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Recommended Citation

Cleek, Elizabeth; Johnson, Norah L.; and Sheets, Lynn K., "Interdisciplinary Collaboration Needed in Obtaining High-Quality Medical Information in Child Abuse Investigations" (2019). *College of Nursing Faculty Research and Publications*. 664.

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Interdisciplinary Collaboration Needed in Obtaining High-Quality Medical Information in Child Abuse Investigations

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Abstract

Background

Despite reporting legislation, healthcare providers (HCPs) do not always report and collaborate in cases of suspected child abuse. Recognizing this leaves children at risk, the Wisconsin Child Abuse Network (WI CAN) sought to understand barriers to mandated reporting and collaboration with child abuse investigators.

Objective

The purpose of the study was to investigate barriers for professionals in providing and obtaining high-quality medical information in child abuse investigations.

Participants and setting

Participants included five discipline-specific focus groups: HCPs, child protective services (CPS), law enforcement, lawyers, and judges. All professionals had been directly involved in Wisconsin child abuse cases.

Methods

This qualitative study consisted of discipline-specific focus groups, directed by open-ended interview questions. Data analysis was completed through the narrative inquiry methodology.

Results

Barriers to providing and obtaining high-quality medical information in child abuse investigations were both discipline-specific and universal amongst all groups. Discipline-specific barriers included: HCPs' discomfort with uncertainty; CPS' perception of disrespect and mistrust by HCPs; law enforcement's concerns with HCPs' overstepping professional boundaries; lawyers' concern of HCPs' discomfort with court proceedings; and judges' perception of a lack of understanding between all disciplines. Universal barriers included: value of high-quality medical information in child abuse investigations, burden of time and money; unequal resources between counties; a need for protocols, and a need for interdisciplinary collaboration.

Conclusion

Findings from this study suggest several ways to address identified barriers. Possible interventions include equalizing resources between urban and rural counties (specifically financial resources and access to child abuse experts); protocolizing reporting and investigations; and, increasing interprofessional education.

Keywords

Child abuse, Investigation, Mandated reporting, Collaboration

1. Introduction

As mandated reporters of suspected child abuse (Child Abuse Prevention and Treatment Act of 2010, 2010, Child Abuse Prevention and Treatment Act of 2010, 2010), healthcare providers (HCPs) play an important role in stopping child abuse by detecting injuries, reporting suspected child maltreatment to authorities and ensuring that police and child protective service (CPS) investigators understand the basis for concern. In the United States, each state requires specific professionals to report suspected abuse. Wisconsin State Legislature (2018) 48.981(2) mandates that HCPs, among other professionals, report any reasonable suspicion of child maltreatment to CPS and/or law enforcement. Despite this law, Wisconsin screens in and substantiates child abuse and neglect at a lower rate than the national average. Wisconsin Department of Child and Family Services (2017) reported that the state's Department of Child and Family Services in 2016 received 78,382 referrals, of which 27,263 (34.8%) were screened in and 4769 (12.5%) cases were substantiated. While there are likely several

contributing factors, Wisconsin's lower rates may reflect HCPs' hesitancy in reporting and ineffective collaboration between HCPs and those who investigate and prosecute suspected abuse (CPS, law enforcement, lawyers, and judges).

When healthcare providers (HCPs) report suspected abuse, other disciplines become involved if the case is screened in for investigation. Effective investigations require collaboration from a diverse interdisciplinary team, including HCPs, child protective services (CPS), law enforcement, and often legal professionals (Wisconsin Department of Child & Family Services, 2018). Each discipline in this process provides a unique and crucial role to child abuse investigation. To protect victimized children, it is essential that each discipline understands the diverse roles in the process of reporting and investigating suspected abuse. In addition to understanding each discipline's role, child abuse professionals must understand how to interact with each other to create a cohesive and effective team when investigating cases of suspected child abuse.

Recognizing the need to increase communication and collaboration across disciplines, Wisconsin child abuse experts created the Wisconsin Child Abuse Network (WI CAN) public-private partnership in 2009. With a vision of "partnering to protect children," Wisconsin Child Abuse Network (2018) goal is to increase the use of medical expertise in child abuse investigations with the purpose of improving the accuracy of investigations and the safety of Wisconsin's children and families. An initial step in meeting this goal was to conduct focus groups, hereafter referred to as "the WI CAN Project." The purpose of this project was to better understand the various disciplines' perspectives on access to high-quality medical information in child abuse cases and to identify strategies to improve collaboration.

