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Nurses' and physicians' reported difficulties and enablers to recognising and reporting child abuse in Swiss paediatric emergency and paediatric surgery departments – an observational study

Marlene Brigitte Berchtold[a], Christian Wüthrich[bc], Daniel Garcia[de], Steffen Berger[f], Ruth Mari Löllgen[dgh]

[a] Department of Paediatrics, Inselspital, University Hospital, University of Bern, Switzerland
[b] Department of Paediatric Psychiatry, Inselspital, University Hospital, University of Bern, Switzerland
[c] Praxis für Kinder- und Jugendpsychiatrie, Bern, Switzerland
[d] Pediatric Emergency Department, Department of Paediatrics, Inselspital, University Hospital, University of Bern, Switzerland
[e] Kinderpraxis Neuhegi, Winterthur, Switzerland
[f] Department of Paediatric Surgery, Inselspital, University Hospital, University of Bern, Switzerland
[g] Pediatric Emergency Department, Astrid Lindgrens Children´s Hospital, Karolinska University Hospital Solna, Stockholm, Sweden
[h] Department of Women's and Children's Health, Karolinska Institutet, Stockholm, Sweden

Summary

BACKGROUND: Under-detection and under-reporting of child abuse remains a considerable challenge in paediatric care, with a high number of cases missed each year in Switzerland and abroad. Published data regarding the obstacles and facilitators of detecting and reporting child maltreatment among paediatric nursing and medical staff in the paediatric emergency department (PED) are scarce. Despite the existence of international guidelines, the measures taken to counteract the incomplete detection of harm done to children in paediatric care are insufficient.

AIM: We sought to examine up-to-date obstacles and enablers for detecting and reporting child abuse among nursing and medical staff in PED and paediatric surgery departments in Switzerland.

METHODS: We surveyed 421 nurses and physicians working in PEDs and on paediatric surgical wards in six large Swiss paediatric hospitals using an online questionnaire between February 1, 2017, and August 31, 2017.

RESULTS: The survey was returned by 261/421 (62.0%) respondents (complete n = 200, 76.6%; incomplete n = 61, 23.3%) with a preponderance of nurses (n = 150/261; 57.5%), 106/261 (40.6%) physicians, and 1/261 (0.4%) psychologists (n = 4/261; 1.5% missing profession). The stated obstacles to reporting child abuse were uncertainty about the diagnosis (n = 58/80; 72.5%), feeling unaccountable for notification (n = 28/80; 35%), uncertainty of whether reporting has any consequences (n = 5/80; 6.25%), lack of time (n = 4/80; 5%), forgetting to report (n = 2/80; 2.5%), and parental protection (n = 2/80; 2.5%) (unspecific answer, n = 4/80; 5%, multiple answers were possible, therefore items don not sum up to 100%). Even though most (n = 249/261 95.4%) respondents had previously been confronted with child abuse at/outside work, only 185/245 (75.5%) reported cases; significantly fewer nursing (n = 100/143, 69.9%) than medical staff (n = 83/99, 83.8%) (p = 0.013). Furthermore, significantly more nursing (n = 27/33; 81.8%) than medical staff (n = 6/33; 18.2%) (p = 0.005) reported a discrepancy between the number of suspected and reported cases (total 33/245 (13.5%). An overwhelming amount of participants were strongly interested in mandatory child abuse training (n= 226/242, 93.4%) and in the availability of standardised patient questionnaires and documentation forms (n = 185/243, 76.1%).

CONCLUSION: In line with previous studies, insufficient knowledge about and lack of confidence in detecting the signs and symptoms of child abuse were the principal obstacles to reporting maltreatment. To finally address this unacceptable gap in child abuse detection, we recommend the implementation of mandatory child protection education in all countries where no such education has been implemented in addition to the introduction of cognitive aid tools and validated screening tools to increase child abuse detection rates and ultimately prevent further harm to children.

Dr. Ruth M. Löllgen
Paediatric Emergency Department
Astrid Lindgrens Children´s Hospital
Karolinska University Hospital Solna
Stockholm
Sweden
ruth.loellgen[at]gmail.com

Introduction

Prevention and detection of child abuse and family violence is paramount to prevent further harm to children [1–4]. However, despite a legal, ethical, and moral responsibility of health care providers (HCPs) to recognise and report child abuse and neglect (CAN), insufficient levels of awareness and skills among medical and nursing staff working with children often lead to under-detection and under-reporting of victims [1, 5, 6]. Maltreatment of children is a serious global public health concern, with incidence rates at emergency departments (EDs) in the U.S. of 23.1 per 1000 children [7], 30 per 1000 children in the Netherlands [8], 1656 reported cases per 1.74 million children in Switzerland [9], and over 700 annual deaths

in children under 15 years of age in the European World Health Organization region [10]. Only 5% of child maltreatment cases are reported to child protection services (CPS) [11]. The number of unknown or unreported cases is likely much higher as most criminal offenses occur within the family, and child victims often are too young to ask for help [6]. Interventions to improve detection rates are heterogenous and include screening tools, mandatory staff education, interdisciplinary child protection team development, standardised documentation, and referral pathways in the ED; however, these interventions are used inconsistently [6]. Although excellent skills are of utmost importance for early detection of child abuse, specific child maltreatment education is not yet a mandatory part of pre- or postgraduate academic curricula in Switzerland and many European countries [12, 13]. With a small investment of time, the confidence in one's ability to detect child maltreatment could be markedly increased [14, 15]. In many cases, paediatric emergency departments (PEDs) and paediatric surgery departments are the first place of contact with the health care system for child abuse victims and their parents or caregivers.

There is a knowledge gap regarding provider-reported barriers and facilitators to detecting and reporting child abuse in PED and paediatric surgery settings in Switzerland. Evidence in the current literature mostly stems from nurses, family/paediatric nursing practitioners, midwives, or physicians working with children in general EDs. The published evidence stems from survey studies (n = 185, Israel [16]; n = 182, U.S. [17]), self-reported data collection methods (n = 145, Saudi Arabia [18]), literature reviews [1, 19], or semi-structured interviews (n = 29, U.S. [20]).

Aim of the study

We aimed to examine nurses' and physicians' beliefs regarding the obstacles and enablers to recognising and reporting child abuse in Swiss PEDs and on paediatric surgical wards using an online survey. We hypothesised that our results, in a culturally different setting, without mandatory child protection education, would vary from previous studies [16, 20]. Based on our results, we aimed to create a recognition aid tool to facilitate and improve the detection and reporting of child abuse.

Material and methods

Setting

An observational, cross-sectional, multicentre, survey-based study was conducted in three tertiary PEDs (Bern, Basel, Zurich), three rural PEDs (Winterthur, Lucerne, Aarau), and three tertiary paediatric surgery departments (Bern, Basel, Lucerne) in German-speaking Switzerland.

Survey participant selection and sample size

For the selection of potential participants, the department heads of eight paediatric institutions (with a PED and/or paediatric surgery department) in German-speaking Switzerland were approached for participation in the survey. Once the participation of the department was confirmed, a departmental E-mail contact list for nursing and medical staff was obtained from the department secretary for electronic distribution of the survey. Participation in the survey was encouraged and promoted by MB through on-site presentations of the study purpose and electronic information sent together with the survey.

To calculate the sample size, we estimated the size of the entire population of nursing and medical staff working in PEDs and paediatric surgery departments in the German-speaking part of Switzerland (approximately 255 physicians and 510 nurses). We then selected a convenience sample using a non-probability design (due to the declined participation in the survey of a subset of institutions) to achieve a final sample size of 382, representing approximately 50% of the relevant population. A total of 421 nurses (except from Lucerne paediatric surgery department) and physicians employed by the participating institutions were surveyed via an online questionnaire between February 1, 2017, and August 31, 2017 (figure 1).

