

Comparative needs in child abuse education and resources: perceptions from three medical specialties

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Introduction: Improvement in child abuse and neglect education has been previously identified as a significant need among physicians. The purpose of this qualitative study was to better understand specific comparative educational needs regarding child abuse diagnosis and management among physicians from differing specialties and practice types.

Methods: A total of 22 physicians participated in focus groups (one family practice (FP), one emergency medicine (EM), and one pediatrician group) facilitated by a professional moderator using a semi-structured interview guide. Five specific domains of child abuse education needs were identified from previously published literature. Child abuse education needs were explored across one general and five specific domains, including (1) general impressions of evaluating child abuse, (2) identification and management, (3) education/resource formats, (4) child/caregiver interviews, (5) medical evaluations, and (6) court testimony. Discussions were audiotaped and transcribed verbatim, then analyzed for common themes and differences among the three groups.

Results: Participants identified common areas of educational need but the specifics of those needs varied among the groups. Neglect, interviewing, court testimony, and subtle findings of abuse were educational needs for all groups. EM and FP physicians expressed a need for easily accessible education and management tools, with less support for intermittent lectures. All groups may benefit from specialty specific education regarding appropriate medical evaluations of potential cases of abuse/neglect.

Conclusions: Significant educational needs exist regarding child abuse/neglect, and educational needs vary based on physician training and practice type. Educational program design may benefit from tailoring to specific physician specialty. Further studies are needed to more clearly identify and evaluate specialty specific educational needs and resources.

Keywords: *child abuse; education; focus groups; qualitative research*

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The existing global shortcomings in physician education related to child abuse and neglect are well-documented (1–7). Physicians often lack training, confidence, and knowledge in identifying and managing child abuse and neglect cases (1, 7). This inadequate education translates to poor practice, including impaired recognition of child abuse, fear of testifying in court, and professional denial of abuse. Difficulties in accurately diagnosing child abuse result in both misdiagnoses (8) and missed abuse (9) leading to significant risk of repeat abuse (9–11) and the over-diagnosis of child abuse (8), which may result in inappropriate legal actions against a caregiver. Despite

the previous documentation of the need for improved education of physicians with respect to child abuse, little information exists on the specific types of education needed across the multiple elements of child abuse/neglect.

Physician education programs in child abuse should assess baseline knowledge, focus interventions on a specific category of physician, and define clear educational and behavioral objectives (6). Yet, few studies have rigorously evaluated the effect of medical provider education programs in child maltreatment (12). Prior to designing education programs for students and medical providers, the specific needs of learners should be assessed.

As differences exist in knowledge and comfort levels among the different medical specialties (13), physicians of different specialties and training are likely to have differential educational needs. The purpose of this descriptive, qualitative study is to explore the comparative educational needs and acceptability of various training methods and assessment tools among clinician groups that vary by training and practice type.

Methods

Focus groups were used to explore the educational needs of family practice (FP) physicians, emergency medicine (EM) physicians, and pediatricians. Each group was homogeneous for practice specialty, and additional demographic data were gathered for the purpose of sample description. Focus groups lasted approximately 1-h and were conducted between 1 September and 20 December 2009. Recruitment for the three groups occurred by mailed postcards, targeted emails, and word of mouth, with a goal of eight participants per group. Participants were purposefully sampled in groups based on physician specialty to ensure participant comfort and opportunity for synergy. The FP and EM groups were recruited from the medical staff of individual institutions. In an effort to maximize participation, and based on feasibility, the pediatrics group was recruited from attendees of a national pediatrics conference held at a regional children's hospital in Kansas City, MO. Participants for the FP group were recruited from the staff at an urban medical center serving a low-socioeconomic population in Kansas City, MO. Participants for the EM focus group were recruited from a semi-rural medical center, located in Joplin, MO, approximately 2 h from the nearest urban center. Participants for the pediatrics group worked in multiple different locations, as detailed in the Results section. All participants in the three focus groups were board eligible or certified in their respective fields. Participants received a US\$25 gift card and provided with a meal.