2. Methodology

The WI CAN Project was a qualitative focus group study, including professionals from five disciplines: HCPs, CPS, law enforcement, lawyers (prosecuting attorneys) and judges. All participants were currently or previously engaged in identifying, reporting, or investigating Wisconsin suspected child abuse and neglect cases. The study methodology, and subsequent findings, were reported incorporating the Consolidated Criteria for Reporting Qualitative Research (COREQ) Checklist, developed to facilitate explicit and comprehensive reporting of qualitative studies (Tong, Sainsbury, & Craig, 2007).

2.1. Study participants and recruitment

Five discipline-specific focus groups participated: HCPs (n = 9), CPS (n = 7), law enforcement (n = 10), lawyers (n = 8), and judges (n = 7). Study participants were recruited by WI CAN personnel through multiple methods. Healthcare providers and judges were invited to attend their respective focus groups during lunch hours at larger, relevant professional meetings. Child protective services, law enforcement, and lawyers were recruited via email and in-person to attend focus groups for this study. Email solicitations were sent by members of the WI CAN team who had professional networks of potential participants. Some solicitations were in-person as well. For example, the social workers on the leadership team contacted CPS workers who might be willing to participate. Those CPS workers also were invited to extend the invitation to others. Given the multiple methods for study recruitment, it is unknown exactly how many participants were initially approached to reach the final sample size of

41 professionals. Inclusion criteria required that each participant practiced in Wisconsin and had been involved in cases of suspected child abuse.

Two members of the WI CAN leadership team were also co-investigators of the focus group research. Some participants were known to researchers. LK Sheets attended the medical focus group to answer WI CAN questions. Additionally, some participants self-disclosed to the researchers after completion of the focus groups. Other WI CAN personnel, who were not researchers, attended focus groups to answer questions posed about WI CAN. The WI CAN personnel were introduced at the beginning of each focus group. It is possible that focus group participants recognized the names of WI CAN personnel, but otherwise the WI CAN personnel did not know the focus group participants. All participant responses in the transcripts/summaries were de-identified.

2.1.1. Demographic characteristics

Participants included 41 professionals across the five focus groups. Except for lawyers, most participants in each focus group were female [n = 29 (70.7%)]. Healthcare providers, (n = 8 female, 1 male), represented the roles of nurse practitioner/physician assistant (n = 4) and pediatric or family practice physician (n = 5), all of whom worked within primary care settings. CPS included seven participants (n = 6 female and 1 male), all of whom were social workers. Ten law enforcement (police officers) participated (n = 8 female and 2 male). Eight lawyers (prosecuting attorneys) attended (n = 3 female and 5 male) and seven judges participated (n = 4 female and 3 male). Wisconsin is a state comprised of 72 counties, with the urban counties primarily located in southern Wisconsin and rural counties in northern Wisconsin. The state's two pediatric trauma centers and several child abuse pediatricians reside within two of these urban counties. Each focus group including a roughly equal number of professionals from both urban and rural counties. Maintaining anonymity of participants, even between the five focus groups, was a concern. Therefore, specific demographic characteristics that could expose the individual identity of participants were intentionally omitted (e.g. age range, range of years worked, and race/ethnicity) to protect anonymity of the participants.

2.1.2. Study procedures

Five discipline-specific focus groups, lasting approximately 90 min each, were facilitated by the same trained professional contracted from the University of Wisconsin Survey Center (UWSC). Along with the facilitator, a WI CAN professional attended each group to answer WI CAN-specific questions, such as program goals and group composition. Otherwise, WI CAN professionals did not participate or engage in discussions. Interview guides, using open-ended questions, were developed jointly by WI CAN and UWSC (Table 1). Study questions were implemented with the first focus group and remained consistent throughout the study.

Table 1. WI CAN Interview question guidelines.

Interview questions: HCPs
1. Child maltreatment is very common and will affect at least 10-25% of all children. Medical providers can provide valuable information and direction when there are suspicions of child physical or sexual abuse.
• How comfortable do you feel in evaluating children in your practice setting for child abuse?
When do you feel more or less comfortable?
How comfortable do you think other health care providers feel?