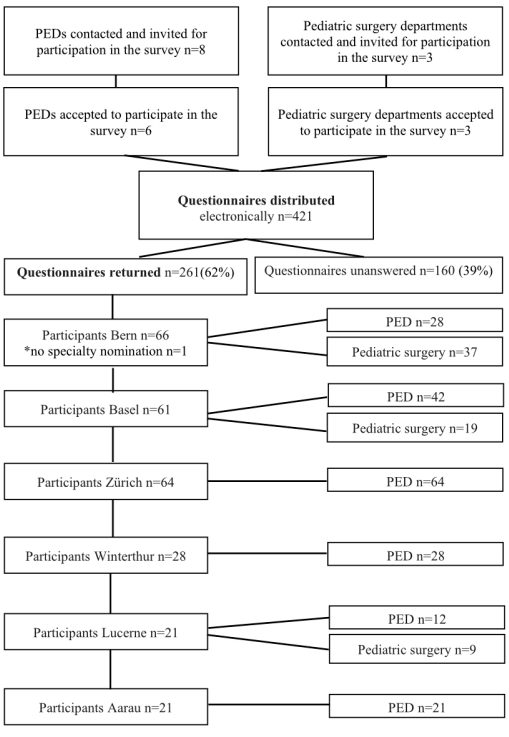
Survey development

A survey that measures nurses' and physicians' difficulties and enablers to recognising and reporting child abuse in our setting was not readily available; therefore, we decided to create our own survey that was applicable to our setting.

We modified the Delphi technique to establish a structured questionnaire exploring nurses' and physicians' difficulties and enablers to recognising and reporting child abuse. A two-round feedback process was used to capture the collective opinion of suitable experts [21].

RML drafted the first version of the questionnaire based on the literature, expert knowledge, and expert discussions. The first draft was composed of closed-end, drop-down questions including the answer option "other" where participants could provide an answer in their own words if

Figure 1: Participant selection chart.



none of the other options applied, multiple choice questions, yes-or-no questions in part with an open-ended answer option, and Likert scale questions with 1 representing "extremely/very" (e.g., competent), 2 "rather" (e.g., competent), 3 "neither" (e.g., competent nor incompetent, neutral), 4 "rather" (e.g., incompetent), and 5 "extremely/very" (incompetent). All feedback rounds were conducted iteratively through consultation and feedback. In the first round, recourse was taken to feedback from a group of experts (two senior PED nurses, one PED consultant, one consultant paediatric surgeon and member of CPS at the University Hospital, Inselspital Bern). To collect the experts' feedback, we used open-ended questions with the scope of prioritising the most relevant survey questions and topics for recognition of child abuse.

All the participating stakeholders were invited by e-mail to complete the questionnaire. They were asked to comment on the content, comprehensibility, grammar/spelling, completeness, and relevance of the survey items to suggest changes or decide whether the items should be included in the final competence list. This also included checking that the survey did not contain confusing, leading, nested, or double-barrelled questions. The face validity of the survey was established during the first feedback round, where experts read the questionnaire and evaluated whether the questions effectively captured the topic under investigation. After completing the first round, the facilitator (RML) read all the answers to the open-ended questions, edited, merged similar answers/suggestions, and grouped them into categories to compile the second-round questionnaire. In the second feedback round, the edited version was pilot tested by four population-based participants who were invited by E-mail. The pilot data from their answers in this edited version was checked for consistency with the questions. Items included in the questionnaire were again repiloted, and final edits were made based on the answers received. At the end of the second round, consensus was reached, resulting in the final 19-item version of the survey. The survey covers the following domains: recognition of CAN, reporting of CAN, support resources, confidence in recognition and approaching the child and the family, and child abuse education. The original questionnaire was written in German (available from the authors upon request) and was translated to English for the purpose of publication (table 1). The final online version was again pilot tested for ease of completion and technical functioning by MB to confirm its comprehensibility and the usefulness of the response options.

Table 1:
Questionnaire "Nurses' and physicians' difficulties and enablers to recognising and reporting child abuse."

No	Question	Response options
1	What is your gender?	Female
		Male
2	How old are you (in years)?	<20
		20–30
		31–40
		41–50
		51–60
		>60
3	What is your level of training?	Medical student
		Medical trainee
		With specialist certificate
		Without specialist certificate
		Consultant
		With specialist certificate
		Without specialist certificate
		Senior Consultant
		Medical director/head of department
		Nursing assistant
		Health care assistant (German FaGe*) in training
		Health care assistant (German FaGe*)
		Nursing student
		Registered nurse
		Other (please describe)
4	In which department do you work?	Paediatric emergency department (PED)
		Paediatric surgery department
5	How long have you been working in the PED and/or in paediatric surgery department?	<1 year
		1–3 years
		>3 years
6	What forms of child abuse have you encountered (at and outside the workplace)? (Multiple answers possible)	Physical abuse
		Emotional abuse
		Sexual abuse
		Neglect (emotional and/or physical)
		Munchhausen by proxy
		None
7	How confident do you feel about recognising child abuse in the PED or in the paediatric surgery department?	Very confident
		Rather confident
		Neither confident nor unconfident
		Rather unconfident
		Very unconfident
8	If you chose "rather unconfident" or "very unconfident" in Question 7, why did you choose this answer? (Multiple answers possible)	Lack of experience
		Respect for taboo topic
		Difficulty to distinguish between accidental and non-accidental events
		Other (please describe)
9	In your clinical role, when do you report a suspicion of child abuse? (Multiple answers possible)	When I am sure that child abuse is the correct diagnosis
		When I suspect child maltreatment
		When I am considering child abuse as a possible diagnosis
		Other (please describe)
10	What do you do if you suspect child abuse? (Multiple answers possible)	I inform a colleague who is at the same level of training as myself
		I inform the consultant on call

Online survey distribution and data collection

The survey was anonymous. We used the online tool SurveyMonkey® (SurveyMonkey Inc., San Mateo, California, USA) [22] for electronic distribution of the questionnaire. Both fully and partially completed surveys were included for analysis.

Primary outcome: Frequency (in absolute numbers and percentage) of obstacles and enablers to recognising and reporting child abuse over a 12-month period.

*Secondary outcomes:*a) Number of suspected versus reported child abuse cases over the last 12 months, b) frequency of drivers for and action taken when reporting child

		I inform the child protection services of my hospital
11	Do you know whether there are child protection services at your hospital?	Yes
		No
12	How often have you suspected a case of child abuse in the PED or on the surgical ward in the last 12 months?	Never
		Once
		Twice
		Three times
		Four times
		Other (please describe)
13	How often have you suspected*and reported* a case of child abuse in the PED or on the surgical ward in the last 12 months?	Never
		Once
		Twice
		Three times
		Four times
		Other (please describe)
14	If you did not report all your suspected cases, what was the reason? (Multiple answers possible)	Uncertainty of whether it was really child abuse
		Lack of time for reporting
		Uncertainty of whether my report has any consequences or leads to investigation
		Protection of the child and their family
		I felt that it is not my responsibility
		I forgot to report
		Other (please describe)
15	What made you report a suspicion of child abuse? (Multiple answers possible)	Discovery of physical injuries (e.g., stocking-like scalding patterns, injuries to back and buttocks)
		Ambiguous history (e.g., injury cannot be explained by the psychomotor development of the child, different statements by different relatives/caregivers)
		Expressed suspicion of a parent/relative
		Suspicious behaviour of the child
		Suspicious behaviour of a parent/caregiver
		Repeated hospital presentations with suspicious injuries, history, or behaviour
		Referral with suspicion of child abuse
		Other (please describe)
16	If you suspected child abuse, how competent did you feel addressing the child/parents/relatives with the suspicion?	Extremely competent
		Rather competent
		Neither competent nor incompetent
		Rather incompetent
		Extremely incompetent
17	Would you like to know more about how to recognise child abuse?	Yes
		No
		If yes, which format would you prefer? (Multiple answers possible)
		Leaflet
		Staff education
		E-learning programme
		Other (please describe)
18	Would you like to have access to a standardised questionnaire and/or documentation form as a support for dealing with suspected child abuse the next time you are confronted with a suspicious situation?	Yes
		No
19	Do you have ideas/proposals for the improvement of detection and/or reporting of child abuse in the PED or on the surgical ward?	Yes (please specify here)
		No

FaGe* = Fachangestellte/r Gesundheit = Nursing assistant profession in Switzerland, usually subordinated to qualified nursing professionals.

abuse, c) level of confidence in the communication with the family, d) interest in gaining more knowledge about child abuse, and e) interest in the availability of standardised questions and documentation forms when encountering child abuse on a 5-point Likert scale, respectively (c-e).