The focus groups were led by a professional facilitator (Sara Pyle, PhD). Demographic information gathered prior to each focus group included type of practice, specialty training, age, and location of practice. A semi-structured interview guide was used to conduct the focus groups. Topics included on the interview guide were derived from the published literature and designed to allow full exploration of the major elements of child abuse training, evaluation, assessment tools, and intervention that may involve physicians (5, 6). In order to ensure that the interview guide was not too narrowly focused to allow important concepts to come forward, the interview guide also contained a broad question aimed at capturing any information that participants felt was important to share. Participants were also asked if there was 'anything else you would like to discuss' at the end of their focus group. This approach allowed for

full exploration of the topic in each focus group. The six aspects of child abuse that were specifically explored as part of the interview guide included: (1) general impressions of evaluating child abuse, (2) identification and management, (3) education/resource formats, (4) child/caregiver interviews, (5) medical evaluations, and (6) court testimony. Focus groups were audiotaped and transcribed verbatim. Any specific mention of a name or other personal identifier during the recorded focus group was eliminated during the transcription process. Transcripts were read and analyzed independently by each author individually for major themes. Transcripts from each focus group underwent content analysis by each author separately. Each author identified core themes of information for each of the six aspects of child abuse covered in the interview guide. Inter-rater agreement was assessed via comparison of the core themes between the authors. Minor variations in themes were discussed and resolved. Major discrepancies in data coding by the authors (such as unrelated main themes) were to be resolved by consultation with the focus group moderator; however, no major discrepancies occurred. The resultant main themes were compared among focus groups.

Data generated from the demographic questionnaire were summarized to provide descriptive statistics for this sample. This study was determined to be exempt from review by the institutional review boards of Children's Mercy Hospital, Freeman Health System, and Research Medical Center.

Results

Participants

A total of 22 physicians participated in the three focus groups. Demographic details are shown in Table 1. Having received their residency training in 10 different states and having practiced in their fields in 13 different states and one foreign country, participants' practice experience was representative of a large part of the USA and beyond. Of note, none of the FP or EM participants had access to child abuse specialists in their practices. Each of the participants in the pediatrics group hailed from a different location (suburban Kansas City, MO, suburban St. Louis, MO, suburban Atlanta, GA, and a US military base). The participants were homogenous with respect to ethnicity and recent child abuse education. All but one of the participants was Caucasian and all but one of the participants had fewer than 5 h of formal or self-study child abuse education in the previous year.

Themes

Themes are reported below based on study question and specialty of physician. Table 2 provides a summary of the main thematic findings.

Table 1. Demographic characteristics of the focus group participants

| | Family practice physicians | Emergency medicine physicians | Office-based pediatricians | Total |
|--------------------------------------|----------------------------|-------------------------------|----------------------------|--------------|
| Subjects | 10 | 8 | 4 | 22 |
| # Residency programs represented | 9 | 6 | 4 | 19 |
| Mean age, range, years | 45.8 (29–55) | 40 (32–60) | 56.3 (46–63) | 45.6 (22–63) |
| Mean years in practice, range, years | 15.8 (1–29) | 8.1 (2.5–33) | 22.8 (14–33) | 14.3 (1–33) |
| Male:female | 4:6 | 7:1 | 0:4 | 11:11 |

Child abuse in general

Pediatricians. Pediatricians identified child abuse as a very common issue and one that elicited strong emotional responses from them even as they perceived that an objective, non-emotional evaluation was necessary. ‘The best evaluations are objective, but it’s hard to separate out your own feelings.’ One pediatrician acknowledged that, ‘the first thing that comes to mind is my own children. I can’t help thinking of my own kids. That’s why it’s a personal thing for me.’ Another expressed the emotional toll that a child abuse case had on them personally. ‘I get this feeling of dread because through the years I’ve had so many cases and it’s just a horrible feeling.’

