improvements in the overall criminal justice outcomes. Children are often brought to hospitals in the middle of the night unannounced by child protection statutory agencies and occasionally with no carer present. So health services have no initial control over when the child presents or who they present with. We identified that just under a quarter of SA assessments and 62% of PAN assessments that occurred after hours could have been deferred

to the following morning, based on whether there was acute forensic need. Clearly the service could improve in this regard and advocate for the child’s physical and emotional needs during these difficult assessments. What is of greater concern is that nearly a third of all CM assessments and half of all PAN assessments had no accompanying carer or guardian present to provide emotional support to the child, or indeed to provide an adequate medical history for the child. This can add challenges to the service including obtaining consent and interpreting examination findings. While clinical staff would not be in a position to dictate who accompanies the child or in what manner the child is brought in, improvements in collaboration between health and welfare services are warranted to ensure that children are appropriately supported emotionally.

Limitations

This collaborative child protection clinical service in SWS is a unique service for CM assessments and therefore it may not reflect practice elsewhere. We had to rely on what was documented in the clinical records and documentation can be notoriously variable.³⁵ Although follow-up in general was poor, it would seem that those with unmet health concerns identified may have been more proactively followed up. Children that had normal SA examinations with no other issues may have been referred and seen at another health service, such as sexual health centres. Likewise, some of the children that were placed in OOHC may have changed residential location and may have got their health needs addressed elsewhere. Nevertheless, the 15 children that were placed in OOHC who did not attend follow up, represent a failure of health and welfare systems collaborating in the best interests of the child. This is certainly an ameliorable issue if health and welfare services both acknowledged that medical and psychosocial follow up were key performance indicators for their sectors, and a measure of holistic care for vulnerable children.

Conclusions

The findings from this quality improvement project have already influenced clinical practice in child protection in this region.³⁶ We have demonstrated that locally relevant standards for CM assessments in the acute setting are achievable; more challenging is addressing appropriate medical and psychosocial follow-up for these children. Our audit demonstrates that multi-disciplinary or joint forensic/paediatric/social work examinations are better at identifying and responding to children’s health needs, and therefore are in the best interests of

the child. We know that children who have suffered abuse and neglect are more at risk of having their rights violated,^{37,38} and need special consideration in health settings. We have established some baseline domains for measurement for a child-friendly approach to CM assessments, and we can improve our own service delivery via better collaborative multi-disciplinary action. However further work is certainly warranted in improving the understanding of how the best interests of vulnerable children can be served in the acute assessment setting, particularly incorporating the views of children and young people themselves.

A) Funding statement:

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

B) Competing Interests Statement:

We declare that there are no competing interests

C) Contributorship Statement:

SR planned, conceived and designed the study, helped with data analysis and did the writing up. PH helped with planning, did all the data gathering and analysis, helped with writing up.

Table 1: Medical follow-up of identified health and developmental concerns

Health Concerns	Attended follow-up assessment	Offered follow-up, <i>was not brought*</i>	No follow-up appointment offered	Unknown if follow-up occurred
Medical alone n = 40	27 (68%)	9 (23%)	0	4 (10%)
Learning difficulties alone n = 28	19 (68%)	6 (21%)	1 (3%)	2 (7%)
Behavioural problems alone n = 21	17 (81%)	4 (19%)	0	0
2 Concerns n = 37	26 (70%)	10 (35%)	1 (3%)	0
3+ concerns n = 25	16 (64%)	8 (32%)	0	1 (4%)
Total Health Concerns n = 151	105 (70%)	37 (24%)	2 (1%)	7 (5%)

*the term “was not brought” preferred to “did not attend”, as these are dependent children

Table 2: Assessing if minimum standards were achieved in child maltreatment clinical assessments

Criteria	Sole SA n = 134	Joint SA n = 70	PAN n = 75	CM (total) n = 279
Trained Doctor completed assessment	134 (100%)	70 (100%)	75 (100%)	279 (100%)
Social Worker present	134 (100%)	70 (100%)	62 (83%)	265 (95%)
Protocol used	130 (97%)	70 (100%)	75 (100%)	275 (99%)
Case discussed with most Senior Doctor	134 (100%)	70 (100%)	75 (100%)	279 (100%)
Report generated	114* (100%)	70 (100%)	75 (100%)	259* (100%)
Attended Medical follow-up assessment	45 (34%)	35 (50%)	40 (53%)	120 (43%)
<i>Offered follow-up but was not brought</i>	37 (28%)	20 (29%)	18 (24%)	75 (27%)
<i>No follow-up appointment offered</i>	27 (20%)	14 (20%)	12 (16%)	53 (19%)
<i>Unknown</i>	25 (19%)	1 (1%)	5 (7%)	31 (11%)
Attended Psychological follow-up assessment	73 (55%)	24 (34%)	4 (5%)	101 (36%)
<i>Offered a follow-up but was not brought</i>	38 (28%)	14 (20%)	3 (4%)	55 (19%)
<i>No follow-up appointment offered</i>	17 (13%)	24 (34%)	68 (90%)	109 (39%)
<i>Unknown</i>	6 (4%)	8 (12%)	0 (0%)	14 (5%)

SA: sexual assault

PAN: physical abuse and neglect

CM: child maltreatment

*Only reports that were needed were generated

Table 3: Were acute child maltreatment clinical assessments child-friendly?

	Sole SA n = 134	Joint SA n = 70	PAN n = 75	CM (total) n = 279
Median time- referral to assessment (days)	0	1	0	0
Interquartile range (IQR) in days	0 - 0	0 - 5	0 - 1	0 – 1
Assessments done after-hours	67 (50%)*	2 (3%)	8 (11%)	77 (28%)
Number with no carer/support person present	19 (14%)	28 (40%)	38 (51%)*	85 (30%)

* *p* value < 0.001

SA: sexual assault

PAN: physical abuse and neglect

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