Statistical analysis

SPSS 25 and Excel were used for data analysis. Categorical variables are presented as frequencies and percentages. The Chi-squared test was used to determine whether there were statistically significant differences between the observed frequencies in various categorical variables or participants. Statistical significance was defined as $p < 0.05$. Missing, conflicting, or ambiguous answers were coded as missing data. Analysis of the available data was performed to minimise bias from missing data. In the tables, we report solely valid percentages, (i.e., each reported analysis is accompanied by the actual number of subjects included in that analysis). Participants with a missing value for each question did not contribute to the analysis of that question. Ambiguous and conflicting answers were excluded from the analysis and were treated as missing data.

Qualitative analysis of qualitative data

We performed qualitative analysis of this small set of qualitative data using content analysis. The data from the participants' descriptions in their own words were categorised into consistent groups (e.g., "someone else reported it" and "it was already reported") and were accounted for in tables (e.g., table 5) or summarised in the explanatory text following the tables.

Development of the cognitive aid tool

We aimed to design a comprehensive decision aid pocket card to support staff in the detection of child abuse in the ED. MB and RML drafted the first version of this tool containing six parts that were based on validated tools or published evidence. Experts from the CPS at Astrid Lindgren's Children's Hospital, Sweden were invited by e-mail to review the first draft and comment on the content, comprehensibility, grammar/spelling, completeness, and relevance of the survey items to suggest changes or decide whether the items should be included in the final version. After reception of the review comments, the facilitator (RML) reviewed the comments, edited, merged similar answers/suggestions, and compiled the current version. Consensus was reached on all items except for the "Typical locations for accidental and non-accidental injuries' item, which the authors decided not to replace with the other suggested items (e.g., TEN-4-FACESp, a validated tool to help screen children under 4 years of age with bruising to differentiate accidental from non-accidental injury [23]). The final ver-

sion of the tool comprised six parts (see appendix): 1) six screening questions adapted from the validated ESCAPE instrument [24] to be used in case of suspected CAN or for the implementation of a general screening in the ED, 2) alarming clinical/behavioural findings of abuse/neglect within the context of the history [25], 3) child and 4) family factors that increase vulnerability to CAN, 5) typical locations for accidental and non-accidental injuries [26], and 6) suggested consensus and experience-based example questions for approaching the child and their family for suspected child abuse. We found this especially useful to respond to the expressed (emotional) challenge of approaching the child and their family in case of suspected CAN and to facilitate a possible entry point for the conversation that could save a life. TEN-4-FACESp is listed and referenced as an additional resource for use in children under 4 years of age [23]. Written permission was obtained for reproduction of the "Typical locations for accidental and non-accidental injuries" figure from the original authors. We encourage users to insert the contact details of local CPS and a link to the local hospital CAN reporting policy, as this may vary widely between hospitals.

Ethical consent and study protocol

The Ethics Committee of the Children's Hospital, Inselspital, waived ethical approval for this type of survey study. A study protocol was not required for this study and was not prepared.

Results

Study participants

Overall, 261/421 employees from paediatric emergency medicine and paediatric surgery departments of six different hospitals returned the survey (62% response rate) (figure 1). All questionnaires were included for analysis whether fully or partially completed: completed, n = 200 (76.6%); incomplete, n = 61 (of which two-thirds [n = 40] only had 1–2 missing answers, n = 3 had 3, n = 2 had 4, n = 1 had 8, n = 7 had 10, n = 6 had 11, and n = 2 had 14 missing answers). The data presented in this paper represent the results from the pilot survey on our intended respondents (n = 261). Participant demographics are described in table 2. The participants were mostly females (n = 202/254, 79.5%); they included registered nurses (n = 150/256, 58.6%) and medical trainees without specialist certificate (n = 45/257, 17.5%).

In this sample, 82.9% (203/245) of participants suspected CAN during the 12-month period investigated in this survey (total answers n = 245, missing n = 15) (table 3), and 95.8% (n = 250/261) had been previously confronted with a child abuse case (table 2). Although this sub-sample did not include all participants, it allowed us to obtain sufficient valid data.

PED staff (n = 153/188, 81.4%) more frequently reported child abuse than paediatric surgeons (n = 32/57, 56.1%) (p = 0.0001); likewise, paediatric surgeons (n = 25/57, 43.9%) "never reported" child abuse significantly more often than paediatric emergency physicians (n = 35/188, 18.6%) (p = 0.0001) (figure 2).

Figure 2: Overall suspected and reported child abuse and neglect and by profession (paediatric emergency and paediatric surgery). * Missing specialty nomination n = 1

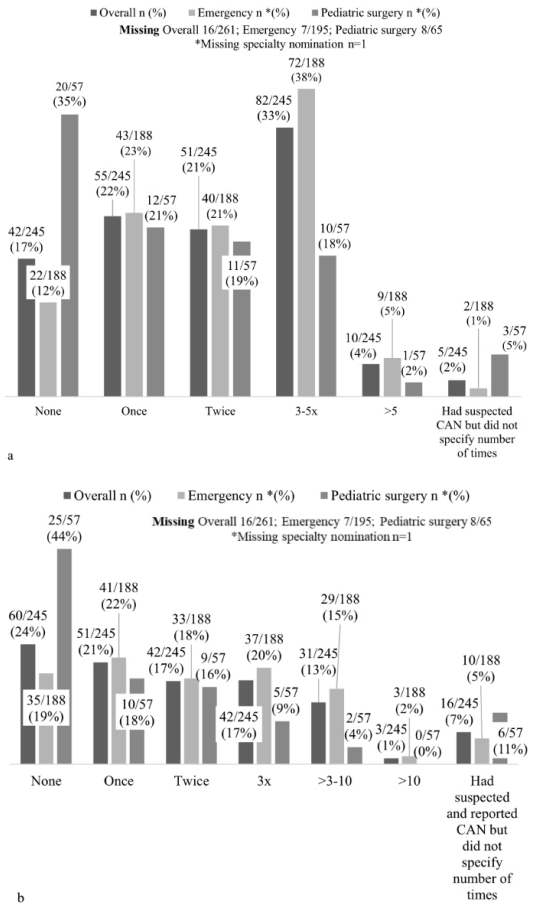
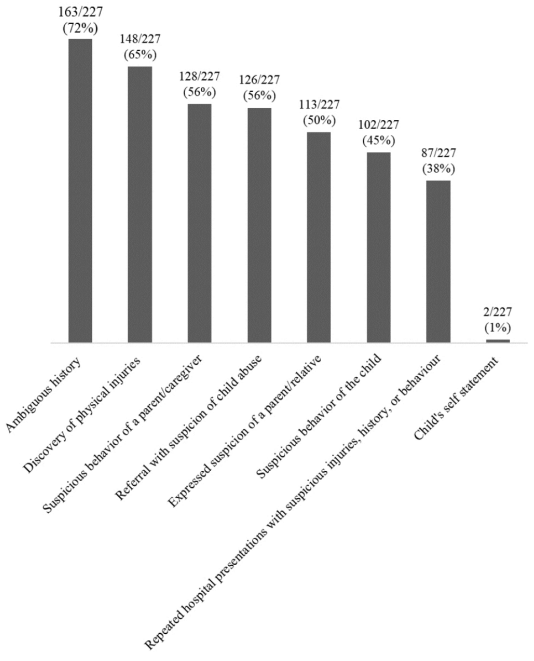


Figure 3: Triggers for paediatric emergency or paediatric surgery staff to report suspected child abuse (more than one answer was possible, so the percentages do not sum up to 100).



Interestingly, we found a discrepancy between the number of suspicions and reports of CAN in 44/245 (18%) respondents, with a preponderance of suspicions (on average 2.9 suspected versus 1.1 reported cases) and various acknowl-

Table 2:
Participant demographics.