<ul style="list-style-type: none"> • What are your concerns when confronted with a possible child abuse case?
<p>Where do you turn when you need additional information or expertise? (on line, books, papers, state expert, national expert...)</p>
<p>Are you concerned about having access to those with more expertise?</p>
<p>Are you concerned about how police or child welfare conduct investigations or make safety decisions?</p>
<ul style="list-style-type: none"> • What other types of resources would be helpful in identifying these cases?
<p>Do you have access to these resources?</p>
<ul style="list-style-type: none"> • A child abuse pediatrician is a new sub-specialty that focuses on identifying child abuse. How might support from a child abuse pediatrician be useful to you?
<ul style="list-style-type: none"> • What happens when you speak to Child Protective Service staff or police about a suspected child abuse case?
<p>How is the communication between you and the CPS?</p>
<p>What about with the police?</p>
<p>What would help you work with investigators better?</p>
<ul style="list-style-type: none"> • What areas of additional training or education would you find useful?
<ul style="list-style-type: none"> • If you had access to Wisconsin child abuse pediatric opinions and trainings, would you find this useful? We are thinking about expanding web-based education and an interactive venue (peer review) to help with cases. What would you want this to include? What special considerations should we take into account as we develop this resource?
<p>2. There are several groups of professionals that work to reduce child abuse, including Child Protective Services, Law Enforcement and of course Health Professionals. How well do you feel like you understand each of these groups' roles?</p>
<ul style="list-style-type: none"> • What would make these groups more helpful?
<ul style="list-style-type: none"> • What should each of these groups be doing differently?
<ul style="list-style-type: none"> • What goes well when you interact with police or child welfare
<ul style="list-style-type: none"> • What does not go well?
<ul style="list-style-type: none"> • Do you have suggestions about what could improve interactions with these investigators?
<p>3. Now let's talk about how these groups work together,</p>
<ul style="list-style-type: none"> • What would improve how these groups work together?
<p>4. What advice would you give us to help build a statewide network or coalition?</p>
<ul style="list-style-type: none"> • What problems might we face?
<ul style="list-style-type: none"> • What would help investigators and providers to work together effectively?
<ul style="list-style-type: none"> • Do you have suggestions on what types of services and resources provided by the network would be helpful to you?
<p>5. Those are all of our questions for today. Are there any issues we did not touch on?</p>
<p>Interview questions: CPS, law Enforcement, attorneys and judges:</p>
<p>6. Many types of professionals work to investigate and assess when there are child abuse concerns including law enforcement and child protective services. Often, but not always, medical information is part of the investigation or assessment</p>
<ul style="list-style-type: none"> • What medical expertise is available to you?
<p>What are your needs in terms of having access to medical expertise?</p>
<ul style="list-style-type: none"> • What barriers do you encounter in obtaining medical input?
<p>What are some other kinds of barriers you encounter?</p>

<ul style="list-style-type: none"> • How valuable do you find medical input in your work investigating cases?
<p>Does it differ by type of case? How?</p>
<ul style="list-style-type: none"> • How do you use medical information?
<ul style="list-style-type: none"> • When you speak to medical providers, how clear is the information they give you?
<p>How well do you think you understand each other?</p>
<p>What could be done to improve communication?</p>
<ul style="list-style-type: none"> • What about times when you can't get the medical input you need? What happens then?
<p>Has there been an impact on the legal side of a case such as on the prosecution of a case or on the safety of a child?</p>
<ul style="list-style-type: none"> • WI CAN is a network of child abuse professionals that will provide access for you to medical experts and educational talks- What do they need to do to be useful to you in your work?
<p>What would you want from the network?</p>
<ul style="list-style-type: none"> • If health care providers had access to Wisconsin child abuse pediatric opinions and trainings, do you think this would improve the quality of the information they provide to you in reporting suspected child abuse cases? We are thinking about expanding web-based education and an interactive venue (peer review) to help with cases. What specific areas to health professionals need to improve that could benefit from more training? What special considerations should we take into account as we develop this resource?
<p>7. There are several groups of professionals that work to reduce child abuse, including Health Professionals, Law Enforcement and of course Child Protective Services. How well do you feel like you understand each of these groups' roles?</p>
<ul style="list-style-type: none"> • What would make these groups more helpful?
<ul style="list-style-type: none"> • What should each of these groups be doing differently?
<ul style="list-style-type: none"> • What goes well when you interact with police or health professionals?
<ul style="list-style-type: none"> • What does not go well?
<ul style="list-style-type: none"> • Do you have suggestions about what could improve interactions with these groups?
<p>8. What advice would you give us to help build a statewide network or coalition?</p>
<ul style="list-style-type: none"> • What problems might we face?
<ul style="list-style-type: none"> • What would help investigators and providers to work together effectively?
<ul style="list-style-type: none"> • Do you have suggestions on what types of services and resources provided by the network would be helpful to you?