Emergency medicine (EM). EM physicians felt that they needed broad skills to be able to address a wide range of presentations of abuse/neglect. They identified child abuse as an issue that, in their care venue, usually manifests as part of a child custody case, but occasionally in the context of severe injury. ‘It’s “exes” using the kid as leverage against each other.’ ‘My child went to daycare,

came home with a bruise, he must be being abused.’ Some reported cases of abuse/neglect involving, ‘fractures, bruises or head injury,’ while others involved car collisions where, ‘somebody has been drinking and their kid was in the back (seat).’

EM physicians also expressed significant difficulties in maneuvering the child protection system: ‘You end up kind of shotgunning everybody because I’m not sure who I’m exactly supposed to call.’ One participant described a case where he, ‘spent an hour on the telephone with different people just trying to manage this one patient. It’s really talking to nine others just to get them to the right spot.’

Family practice (FP). FP physicians identified child abuse as a range of findings and interactions that are closely intertwined with family and social dysfunction as well as lack of knowledge or experience. ‘When I think of child abuse, I think of dysfunction in the family, stress in the family, and it’s affecting the child, whether it’s physical abuse or not taking care of the child. It’s a dysfunctional family scenario.’ FP physicians felt that

Table 2. Summary of main thematic findings

| | Pediatricians | EM physicians | FP physicians |
|--------------------------------|--|--|---|
| Child abuse in general | Emotional issue that requires objective evaluations | Cases range from child custody issues to severe injury | Closely intertwined with family dysfunction; neglect is most common |
| Identification and management | Difficulties in detecting subtle abuse and neglect; rely on abuse experts for management | Neglect is most challenging aspect | Low confidence in identification; managing neglect is difficult |
| Education and resource formats | Prefer case-based presentation and role playing | Intermittent lectures not useful; computer tools a possibility | Intermittent lectures not useful; need immediately accessible resources |
| Child/caregiver interviews | Hardest part of cases; skills gained through practice experience | Feel unprepared to interview, spend little time doing so | Low confidence in interviewing; particular challenge when the parent is a patient |
| Medical evaluations | Rely almost completely on child abuse experts | High confidence, but unaware of special medical evaluations in abuse cases | Low confidence in conducting medical evaluations |
| Court testimony | Low confidence | Low confidence | Low confidence |

they could not effectively address the child abuse/neglect issue unless they could address the underlying family dysfunction.

Neglect was identified as the most common and concerning manifestation of child maltreatment in the FP arena. 'In most cases, it seemed as though the parent had no awareness that they may be neglecting the child. And so discussing bathing and feeding and developmental issues is difficult to bring up non-judgmentally. I see that more often than more overt abuse.'

Identification and management of child abuse/neglect

Pediatricians. Pediatricians expressed educational needs related to managing ongoing issues like neglect: 'Ongoing neglect is challenging. It's hard to assess the root cause of things, even if we know the family.' Another important area of concern was identifying abuse when the injury was 'minor.' One pediatrician shared, 'a lot of these kids have subtle findings, that, if you're not careful, you'll miss, or won't realize that abuse is the cause.' Confounding the subtleties of the injuries themselves is that behavior in the pediatrician's office might not reflect what is really going on in the home. 'A lot of these caregivers are behaving well in the ten minutes that they are in the clinic. But we don't know how they are treating the child.'

With respect to management, pediatricians stated that they relied on local child abuse experts once abuse had been identified. 'We just dump them. I dump them. They go.' Another reported, 'Yeah, we don't do a thing (once abuse has been identified).'

Emergency medicine (EM) physicians. EM physicians described the management of neglect as their most significant educational need, particularly in children injured as a result of neglect. One EM physician described 'kids that are sick that their parents aren't taking care of as far as diabetics or kids with congenital problems that aren't able to get proper care at home. What do you do for them?' In trying to address the root of the problem, another stated, 'I wonder how much neglect is parent education as opposed to willful neglect, or parent intelligence.' The underlying cause was seen as important, as educational needs may be addressed in the medical visit, but willful neglect may necessitate legal or child protection involvement.

EM physicians described a lack of relationships with the families and a lack of time as significant barriers to identifying and addressing neglect issues. 'Unless you have that repeated visit history or if you had the time to get into some family dynamics, it's just impossible.'