	Overall respondents n (%)	Paediatric emergency department (PED)* n (%)	Paediatric surgery* n (%)
Hospital	n = 261/261 (100)	n = 195/260 (75)	n = 65/260 (25)
Bern (University hospital)	66/261 (25.3)	28/195 (14.4)	37/65 (56.9)
Basel (University hospital)	61/261 (23.4)	42/195 (21.5)	19/65 (29.2)
Zurich (University hospital)	64/261 (24.5)	64/195 (32.8)	0/65 (0)
Winterthur (Teaching hospital)	28/261 (10.7)	28/195 (14.4)	0/65 (0)
Lucerne (Teaching hospital)	21/261 (8.0)	12/195 (6.2)	9/65 (13.8)
Aarau (Teaching hospital)	21/261 (8.0)	21/195 (10.7)	0/65 (0)
Gender, n (%)	n = 254/261 (97.3)	n = 191/195 (97.9)	n = 62/65 (95.4)
Female	202/254 (79.5)	157/191 (82.2)	45/62 (72.6)
Male	52/254 (20.5)	34/191 (17.8)	17/62 (27.4)
Missing	7/261	4/195	3/65
Age, n (%)	n = 255/261 (97.7)	n = 192/195 (98.5)	n = 62/65 (95.4)
<20 years	4/255 (1.6)	1/192 (0.5)	3/62 (4.8)
20–30 years	74/255 (29)	53/192 (27.6)	21/62 (33.9)
30–40 years	90/255 (35.3)	77/192 (40.1)	12/62 (19.4)
41–50 years	54/255 (21.2)	39/192 (20.3)	15/62 (24.2)
51–60 years	22/255 (8.6)	16/192 (8.3)	6/62 (9.7)
>60 years	11/255 (4.3)	6/192 (3.1)	5/62 (8.1)
Missing	6/261	3/195	3/65
Professional group, n (%)	n = 256/261 (98.1)	n = 192/195 (98.5)	n = 64/65 (98.5)
Nurse	150/256 (58.6)	113/192 (58.9)	37/64 (57.8)
Physician	106/256 (41.4)	79/192 (41.1)	27/64 (42.2)
Registered psychologist	1/256 (0.4)		
Missing	4/261	3/195	1/65
Level of training, n (%)	n = 257/261 (98.5)	n = 192/195 (98.5)	n = 64/65 (98.5)
Medical profession			
Medical student	1/257 (0.4)	1/192 (0.5)	0/64 (0)
Medical trainee without specialist certificate	45/257 (17.5)	33/192 (17.2)	12/64 (18.8)
Medical trainee with specialist certificate	6/257 (2.3)	5/192 (2.6)	1/64 (1.6)
Junior consultant without specialist certificate	5/257 (1.9)	3/192 (1.6)	2/64 (3.1)
Consultant with specialist certificate	37/257 (14.4)	30/192 (15.6)	7/64 (10.9)
Senior consultant	10/257 (3.9)	6/192 (3.1)	4/64 (6.25)
Medical director/head of department	2/257 (0.8)	1/192 (0.5)	1/64 (1.6)
Nursing profession			
Nursing assistant	3/257 (1.2)	0/192 (0)	3/64 (4.7)
Nursing student	1/257 (0.4)	1/192 (0.5)	0/64 (0)
Registered nurse	140/257 (54.5)	109/192 (56.8)	31/64 (48.4)
Health care assistant** student	1/257 (0.4)	0/192 (0)	1/64 (1.6)
Health care assistant**	5/257 (1.9)	3/192 (1.6)	2/64 (3.1)
Other profession			
Registered psychologist	1/257 (0.4)		
Missing	4/261	3/195	1/65
Work experience, n (%)	n = 260/261 (99.6)	n = 195/195 (100)	n = 65/65 (100)
<1 year	53/260 (20.4)	44/195 (22.6)	9/65 (13.8)
1–3 years	59/260 (22.7)	48/195 (24.6)	11/65 (16.9)
>3 years	148/260 (56.9)	103/195 (52.8)	45/65 (69.2)
Missing (psychologist participant)	1/261	0/195	0/65
Previous confrontation with child abuse at or outside work (multiple answers were possible)	n = 250/261 (95.8)	n = 190/195 (97.4)	n = 59/65 (90.8)
Physical abuse	235/250 (94)	183/190 (96.3)	52/59 (88.1)
Neglect	216/250 (86.4)	167190 (87.9)	49/59 (83.1)
Emotional abuse	169/250 (67.6)	137/190 (72.1)	32/59 (54.2)
Sexual abuse	153/250 (61.2)	134190 (70.5)	19/59 (32.2)
Munchhausen by proxy syndrome	115/250 (46)	91/190 (47.9)	24/59 (40.7)
None	11/261 (4.2)	5/195 (2.6)	6/65 (9.2)
Missing (psychologist participant)	1/261	0/195	0/65

PED = Paediatric emergency department. * Missing specialty nomination n = 1, ** FaGe (German: Fachangestellte/r Gesundheit) is a nursing assistant profession in Switzerland, usually subordinated to qualified nursing professionals.

edged reasons for not reporting a suspicion; the most common rationale being uncertainty as to whether child abuse was the correct diagnosis (n = 21/44, 47.7%) (figure 2).

Considering the reasons for not reporting suspected child abuse (table 3), we can assume that in a further 11/44 cases, the suspicion was eventually reported (e.g., "someone else reported it", "it was already reported", or "reported to the consultant"). One response was excluded from the analysis as the ratio of suspected and reported to suspected cases was inappropriate, most likely due to misunderstanding of the question (the respondent stated that she had reported all her suspicions in the end). The characteristics of the remaining 33/245 (13.5%) respondents with diverging answers are detailed in table 4. Significantly more females than males (p = 0.039) and significantly more nurses than physicians (p = 0.005) indicated higher numbers of CAN suspicions than reports. Likewise, staff with longer work experience were less likely to report initially suspected CAN than staff with less work experience (p = 0.008). Furthermore, CAN was reported more often at university hospitals (n = 184/100 respondents) than smaller teaching hospitals (n = 168/100 respondents). The average number of reported cases per person ranged from 1.3 to 2.5 in the different hospitals.

Triggers to report a suspicion of child abuse are depicted in figure 3.

Self-reported barriers and enablers for the recognition and reporting of CAN, person informed about the suspected child abuse, and preferred educational tools for child abuse education are listed in table 5.

The self-reported levels of confidence in recognising child abuse and competency in addressing the child/parents/rel-

Table 3:
Number of suspected child abuse cases over the last 12 months and reasons for not reporting suspected child abuse.

Occasions of suspecting but not reporting child abuse over the last 12 months (n = 44)	**n (%)**
Once	13/44 (29.5)
Twice	15/44 (28.9)
Three times	4/44 (8.9)
Four times	6/44 (13.3)
Five times or more	6/44 (13.3)
Reasons for not reporting child abuse cases, indicated by respondents who suspected more cases than they reported (n = 44)	**n (%)**
Uncertainty of whether child abuse was the correct diagnosis	21/42 (50)
Not my task/someone else reported it	9/42 (21.4)
Reported to the senior consultant, who decided differently/unsure whether it was subsequently reported	5/42 (11.9)
Uncertainty of whether the report has any consequences/causes investigation	4/42 (9.5)
Lack of time	3/42 (7.1)
Missing	2/44
Hypothetical reasons for not reporting child abuse cases, indicated by those who reported all their suspicions; more than one answer was possible (n = 80)	**n (%)**
Uncertainty of whether child abuse was the correct diagnosis	58/76 (76.3)
Lack of time	4/76 (5.3)
Concern about potential consequences for the patient or the staff	5/76 (6.6)
Not my task/someone else reported it	28/76 (36.8)
Parental protection	2/76 (2.6)
Forgotten to report	2/76 (2.6)
Missing	4/80

Table 4:
Characteristics of participants with a discrepancy in the number of suspected versus reported child abuse cases.

Characteristics (n = 33)		**n (%)**	
Sex	Male	2/32 (6.3)	p = 0.039
	Female	30/32 (93.8)	
	Missing	1/33	
Profession	Health care assistant	2/33 (6.1)	p = 0.005
	Registered nurse	25/33 (75.8)	
	Physician	6/33 (18.2) (junior medical trainee without specialist certificate: n = 2; junior medical trainee with specialist certificate: n = 1; consultant without specialist certificate: n = 1; consultant with specialist certificate: n = 2)	
Age (years)	<20	0/33 (0)	p = 0.452
	20–30	12/33 (36.4)	
	31–40	13/33 (39.4)	
	41–50	3/33 (9.1)	
	51–60	4/33 (12.1)	
	>60	1/33 (3.0)	
Work experience (years)	<1	1/33 (3.0)	p = 0.008
	1–3	13/33 (39.4)	
	>3	19/33 (57.6)	
Discipline	Emergency	26/33 (78.8)	p = 0.798
	Surgical ward	7/33 (21.2)	

Table 5:
Self-reported barriers and enablers of the detection and reporting of child abuse, the person informed about the suspected child abuse, and the preferred educational tool for child abuse education.