2.2. Study ethics

2.2.1. Funding

Initial funding for the study was provided by Children's Hospital of Wisconsin (CHW) and American Family Children's Hospital. These dollars funded the initial focus groups for HCPs, CPS, and law enforcement. Subsequent funding from the Wisconsin Department of Justice funded focus groups for prosecuting lawyers and judges. The work of the first author was supported by the National Center for Advancing Translational Sciences, National Institutes of Health, through Grant Numbers UL1TR001436 and TL1TR001437. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the NIH.

2.2.2. Incentives

Each focus group occurred over a noon hour and all participants received box lunches. Those traveling specifically for the focus group (CPS, law enforcement, and attorneys) were reimbursed for their mileage. Additionally, at the recommendation of the UWSC, HCPs were each given a \$100 honorarium to increase willingness to participate as the HCPs were missing a conference networking luncheon to attend the focus group.

2.2.3. Protection of human subjects

CHW's Internal Review Board (IRB) approved the WI CAN Project focus groups. The analysis of the completed (transcribed and de-identified) transcripts was deemed exempt by Marquette University's IRB. CHW confirmed they were no longer engaged for the data analysis and additional IRB approval was not needed by CHW.

2.3. Data

2.3.1. Data collection

All data intake was coordinated through one facilitator at UWSC. Each focus group was recorded using a digital audio file and transcribed verbatim. UWSC then provided the completed transcripts, and a written summary and brief analysis of each session to the PI of the initial study. While LK Sheets participated in both the focus group data collection and analysis, the other two investigators did not participate in the initial focus groups. Thus, an additional IRB approval was obtained for data analysis to include these two researchers in the study.

2.3.2. Data analysis

The framework for qualitative analysis was the narrative inquiry methodology. Narrative inquiry engages in understanding individual's experiences and the meaning behind these experiences. Significantly, individual's experiences are given particular meaning within larger societal context (Clandinin, Cave, & Berendonk, 2017). While participants share their individual narratives, each person's narrative is particularly meaningful given his/her relationships within societal, cultural, and institutional narratives (Clandinin et al., 2017). Additionally, researchers using narrative inquiry recognize and reflect that their own narratives reflect their experiences as researchers and the meaning given to data within narrative inquiry (Caine, Estefan, & Clandinin, 2013).

Two investigators reviewed each transcript separately, identifying and analyzing themes in the data. Additionally, QSR International's NVivo 12 Pro Software (2012) was used for qualitative data analysis. The software was used for quantifying word frequencies and for identification and organization of themes. Initial analysis was done separately by each investigator. Subsequently, all three investigators met to discuss themes until consensus was reached.

3. Results

The five focus group transcripts were analyzed to identify themes for barriers in reporting and obtaining high-quality medical information in investigations of child abuse. Both discipline-specific and universal themes were identified.

3.1. Barriers, discipline specific

3.1.1. HCPs: uncertainty

HCPs spoke of three areas of pervasive uncertainty in the process: (1) identifying child abuse, (2) reporting suspected abuse, and (3) outcomes for the child and family. In identifying child abuse, one HCP stated directly, “I don’t feel terribly comfortable identifying it...more subtle cases are very challenging.”

The second area of uncertainty is related to the reporting process. One HCP explained: “we don’t know the criteria, so it does get hard if it’s this then maybe this you should be doing but there is no flow sheet or criteria.” Another HCP expressed uncertainty in the steps of reporting: “I don’t even know how to go about doing it; besides you have to contact someone but, in our institution, I can’t even tell you what the policy and procedure is.”