Family practice (FP). FP physicians expressed low confidence in identifying child abuse in all but 'blatant'

cases, and identified child abuse as a significant educational need. In discussing a case of neglect, one participant described that, 'It's so multifactorial that I get very confused unless there's just something that's just blatant.' Another discussed the time limitation faced by FP physicians in an office visit, 'sometimes you're focused on the issue at hand and it's just hard to pick up in that time frame we get to see them.'

Addressing all forms of neglect was the highest concern. FP physicians expressed particular lack of confidence in cases where there were perceived subtle indications of abuse, high-risk social and family situations: 'Some families have all these risk factors. Drugs, violent histories, and you know they aren't doing well with their kids, but you don't know exactly what to do.'

Education/resource formats

Pediatricians. Pediatricians agreed that effective learning formats would be case presentations based and focused on detecting child abuse in families without standard or obvious risk factors. In explaining why the case-based presentations are preferred, one participant expressed that, 'the case based presentations make me think more. They create a context, a story.' Another described how the context in the case helps explore preconceived notions: 'We need case presentations of higher income families with child abuse.'

Pediatricians agreed that case-based role playing would be beneficial, to address challenges in obtaining histories and conducting interviews and giving parental advice. One expressed, 'we only get good at this by doing it. Role playing might make us better right away.' Pediatricians described difficulties and a lack of comfort in the interview process, and that they were 'ill-prepared coming out of residency.' They agreed that they 'learned that skill on the job.'

Emergency medicine (EM) physicians. EM physicians felt that intermittent educational opportunities were not ideal. At the time of the abuse/neglect encounter, EM physicians expressed that they may not remember what they were taught in their last education opportunity. In describing the challenges, one EM physician stated, 'our exposure is not enough that even-that skill set phase, even if you've had training, you just don't use it enough.' Another participant commented, 'I have to try to remember everything since my last training, and that's just not effective.' EM physicians expressed interest in more accessible tools that can be used on-demand. 'On-line stuff could be good if you can interact with it. The more interactive you can get, and the more personal you can make it, the more high yield it is.' Another added, 'we could access it when we needed it, as opposed to waiting for the once a year lecture.' Participants felt that accessing a management tool at the time of the

encounter would provide for better performance, 'if we don't have an in-house consultant, we need something that is close to that from another resource.'

Family practice (FP) physicians. FP physicians identified the need for ongoing training or more immediately accessible resources: 'We see less kids, so we see less abuse. When we do have them, they are more spaced out. You can do a training this month, but not have a case or recognize a case for 6–8 months and everything you've learned is lost. The challenge we as family physicians have is-is the gaps of time and experience.' Helpful resources were described as those that 'allow people to be able to access it and kind of familiarize themselves again.' Role playing was identified as a potential mechanism of improving/teaching communication skills regarding abuse: 'The only way to do it is to experience it, to watch it, to participate, to do, to be somehow involved in it.'

Child/caregiver interviews

Pediatricians. Participants agreed that interviewing families was the most difficult aspect of possible child abuse cases, 'that situation is uncomfortable no matter what.' Participants also agreed that, coming out of residency, they were ill-equipped for this interaction, 'We didn't get any training on that.' However, they became better at interviewing children and caregivers in abuse situation as they gained more experience in their careers: 'It's never an easy conversation, but you do get more comfortable with it.' 'At first I was very bad at it, but, in years of practice, that's helped me get confidence.' 'We need to practice this stuff in residency, so we don't have to learn it on the job.'

Emergency medicine (EM) physicians. EM physicians described a need for education in interviewing families that 'presented well.' Such as a child in a 'family that looks all clean cut, comes in with an injury. They are like, "who are you to think it's child abuse?" I'm not sure how to approach that situation well as far as getting information.' EM physicians stated that they often have nursing staff discuss these issues with the families, as 'they spend more time with the families than we do. We might have a bunch of different stuff going on at once, someone having a heart attack, a car accident, we don't always have time to discuss a neglect case.' EM physicians admit that they are poorly qualified to interview the caregivers or families in possible abuse cases. One participant commented, 'I haven't been trained on some of that stuff. We practice in a blunt environment. We've got drug-seekers, heart attacks, strokes, etc. Dealing with an abuse case is a different skill set.' Another participant expressed fear of contaminating an abused child's evaluation, 'I don't want to get stuff in the

record that may be contradicted later because somebody better interviewed them.'