Barriers to the recognition of CAN (n = 64) (question 8)		**n (%)**
Lack of exposure/experience		34/64 (53.1)
Difficulty distinguishing between accidental and non-accidental events		26/64 (40.6)
Respect for a taboo topic		3/64 (4.7)
Lack of transparency of the reporting process		1/64 (1.6)
Missing		5/69
Obstacles to reporting CAN (n = 80)		
Doubts about the diagnosis		58/80 (72.5)
Feeling unaccountable for notification		28/80 (35)
Uncertainty of whether reporting has any consequence		5/80 (6.25)
Lack of time		4/80 (5)
Forgetting to report		2/80 (2.5)
Parental protection		2/80 (2.5)
Unspecific answer		4/80 (5)
Enablersfor the of CAN (n = 245/261) (question 9)		**n (%)**
Suspicion of child maltreatment		127/245 (51.8)
Child abuse was a differential diagnosis		115/245 (46.9)
Certainty about the diagnosis		3/245 (1.2)
Self-reported enablers for the of CAN (n = 53/261) (open-ended question 19)		**n (%)**
Mandatory child protection (refresher) courses		16/52 (30.7)
Encouragement of low thresholds to express and report suspicions		7/52 (13.5)
Implementation of clearly defined clinical practice guideline for the reporting of child abuse for medical and nursing staff, including but not limited to:	Catalogue of questions and standardised documentation form to be used in case of suspicion	6/52 (11.5)
	Flowcharts	3/52 (5.8)
	Mandatory full-body examination and documentation in case of suspicion	1/52 (1.9)
	Standardised handling of suspicions expressed by team members regardless of hierarchical position	2/52 (3.8)
Improvement of child protection services resources:	Implementation of a 24/7 on-call roster for child protection services	4/52 (7.7)
	Mandatory feedback by child protection services to the reporting staff member for each case for training purposes	2/52 (3.8)
	Standardised involvement of child protection services for specific diagnoses (e.g., fractures incompatible with developmental age)	1/52 (1.9)
Teaching facilitated by forensic medicine and psychology specialties	Implementation of complementary forensic nursing training	3/52 (5.8)2/52 (3.8)
“For your information” alert in the medical record for representing patients		1/52 (1.9)
Mandatory skill training, including communication training, for new employees		1/52 (1.9)
Simplification of procedure routine for reporting child abuse		1/52 (1.9)
Implementation of informational leaflets for patients and their families		1/52 (1.9)
Consultation with other hospitals in cases of suspected child maltreatment		1/52 (1.9)
Missing		1/53
Person informed about the suspected child abuse (question 10)		**n (%)**
Consultant		169/245 (68.9)
Peer colleague at the same level of training		19/245 (7.8)
Hospital's child protection services (CPS)		57/245 (23.3)
Preferred educational tool for child abuse education (question 17)		**n (%)**
Continued professional education in child abuse for staff		199/225 (88.4)
E-learning programmes		70/225 (31.1)
Leaflets		48/225 (21.3)
Other		10/225 (4.4)

atives with the suspicion of child abuse are described in figure 4. There was no significant differences between the professional affiliation and described level of confidence in recognising child abuse (p = 0.237).

Nearly all participants (n = 241/244, 98.8%) knew whether there was an acting CPS in their hospital but expressed an interest to know more about how to recognise child abuse (n = 226/242, 93.4%). Regarding the interest in receiving more child abuse education (table 5), there was no significant difference between hospitals (p = 0.251), sex (p = 0.060), work experience (p = 0.358), age (p = 0.147), specialty (paediatric emergency medicine or paediatric surgery) (p = 0.38), and profession (p = 0.34) or between nursing (p = 0.859), medical (p = 0.193) and nursing assistant (FaGe) level of training (p = 0.062). Three-quarters (n = 185/243, 76.1%) of the participants stated that they were interested in having access to a standardised questionnaire and/or documentation form supporting the management of suspected child abuse.

Development of a child abuse detection and reporting aid tool

Based on the reported enablers for the detection and reporting of child maltreatment (table 5), a CAN detection aid tool was created featuring risk factors for child abuse

(clinical, history, socio-economic factors), screening questions for staff [24], sample questions for facilitated communication with child abuse victims and their families, and a graphical representation of typical locations of accidental and non-accidental injuries in children [26]. We suggest that other resources be added individually (e.g., contact details of the hospital CPS, linkto the local child abuse referral pathway, and relevant local web sites).

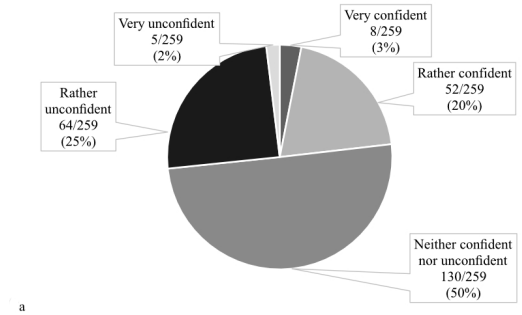
Cognitive aid tool for use in the emergency department

Detecting and reporting child abuse in the ED to prevent further harm!

1. Screening questions (adapted after the ESCAPE instrument) [24]

A "no" answer to any of the following questions should trigger collection of more information and prompt notification of the child protection services.

- Is the history consistent (taken by at least two assessors)?
- Are findings of the head-to-toe examination in accordance with the history?
- Is the injury compatible with the child's developmental stage?
- Was seeking medical help unnecessarily delayed?
- Is the behaviour/interaction of the child with their carers appropriate?



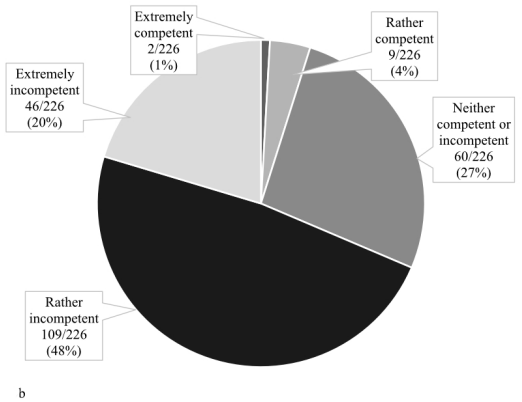


Figure 4: a: Self-reported level of confidence in recognising child abuse on a 5-point Likert rating scale. b: Self-reported level of competency in addressing the child/parents/relatives with the suspicion of child abuse on a 5-point Likert rating scale.

- Are there other signs that make you doubt the safety of the child/other family members?

2. Alarming clinical/behavioural findings of abuse/neglect within the context of the history [25]

Abuse:

- Intraoral injuries, bruising in pre-cruising child without adequate explanation ("no cruising, no bruising")
- Fractures in infants/toddlers before the first birthday (especially femur/long bone fracture, rip fracture), complex skull fractures with a drop height <1 m, metaphyseal fractures, fractures of different age/multiple fractures by alleged simple trauma
- Subdural hematoma, especially in combination with retinal haemorrhage, scald burns on the hands, feet, and the urogenital area

Neglect:

- Poor standard of hygiene (child persistently smelly/dirty), insufficient provision of food, unsafe living environment, persistent infections (scabies, headlice) or tooth decay, inappropriate clothing or footwear

Abuse/neglect:

- Marked change in behaviour or emotional state (e.g., nightmares, extreme distress, becoming withdrawn, substance/alcohol misuse, self-harm, eating disorder, suicidal behaviour, bullying or being bullied, and indiscriminate, coercive, or precocious sexual behaviour), social isolation, exclusion

Family findings:

- Failure to seek medical attention and follow-up appointments or failure to administer treatment essential to the child's well-being (e.g., immunisation, screening, developmental follow-up)
- Harmful parent-child interaction (e.g., negativity towards the child, rejection/scapegoating of the child, inappropriate threats or methods of disciplining, using the child for relational/marital conflicts)

3. Child factors that increase vulnerability to child abuse and neglect

Socio-economic factors

- Disability/chronic illness of the child, less disclosure of sexual exploitation by boys, younger age, extreme prematurity, crying infant, child with persistent sleep or eating problems, identifying as or being identified as lesbian, gay, bisexual, or transgender

4. Family factors that increase vulnerability to child abuse and neglect

- Substance misuse, history of domestic/family violence, anger management issues, mental health issues impairing parenting, adverse childhood experiences
- Financial difficulties, unwanted pregnancy, young maternal age, parental delinquency

Family factors that increase the risk of recurring child abuse

- One or more previous episodes of child abuse, parental non-engagement with services, substance abuse, chron-

ic parental stress, parent experienced abuse/neglect as a child

5. Typical locations for accidental and non-accidental injuries

Typical features of accidental and non-accidental injuries are shown in figures 5 and 6.