A third area of HCPs uncertainty pertains to not knowing the outcomes for the child and family. “Sometimes you just think does the parent need help or does the parent need to be turned in and then what? Is there something in between that will help the family out?” Furthermore, one HCP voiced frustration due to uncertainty in outcomes when HCPs do report, “When I’ve reported those things sometimes to CPS nothing really ever happens so I’m not really sure if I should keep reporting some of that or if I should just wait until something more obvious happens.” Another HCP stated that “When I call, I haven’t had any feedback at all, so you kind of wonder why are you doing this?” For HCPs, uncertainty is pervasive in the process of identifying and reporting concerns of abuse. HCPs commonly receive little if any feedback when they report. Therefore, the concerns of uncertainty are not alleviated as HCPs often do not know the outcomes of their reporting.

3.1.2. CPS: lack of respect and trust from other professions

For many CPS personnel, disrespect and mistrust were evident in HCPs’ actions. CPS participants voiced their perception of being disrespected: “There’s not much lower than social services in the medical field.” For CPS this disrespect and mistrust was evident in witnessing that HCPs preferred to speak directly with law enforcement, even in the presence of CPS: “I feel like I’m back in the women’s right movement kind of thing where it’s like I’m just standing here behind the big bad man [law enforcement].” Additionally, CPS felt that HCPs, particularly child abuse pediatricians, would interfere with the role of CPS:

can you let us do our job and pull it all together with law enforcement, and everything else? When they step over your head two levels just to make their point; I realize they are child advocates and they care about kids, but damn-it, so do we, you know, we really do.

One CPS social worker verbalized that HCPs need to address their own responsibilities and trust that CPS will fulfill their own responsibilities, “They [HCPs] focus more on the case planning on what human services needs to do than what the medical findings are.” For CPS, when HCPs bypass or second-guess CPS decision making, HCPs demonstrate that they don’t trust or respect the role of CPS.

3.1.3. Law enforcement: HCPs overstepping boundaries

Law enforcement discussed at length the ramifications when HCPs encroach on the role of the police. They voiced concerns when HCPs would interview parents to investigate histories and identify suspicions of child abuse: “...where doctors start to delve into the who, what, where, when and why’s

more so than just what they need to know, in my opinion, it gets into the prosecuting end.” One law enforcement participant explained, “I don’t ever question their medical opinion, but they need to not question our investigative tracking and what we’re doing.” Law enforcement verbalized that legal cases have been impeded due to HCPs overstepping their roles:

sometimes all you have to go on is a confession and the doctor has turned them so poorly against everyone involved it’s dead in the water sometimes. And there’s a misunderstanding of roles or sometimes due to enthusiasm I think of going over that role, that boundary.

HCPs can impede legal investigations by overstepping their roles into those of law enforcement. Law enforcement’s statements clarify their frustration when HCPs infringe on the responsibilities of law enforcement, instead of focusing on the responsibilities of HCPs in identifying and reporting suspected abuse.

3.1.4. Attorneys: HCPs’ hesitancy to cooperate with court

Attorneys reflected that it is unusual for HCPs and attorneys to work together; thus, each profession has limited knowledge about how the other profession practices. This requires a willingness of both HCPs and attorneys to collaborate:

We—sometimes, work collaboratively and cooperatively, but for the most part, we’re our own institutions, we’re our own entities, we don’t really have the ability to, you know, make any calls about how things work. It’s all just based on sort of the largess and willingness on one side or the other.

Moreover, the relationships between HCPs and attorneys is one-sided, “we absolutely need them to do our job and they don’t need us. I mean, they’ve done their thing with this patient. They’ve treated them and moved on, and they don’t need us.” While some HCPs cooperate and participate in legal investigations willingly, others do not and “If doctors and hospitals want to make it difficult, they can definitely do that.” Prosecutors depend upon the willingness of HCPs to assist in child abuse investigations. However, some HCPs feel they’ve completed their responsibility by reporting suspected abuse, which can limit an attorney’s ability to do his/her job effectively

3.1.5. Judges: lack of understanding of other’s roles

Uniquely, judges verbalized a lack of communication and understanding amongst all professions, not just by HCPs. Disciplines also blamed each other for lack of work effort. For example, one judge shared:

I don’t want to say adversarial, but it’s almost like they [HCPs, CPS, law enforcement]’re all saying, ‘Well, they’re not doing enough. So, whatever it is that the others are doing, it’s not enough. But, you know, they’re doing more – they’re doing all that they can do, but their perception is that the others are not doing what they need to do.