Family practice (FP) physicians. FP physicians expressed a lack of confidence in conducting patient interviews, particularly in younger children, and fears of contaminating the child's story by inappropriate interviewing. 'Sexual abuse, I'm always afraid I'm going to mess something up. You know, that I'm going to question the child and somehow raise an issue that, um, is going to endanger them or is going to put something in their head that wasn't there.'

Interviewing family members that may be perpetrators of abuse is especially difficult if the family member is also a patient. This is a unique concern for FP physicians. One FP physician described how families may perceive this information, 'to ask them questions that they see as accusing them is, sort of, you know, betrayal.' 'It's like you've undercut the relationship you built up with the family.'

Medical evaluations

Pediatricians. Participants agreed that they rely heavily on child abuse specialists for all medical evaluations, and in the absence of subspecialists, they would have insufficient knowledge of medical evaluations necessary in child abuse cases. 'We call the abuse docs. They make all the decisions. I don't know what tests they get, how they evaluate.' However, the medical evaluation of more subtle findings is problematic. One participant described a case of, 'a kid with a concerning bruise and unreliable parents. Do I need to do anything else? Do I refer every kid like that to the child abuse specialists?' Participants felt that they had the tools to pick out and refer obvious abuse, but lacked skills in managing cases that are less obvious.

Emergency medicine (EM) physicians. EM physicians felt very comfortable in conducting medical examinations and performing medical testing in abuse evaluations. With the exception of skeletal surveys, 'whether it's a legitimate injury or whether it's an abuse injury, it's still the same testing.' 'That's part of our training.' When discussing testing for occult injuries in abuse, the EM physicians expressed little knowledge, 'we don't think about that. We're just trying to stabilize the patient and treat their symptomatic stuff. We'll get a skeletal survey, but that's about it.'

EM physicians expressed particular needs in addressing young victims of sexual abuse. 'We refer a lot of the cases to the child advocacy center here, but if the kid comes in at three in the morning, we're on our own. We can do a rape kit, but is that what's needed in a 4 year old?' Another added, 'yeah, should I be sending tests for chlamydia in a

young kid? And what test?’ EM physicians described a lack of accessible resources for these situations.

Family practice (FP) physicians. FP physicians expressed very low confidence in knowing which tests to order in either physical abuse or sexual abuse. ‘Other than a skeletal survey, I don’t know if I would know of anything else that I should do.’ FP physicians agreed that sexual abuse was particularly challenging. One expressed, ‘I’m not totally comfortable with sexual abuse. In sexual abuse, you don’t want to screw up any evidence.’ The participants typically send any complex cases to the Emergency Room for further evaluation, ‘we send the complicated cases along to the ER, but I don’t know if they know any better than us.’

Court testimony

All three groups expressed very little confidence in testifying in court proceedings in child abuse cases. Participants in each group agreed that providing court testimony was not only difficult, but personally challenging.

It was a harrowing experience . . . to see the dad dressed up in a suit looking very nice and normal, when he was the one being accused of doing all these things and then the attorney just attacking you personally. It was a really hard thing to do.

You are the recipient of an attorney who is attacking you personally.

I figure my training isn’t adequate to put forth opinions other than, “I suspect or I don’t suspect child abuse.”

I had to go to court one time, and it was like, “I’m an idiot.” They chewed me up.

Other themes

Each focus group ended with the question, ‘Is there anything else you would like to discuss?’ In response to that question, and during other parts of the focus group discussions, several other themes emerged.