We recommend the TEN-4-FACESp tool as an additional, validated resource for use in children under 4 years of age [23].

6. Suggested questions when approaching the child and their family for suspected child abuse

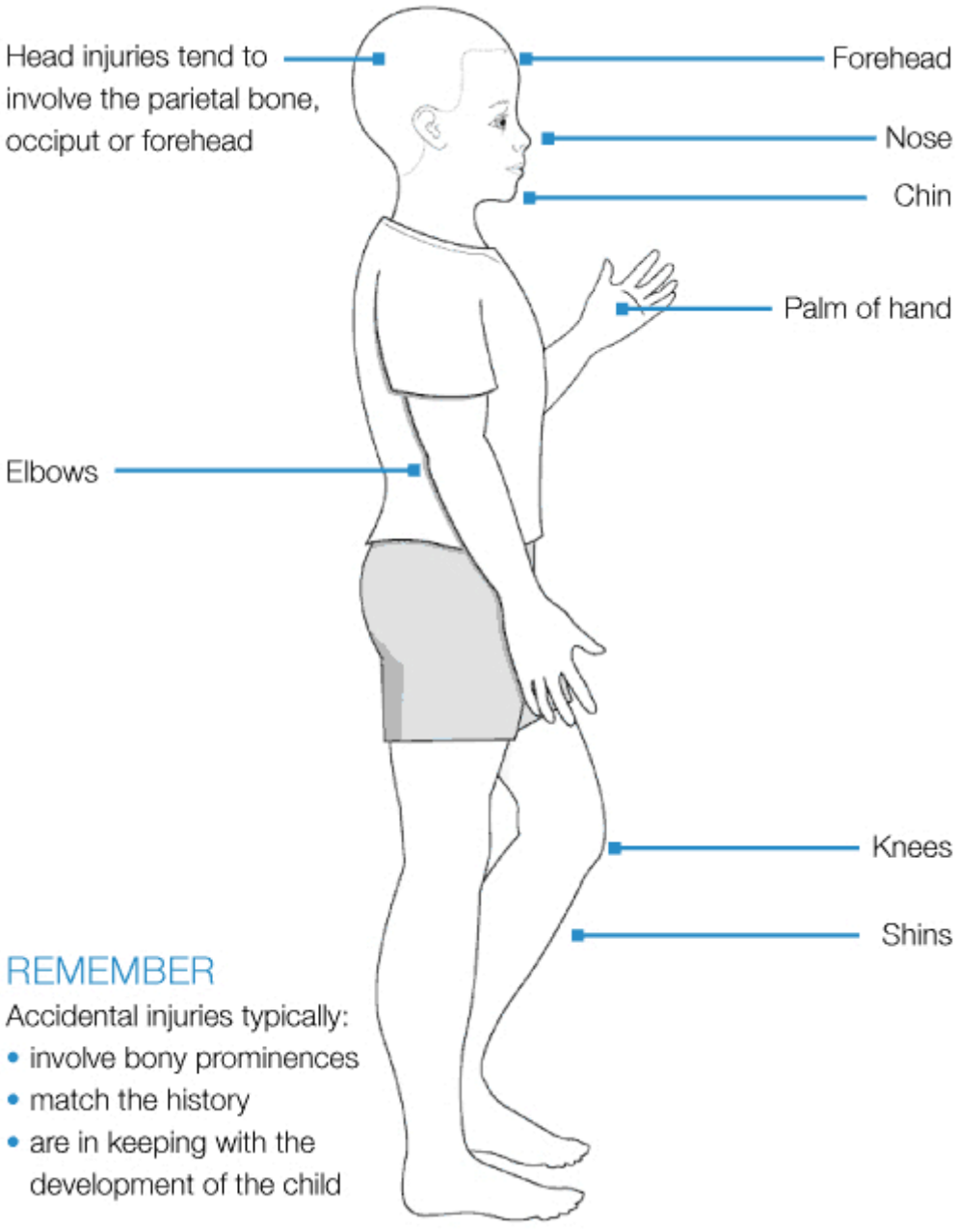
Preparation of the conversation: Use non-leading, open-ended questions in a quiet and private atmosphere, avoid discussing stressful topics in the presence of the child, listen without condemning, and describe your findings as objectively as possible (e.g., size and colour of haematoma instead of estimated age).

Introduction: "We routinely ask standard questions with this type of injury and may notify child protection services, if appropriate", "We routinely involve child protection services with this kind of injury at this age".

Example questions (child/adolescent):

– Can you tell us what happened?

Figure 5: Typical features of accidental injuries. Reproduced with permission from: Harris J, Sidebotham P, Welbury R, et al. Child protection and the dental team: an introduction to safeguarding children in dental practice. COPDEND: Sheffield, 2006-13,https://bda.org/childprotection/Recognising/Pages/Physical.aspx.



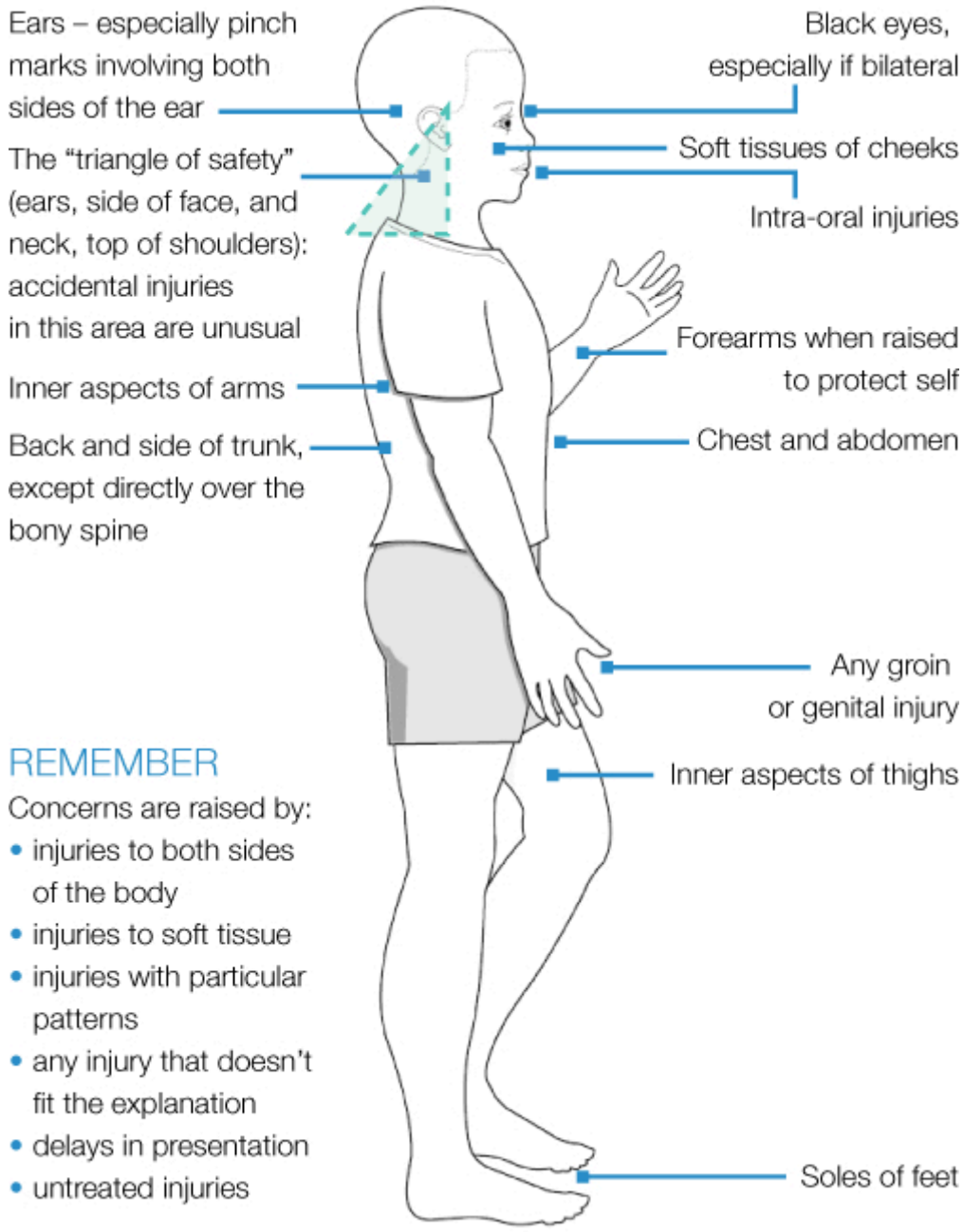
– Who is looking after your child/you and how often? Who does your child/do you live with?
– Is your child crying a lot/not sleeping/refusing to feed/eat? How does that feel for you? Have you ever felt overwhelmed by such a situation? Do you have someone to talk to or ask for help?
– Is your child / are you safe at home? Is your child/are you threatened by someone (at home/out of home)?
– Do you / does someone in the household take alcohol or drugs?
– Are there mental health issues in the family? Do conflicts occur often at home?
– Please describe your/your parents' relational status (together, separated, or divorced)?How is your child/are you affected by this situation?