Judges also identify that other professions do not seem to fully understand the purpose and scope of judges in child abuse investigations:

I don’t think that they [HCPs, CPS, law enforcement] have this same grasp of what it is legally that we’re looking for, and so we wind up with more of a shotgun approach, giving us information that may or may not be relevant to the issues

Judges, at the end of the continuum of child abuse reporting and investigating, seemed to have a more global view of where communication and collaboration broke down, specifically with misunderstandings between disciplines regarding each other's roles and needs.

3.2. Universal themes

While each profession voiced unique themes regarding how HCPs can provide high-quality medical information, universal themes were also present amongst the focus groups. Several themes transcended different disciplines, speaking to the larger scope of child abuse and neglect investigations.

3.2.1. Value of high-quality medical information

Most universal themes identified barriers in providing and obtaining high-quality medical information. However, amongst these voiced barriers, the four groups of CPS, law enforcement, lawyers, and judges all spoke to immense value of high-quality medical information. CPS reported that medical information is valuable in substantiating cases, "I find it very helpful in neglect cases...how that could have been prevented medically...that helps me get to my substantiation criteria." Lawyers were able to prosecute more cases because of quality medical information, "It's the only way you are going to prove some of these cases and it's increased our ability to prosecute and prove cases that I don't know we were touching 10 years ago." Judges also identify that high-quality medical information directly affected legal outcomes:

I see written [medical] documents that are very comprehensive and come to certain conclusions and then support those conclusions, and most of those cases resolve because of that robust training that certain medical experts have. And then I've had other medical experts that it's so inconclusive that there's ultimately either a trial or they're not guilty or there's going to be a plea negotiation on something else.

High-quality medical information directly affects substantiating and prosecuting child abuse cases. However, as one law enforcement participant explained, the county's need access to this information.

A law enforcement participant from the state's largest urban county expressed the value of having ready access to child abuse resource, in contrast to most other counties:

I'm in X [county] and for once I get to say my system works. I have access to Children's Hospital and then we also have the CAC [Child Advocacy Center] and the Child Protection Center, so I have access to Dr. X one of the experts that we deal with on a consistent basis. And then we also have a sexual assault treatment center, so we have a, anytime we can have access to a SANE [Sexual Assault Nurse Examiner] nurse. So, we're not really having any delay issues or expertise issues.

High-quality medical information is critical, but not equally available for all Wisconsin counties.

3.2.2. Burden of time and money

Time involvement in suspected child abuse cases was discussed by all. HCPs shared their conflict about reporting to CPS:

You want to do what's best for the kid, but if nothing's gonna happen, and it takes twenty minutes to do it [report to CPS] in the middle of ten minute appointments all day long, it would be useful to know something is going to happen.

The disruption to an already busy day can be especially frustrating for HCPs as they don't know the outcome of their actions.

CPS remarked upon long waits to obtain medical evaluations both in Emergency Departments (EDs) and traveling to specialty Child Advocacy Centers, which may be a long distance away. Rural communities have limited resources and some HCPs refuse to engage:

None of our doctors want to deal with child welfare to begin with, it doesn't matter if it's sexual or physical or neglect, or unborn baby, it's all, I don't really want to deal with that, go somewhere else. I've been told I have to call and make an appointment for an emergency...Several times I've been turned away from the ER [emergency room], with child in hand 'we don't have the ability to deal with that, go somewhere else.'

CPS empathized with the child, "sitting around waiting forever, putting a child under that kind of stress when they are under stress already..." In addition to being time-intensive, obtaining a medical investigation can be stressful for the child at risk.

Lawyers discussed both the time and financial burden related to child abuse investigation. In rural counties, prosecutors must engage on-call ED (emergency department) physicians, who are often locum tenens (casually referred to as *rent-a-docs* by several participants):

that are there for the weekend shifts, they may examine or evaluate the child and that may need to be critical testimony that afterwards, not only is that doctor not at the hospital, or at the local hospital, he is out of state and maybe out of the region geographically.

Time is spent trying to find the physicians who reported the suspected abuse. Additionally, while HCPs in this study did not verbalize an unwillingness to testify in court, attorneys reported this occurrence, which can be both time intensive and expensive:

They [doctors] seem to think that sometimes they're above being bothered for live testimony. They'll be happy to do a deposition. They'll be willing to do telephonic testimony. But when you tell them in the criminal arena, it's very difficult to have anybody agree to anything other than live testimony or the live cross examination. They're like, 'Not going to happen.' And yet get in this battle at the legal counsel for the hospital and fighting subpoenas and it can get to be nasty and expensive.