Pediatricians

Pediatricians expressed a desire for screening tools to detect abuse, particularly in sexual abuse. One participant expressed, ‘the thing we miss the most is sexual abuse because it’s so much harder. You can’t assess it.’ Some participants described the possible nature of a screening tool. ‘We should have a list of high risk situations. We could be much more vigilant of those people. Pick out those people, maybe interview them.’ ‘If there’s some questionnaires that can be prepared for the parents to fill out, that would give us some clue maybe that we need to

look in more detail.’ Pediatricians expressed frustration with having to screen for so many issues in their office visits, and a limited amount of time to do so, ‘We can’t screen for everything,’ but child abuse would be a higher priority given the consequences, ‘this would be higher on my list.’

Emergency medicine (EM) physicians

EM physicians expressed the need for communication with investigative services. One participant expressed this common frustration, ‘We call in the case, then we never hear anything. Sometimes we need to know stuff about the scene to figure out what happened.’ Another described a case where, ‘the kid was horribly scalded and the parent said “I just turned on the cold water for them to play and I hear them crying and I came back and they’re burned.”’ The investigator went out while the child was still at the hospital, and they had just moved into the residence and the hot and the cold water intake were switched on the appliance. The kid was sitting in hot water straight out of the heater.’ Feedback of this nature is infrequent, according to the EM physicians, and would significantly improve case management.

Family practice (FP) physicians

FP physicians described the need for streamlined resources, ‘like a list of questions to ask in certain situations, or a list of people to call for help.’ One participant summarized the need: ‘As a physician, I’m kind of considered the expert having to kind of decide. But to be able to bounce it off somebody and say this is what I have, maybe some reassurance as to what I should do, you know, like an “Ask-a-nurse” hotline for doctors.’ Another described when this resource would be most useful, ‘where you wouldn’t say it’s full out abuse, but there’s a lot of marginal things where you just know the parenting isn’t optimal but you don’t want to call the authorities.’

Misinformation in abuse identification

All three groups expressed confidence in differentiating abuse from accident in significant injuries; however, further discussion of this issue in the EM and FP groups revealed comments that do not support the reported self-efficacy. An EM physician described, ‘spiral fractures, or a skull fracture in a 9 month old, that’s just obvious abuse.’ Spiral fractures and a skull fracture in a 9-month-old, in and of themselves, are considered non-specific for abuse (14). While discussing accidental injuries, an FP physician elaborated on a case of an ‘accidental’ humerus fracture in an infant. The fracture reportedly occurred accidentally during changing of clothes and the story was believed: ‘If I don’t know the mom, I would probably call her guilty as well as just because the injury was an unusual injury for a little kid.’ Extremity fractures should

not occur in infants during regular changing of clothes, and are highly concerning for abuse.

Discussion

This study provides further understanding of child abuse-related educational needs faced by physicians of different training. Many needs vary by physician specialty and may require targeted educational programs. However, educational needs in addressing neglect, interviewing families and children, providing court testimony, and the evaluation of subtle injuries are common among the participating medical specialties and may need to be addressed globally in the medical education system.

All groups identified neglect as a high educational need area, but needs varied among different physician groups with respect to detection, evaluation, and management. EM physicians identified a need for training and management tools that are specifically targeted at assessing and managing types of neglect that result in child injury and inappropriate or lack of medical care. Additionally, EM physicians need skills that allow them to address these situations in an emergent clinical setting and without the opportunity for continuity of care. Addressing these specific needs may require focused training on neglect and child injury, and the development of rapid use tools for managing neglect, such as checklists and referral lists. Pediatricians were more concerned with detecting ongoing neglect, whereas the FP physicians expressed the need for better capabilities in addressing neglect that was already apparent. Practice location may have played a role in this difference, as the FP physicians likely encountered more poverty in their population. All groups may benefit from the development of screening tools regarding parenting skills and home environment that may assist in detecting neglect. The FP physicians are faced with a unique challenge in that many of the neglectful parents are their patients as well. This may cause hesitation when addressing neglect and other parent/caregiver struggles. Educational programs regarding identifying and managing neglect are needed, and these programs, particularly 'refresher' courses, may need to be tailored to specific physician needs. FP and EM physicians may benefit from 'question lists' or other easy access tools that may help them manage neglect situations at times distant from their last educational training. Further characterization of these different educational needs, based not only on type of physician but location of practice, may be beneficial in designing education and resource programs for neglect.