You may insert here: Contact details of local child protection services, link to hospital child abuse and neglect reporting policy.

Discussion

To the best of our knowledge, this is the first survey on the barriers to detecting and reporting child maltreatment in the PED and paediatric surgery department in Switzerland. This study highlights several significant self-reported obstacles and enablers of the detection and reporting of CAN.

Figure 6: Typical features of non-accidental injuries (injuries that should raise concerns). Reproduced with permission from: Harris J, Sidebotham P, Welbury R, et al. Child protection and the dental team: an introduction to safeguarding children in dental practice. COPDEND: Sheffield, 2006-13,https://bda.org/childprotection/Recognising/Pages/Physical.aspx.



The largest hurdles were insufficient knowledge about and lack of confidence in detecting the signs and symptoms of child abuse, reporting to CPS, and interprofessional (e.g., belonging to the professional group nursing) and medical hierarchical structures.

The main emerging self-reported enablers to detecting and reporting CAN according to our survey results included more and regular child abuse education, clinical practice guidelines for CAN reporting and identification (e.g., a catalogue of questions and a standardised documentation form to be used in case of suspicion), and encouragement of lower thresholds to express and report CAN that bypass hierarchical and interprofessional barriers.

Our findings confirm the previously described barriers and enablers for detecting and reporting CAN in other settings, which have been consistent over the past decades [1, 16–20]. Alarmingly, strategies to maximise recognition and reporting of CAN by HCPs working in EDs have been insufficiently implemented.

Emerging barriers to recognising child abuse from past studies include inadequate knowledge, experience and awareness, failure to recognise the signs and symptoms of abuse during a child's presentation, lack of confidence, inadequate CAN assessment tools or omission of essential questions from such tools [27], biased provider views about education, family structure or employment status [28], and lack of ongoing contact with the family [1, 17, 20]. The earlier published enablers for the detection of CAN included real-time case discussion with peers/supervisors, more child abuse education, objection to child abuse, and professional and personal accountability and responsibility [16, 19].

Previously elaborated barriers to reporting child maltreatment included failure to recognise the signs and symptoms of maltreatment, lack of confidence, inadequate education/ignorance, knowledge, and experience with the reporting process, a lack of guidelines [29], reporting infrastructure deficits, loyalty to the family or fear of causing harm to the child or their family [19], reluctance to involve legal bodies, biased provider views, lack of follow-up of reported cases, fear of negative consequences of reporting (e.g., testifying in court [20], or litigating with retaliating family members [29]), and previous negative experiences with CAN reporting [18]. In contrast, enablers for reporting CAN were real-time case discussion with peers or supervisors, the belief that it was in the patient's best interest to report in case of suspicion [1, 20, 31], specific CAN reporting laws [18, 32], reporters' own parental status (i.e., inclination to report increased with the number of own children) [16], and longer work experience [33]. This contrasts with the findings of our study, where the percentage of respondents not reporting a proportion of their initial CAN suspicions was higher among staff with longer work experience compared with those with <3 years of work experience (table 4). However, this may reflect a more thorough reconsideration of the CAN diagnosis in this group.

Only 1/4 (23.2%) respondents felt "very confident" or "rather confident" in recognising child abuse, and nearly all (93.4%) expressed an interest in increasing their knowledge about the recognition of child abuse. Likewise, only every twentieth participant felt extremely competent (n = 2/226, 0.9%) or rather competent (n = 9/226, 3.9%) in addressing the child/parents/relatives with the suspicion.

In line with our results, this need for more knowledge and education has been elaborated in a previous survey-based European study [13]. Child maltreatment education was mandatory in just over one-half (n = 16/29) of the participating countries and for approximately one-third of ED nursing (31.9%) and medical (36.2%) staff; 71.9% of respondents from 28 countries expressed the need for more training, and one-half (51.9%) of European hospitals providing treatment for children were insufficiently equipped to recognise child maltreatment in the ED [13]. Despite the availability of international guidelines (e.g., NICE or AWMF guidelines for the management of child maltreatment [34, 35]) and persistently high numbers of reported child abuse cases in Switzerland [9] and abroad [5, 10], child protection training is not yet mandatory in Switzerland and many European countries. Consequently, the main enablers of the recognition and reporting of child maltreatment reported in this survey included mandatory skill training, including communication training for new employees, regular refresher courses, and the need for encouragement of staff and lower thresholds to actively express and report suspicions (table 5). It has been recommended that such education should cover the recognition of child abuse based on child risk factors, clinical examination findings, parental risk factors (e.g., severe psychiatric problems, substance abuse or domestic violence), and steps for handling CAN, including awareness of CPS and sensitive communication with the child and their parents [14, 15, 36, 37].

Almost three-quarters (82.9%) of HCPs suspected child abuse once (22.9%) or twice (20.8%) in the past 12 months (figure 2); all but 30/245 (12.2%) subsequently reported their suspicions. In line with previous findings [13], the number of suspected cases was positively correlated with the level of care provided at the institution (tertiary versus teaching hospital); therefore, university hospitals seemed to be better equipped for the recognition of CAN.

In this study, more than 1 in 10 (12.2%) suspected child maltreatment cases were not reported or followed up, potentially leading to adverse outcomes for these children. When examining the reasons for waiving notification in these cases, uncertainty of whether child abuse was the correct diagnosis (47.7%) and lack of feeling responsible (20.5%) were the most common underlying rationales for not acting in these cases, followed by uncertainty of whether reporting has any consequences (9.1%) and opposing assessments by hierarchically superior staff (11.4%) (table 3). Interestingly, there were significantly more suspected but not reported cases reported by female than male health care workers ($p = 0.039$) and by nurses than physicians ($p = 0.005$). This behaviour has been described previously and is attributed to institutional task allocation and greater confidence among medical staff [16]. Potential obstacles for nursing and junior medical staff for reporting suspected child maltreatment cases may be a lack of education and a consequent lack of confidence, hierarchical structures with high thresholds to express concerns, and the local reporting system infrastructure (table 5). Likewise, PED staff reported CAN significantly more often than paediatric surgery staff. However, this may be

explained by a participant bias, in which many inpatient cases were already reported by the first point of contact in the ED and were subsequently admitted to the surgical ward.

There is an urgent need to implement intervention strategies (e.g., a legal obligation to implement mandatory child protection education for nursing and medical students or postgraduate trainees beyond the basic academic curriculumin Switzerland and abroad), develop cognitive aids to meet the needs of HCPs in the ED, implement validated screening tools, improve the reporting system infrastructure, ensure the supply of resources and support (e.g., funding, time), implement CAN reporting laws, and advocate for gender and interprofessional equity [19].

Only every twentieth survey participant felt extremely competent (0.9%) or rather competent (3.9%) in addressing the child/parents/relatives with the suspicion of child abuse. These findings highlight the need to extensively cover communication training, not only for the delicate task of confronting the family with a suspicion (using preformulated expressions such as "Reporting children with this type of injury is routine in our institution") but also for conveying one's suspicion to the final decision maker using established teamwork items, such as "speaking up" [38]. Self-reported potential drivers for and action taken when reporting child abuse include the need for clinical practice guidelines, including a catalogue of pre-formulated questions and a standardised documentation form to be used in case of suspicion, and standardisation of the detection and reporting process, regardless of hierarchical position (e.g., flowcharts and mandatory full body examination documentation) (table 5). In addition, more effective teamwork with feedback from Allied Health (CPS) and instruction by forensic medicine was mentioned as potential areas of improvement. There was an interest in having access to a standardised questionnaire and/or documentation form supporting the management of suspected child abuse among three-quarters of participants (76.1%). EDs with a hospital policy/clinical practice guidelines on the management of child abuse scored higher in the detection of both child and parental risk factors than institutions without these policies/guidelines in place [13].

Strategies to increase the detection of child abuse in EDs to prevent devastating outcomes have been previously described, including checklists, the development of new screening tools [6, 24, 39–42], testing of existing tools for their usefulness [15, 43], implementation of staff training [15, 31, 44], and automatic involvement of CPS at certain defined diagnoses [45]. Checklists covering the indicators of risk for CAN have been previously shown to increase the rate of suspected but not confirmed cases of child maltreatment, the awareness of CAN, and the documentation of suspected cases [5]. Earlier studies have highlighted the three- (0.3% versus 0.1%) to fivefold higher detection rate (0.5% versus 0.1%) of child maltreatment in the ED when a local checklist or validated screening tool (e.g., ESCAPE instrument, currently the screening tool with the highest empiric level [3]) was used, respectively, as compared with not using screening tools [39]. Furthermore, the use of this screening tool led to improved documentation and a higher level of awareness of child abuse, which in turn may help prevent further harm to children at risk for maltreatment. However, ESCAPE did not screen for sexual and emotional CAN and might therefore not be feasible for reliable detection of all types of child maltreatment in the PED [3]. Similar screening questions are used in other screening tools, such as in the SPUTOVAMO-R2 [46]. At the time of this study, no validated screening tools were used at our institutions. Likewise, only 28.6% of 29 surveyed European EDs used a validated (SPUVAMO, ESCAPE) or local, non-validated screening tool [13]. In this survey, we did not investigate the need for a local or validated screening tool; however, previous investigations reported a high level of acceptance among HCPs for the introduction of an early detection measure/screening tool to facilitate the recognition of domestic violence and the increased risk for child abuse, although its concrete form remains controversial [12]. It has been suggested that screening tools should cover both child risk factors (clinical findings and medical history red flags) and parental risk factors that significantly increase the risk of suffering child abuse (e.g., domestic violence, drug/substance abuse, and severe mental health problems) [13]. Automatic involvement of CPS for children under 1 year of age presenting with high-risk injuries did not lead to increased child abuse detection rates [45].

In this survey, nearly all (98.8%) respondents knew whether an acting CPS existed in their institution. This contrasts other studies, where only one-third of participants stated that they had a local child maltreatment team at their institution [13].

Secondary preventive measures have been described, including the co-examination of siblings of suspected/confirmed child abuse or family violence victims [47], screening adult patients in the ED to identify potential children at risk for maltreatment [13, 34, 40] and vice versa, and universal intimate partner violence assessment or screening for parental risk factors, including domestic violence in the PED [48]. In addition to the parental risk factors/conditions (parental substance dependence, mental illness, domestic violence), chronic illness of the child has been associated with the increased occurrence of child abuse [2, 25, 27, 49]. One study examined the efficiency of child abuse detection by screening for parental risk factors in adult EDs using the Hague protocol. The study found a large increase in child protection notifications after the introduction of the protocol [40]. The same protocol was tested in a pilot study in Switzerland but lacked statistically significant statements due to the small sample size [50].

Limitations of the study

We acknowledge certain limitations to this survey-based study.

First, we modified the Delphi process to conduct expert feedback rounds to develop the questionnaire used in this survey. Following the comprehensive Delphi design might have increased the quality of the survey and the survey data. Furthermore, the pilot test (feedback round 2) was conducted on a very small sample (n = 4); it has been suggested to pilot test a survey on at least 30–60 population-based participants [51]. We did not perform principal components analysis or assess the internal consistency of questions loading onto the same factor. Doing so would have improved the survey structure by removing a maxi-

mum of potential internal inconsistency of questions and minimising ambiguous or missing answers and maximising answers to open-ended questions, thereby increasing the internal validity of this study.

Second, recruitment of participants was performed using a non-probability design due to a subset of institutions declining participation in the survey. This may have introduced selection bias into the sample and results. Furthermore, only institutions from German-speaking Switzerland were approached for participation in the survey, potentially introducing selection bias. Including institutions in French- or Italian-speaking Switzerland would have allowed for a more accurate representation of results.

Third, we acknowledge that the missing data in our study may have reduced the precision of desired survey data. The percentage of missing data from this survey may limit the generalisability of our results. The percentage of missing values may be related to the quality of the study and the quality of the collected data. The quality of this study can be improved by formal validation of the pilot survey; this includes reliability and validity testing, which was not conducted. Validation of this instrument will improve internal consistency, test-retest, interrater reliability, content and construct validity, and ultimately the power and generalisability of the results [52]. We included 61 (23.4%) incompletely answered surveys in our analysis; however, in two-thirds of the incomplete surveys, only one or two answers were missing. This might have introduced a non-response bias and could be explained by a lack of time, interest, comprehension, or interruption in the answering process. Likewise, the nursing staff of Lucerne hospital declined participation in the survey, and more ED than paediatric surgery medical and nursing staff were surveyed. The external validity of the study may therefore be compromised; our results may lack power, may not be generalisable to the real world and may need to be repeated with a more balanced sample.

Fourth, we recognise a potential social-desirability bias in which behaviour that will be viewed favourably by others might have been over-reported regarding a subset of questions (7–11 and 13–16). To minimise social-desirability bias and interference with the interpretation of average tendencies, the survey was conducted entirely anonymously, and participants were informed of the purpose and importance of the survey (i.e., to improve future management of CAN).

Fifth, we did not investigate whether tertiary and rural hospitals complied with international guidelines (e.g., NICE [34]), whether they had implemented child protection policies/clinical practice guidelines, or whether regular child protection training was held and which aspects were covered. Detailed knowledge of this data may allow educational areas of need to be identified and action to be taken to counteract potential educational gaps. Furthermore, this data would allow researchers to draw conclusions on whether regular child protection training is associated with higher self confidence in the detection and reporting of child maltreatment. Finally, the use or interest in the use of a child abuse screening tool was not investigated.

Finally, our aid tool underwent an informal feedback process but is not yet formally validated.

Conclusion

Several significant self-reported barriers to detecting and reporting child maltreatment in the PED emerged from this survey that were consistent with previously reported issues from other health care settings, the most significant being insufficient knowledge about and lack of confidence in detecting the signs and symptoms of child abuse. Despite consistently similar results over the past decades, the need remains urgent for intervention strategies, such as a legal obligation to implement mandatory child protection education for nursing and medical students or postgraduate trainees during general paediatrics, paediatric surgery and paediatric emergency medicine specialty training beyond the basic academic curriculumin Switzerland and abroad, the availability of cognitive aid tools to meet the needs of HCPs in the ED, and implementation of validated screening tools. We have devised a proposed cognitive aid tool for use and adaption according to local routines to maximise the recognition, referral, and management of child abuse cases in paediatric care (available as a separate file for download at https://doi.org/10.57187/smw.2023.40017). Both this pilot survey and the cognitive aid tool need to be formally validated in future studies prior to their use in international research and clinical work to reduce the risk of more devastating outcomes in children.

Open Science – data sharing

All study data are available upon request from the first author.

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Potential competing interests

All authors have completed and submitted the International Committee of Medical Journal Editors form for disclosure of potential conflicts of interest. No potential conflict of interest was disclosed.

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