All three groups identified caregiver/child interviews as a significant educational need in potential abuse/neglect cases. Participants felt untrained and unqualified to discuss possible abuse/neglect with caregivers and children, particularly early in their careers. Skills regarding this interaction may be useful for all types of physicians; however, discussing abuse in the context of the

physician-parent-child relationship that exists in an FP or pediatrics setting is likely significantly different from a similar discussion in the Emergency Room and may require alterations in education program design. Additionally, practice location and socioeconomic status of the patient population may affect how this discussion is perceived by the families and children. Role playing with trained patient-actors may provide an opportunity to address these challenges at the medical school and residency levels (15). Role playing 'refresher' courses may help physicians in practice hone their self-learned skills.

Traditional educational offerings on child abuse may be failing EM and FP physicians. Members of both groups agreed that knowledge gained from intermittent lectures is often forgotten by the time an abuse/neglect case is encountered. EM and FP physicians may benefit from easily accessible, tailored patient education resources that allow for personal interaction. Internet-based tools, which could be accessed at any time from almost any place, may help with immediate and ongoing education and management needs. The pediatrician group, all of whom had access to child abuse specialists, expressed complete reliance on the specialists. Without the availability of child abuse specialists, pediatricians may need resources similar to the FP and EM groups. Additionally, simple resource 'calls lists' for maneuvering the child protection system and 'question lists' for gathering information from children and families, may benefit all practitioners.

All groups expressed significant educational needs regarding more 'minor' child abuse, particularly ongoing neglect and subtle findings. Educational programs that may currently detail 'severe' abuse should include information on identifying and managing different types of abuse. All groups also expressed confidence in identifying 'obvious' cases. However, examples that participants provided of 'obvious' cases (skull fracture in a 9-month-old, spiral fractures) may be considered moderate or low specificity for abuse (14). Physicians also appeared to have little knowledge of the necessary testing for occult injuries in abuse (16, 17). Accessible practice protocols may assist in the knowledge/use of appropriate testing for occult injuries in child abuse cases. Future studies should further characterize these potential knowledge gaps and test educational programs and management tools to address them.

Finally, as court testimony is a rare occurrence for physicians who are not specialists in child abuse, educational programs that target physicians at or near the time of testimony may be most beneficial. An on-line resource that could be accessed as needed by physicians may provide benefit. Further characterization of physicians' needs in providing quality testimony is warranted to construct the most efficacious educational program.

This study has several limitations. First, the number of focus groups may not have been large or ethnically diverse enough to encompass all possible themes of each subspecialty, and the number of participants in the pediatrics group was relatively small. This may have allowed for more complex individual information to be shared in the pediatrics group, but may have limited the breadth of information. Additionally, participants in all groups represented a wide variety of training programs and experiences, so themes generated probably represent a broad array of perspectives. Some of the themes generated may have been affected by the location of the practicing physicians (urban vs. rural), or, in the case of the EM and FP groups, local practice culture. Future studies will need to better clarify how these characteristics affect needs. Lastly, as the objective of this study was to generate hypotheses for future studies, further evaluation of the questions raised by the limitations of this study will be necessary. Potential future studies, possibly including physician surveys and the repetition of focus groups until exhaustion of themes, are necessary to fully evaluate physicians' self-perceived needs in child maltreatment education and resources. Additionally, stratification based on the availability of child abuse experts may allow for a description of the educational needs of physicians with and without this resource. Studies evaluating physician proficiency in aspects of abuse/neglect identification and evaluation are necessary to assess needs that may not be discovered via physician self-report. Once fully characterized, needs may be addressed by tailored educational programs and resource tools.

Conclusion

Medical providers have significant educational needs in evaluating and managing child abuse/neglect. The specifics of education and management needs vary based on physician training, particularly involving the types of abuse encountered, the setting and structure of the encounters, and the potential formats for and content of education and management tools. Further studies are needed to better characterize the education programs that will best serve clinicians in addressing child abuse/neglect.

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