The financial expense of obtaining medical expertise is burdensome. Medical experts can bill counties for their time during trial preparation and testimony. A prosecutor from a northern rural county explained:

they [doctors] were billing for travel expenses the same as testimony time, so I know the bill for that county is just outrageous and is now shot for the whole year just doing a couple of child sexual assault cases.

Another lawyer agreed, “As an expert witness they are entitled to greater compensation, there is really no statewide mechanism for that, it’s a county budget issue...so I think a lot of prosecutors are put in a corner...Cost is a reoccurring problem.” Judges note similar concerns:

Probably for me the biggest issue is getting evaluations [medical] done, and so I am appointing—like in cases I may appoint an independent evaluator or an expert at the request of the parties, or because they’re an expert of the court and further elaborate on any issue. Don’t want to do that very often because it’s expensive, and anything that I order my county has to pay for.

Lawyers and judges are mindful of balancing county budgets and the costs of obtaining the best medical information possible. This reality may put another child at risk if high-quality medical information cannot be obtained due to cost or due to HCPs not engaging in court cases.

3.2.3. Unequal resources

While disparities in resources were known to WI CAN members prior to the study, the ramifications of the unequal resources between urban and rural counties were identified by focus group participants. The ability to obtain medical evaluations in suspected abuse can be difficult in rural communities. Participants in rural counties discussed that some ED providers would refuse to evaluate a child brought in for suspected abuse, requiring the CPS worker and child to go to another ED. Additionally, those in rural counties often have to travel long distances as the Child Advocacy Centers (CAC) are primarily located in the urban counties. One CPS worker explained, “I come from a rural county, and there are not a lot of medical professionals at all in our community...So I tend to use [hospital X] which is about an hour and a half drive away.” Another CPS worker explained the consequences of not having access to a CAC and qualified medical child abuse HCPs. In rural counties, with limited access to child abuse experts, one CPS provider explained that she guided HCPs on abuse evaluations:

The social worker typically directs the physicians in examinations, making suggestions....so it really depends, on the time of the day, day of the week, who is working an emergency room, who a family’s primary physician is, so there is really not a consistent medical response.

With limited resources, some rural CPS providers support community HCPs in assisting in directing the evaluation. Otherwise, those in rural counties, both those caring for maltreated children, as well as the children themselves, must travel further for evaluations by child abuse experts. Additionally, the financial burden to rural counties can be immense, spending an annual budget for expert medical witnesses on just one child abuse case.

3.2.4. Protocols needed

HCPs, CPS, and law enforcement all discussed a desire for protocols to standardize reporting processes, particularly to make the process more efficient. One HCP explained:

It always seems like they [CPS] ask more questions than I thought they were gonna ask. It would be nice to have a list or a form at our end that we could have someone fill out so when you call it’s all done instead of running in and asking more questions [from the child’s family].Despite HCPs desire for protocols, one CPS worker anticipate..”I know that would probably be insulting to most physicians, but I think it’s needed..” However, these concerns were not substantiated by HCPs comments, who

specifically requested a protocol from CPS so that they could anticipate what information would be needed.

Law enforcement suggested that a communication protocol might streamline reporting for them as they communicate with CPS:

I should just be able to like make a phone call and get someone to help me because I think I know what I'm doing but we have to go through the intake and do the same thing as if I'm a teacher or something.

One judge discussed a need for protocols so that outcomes were not provider dependent:

everything was working really nice and smooth, and then that person moves to another area. Now I've got a new ADA [Assistant District Attorney]. There are no protocols in place; there's no—no institutionalization whatsoever, and now we're all back to square one because, you know there is—there wasn't anything in place before that person left.

Protocols were universally recommended to streamline communication between disciplines, and consequently make reporting and investigating suspected abuse more efficient and less stressful for each provider.

3.2.5. Collaboration

The need for interprofessional education and communication for collaboration was voiced by several participants in different professions. HCPs voiced regarding CPS, "I don't feel like I'm on a team with them," while another HCP shared a desire to understand, "Who are your resources, what do all these different people do, what does CPS do...and maybe that would make people more apt to refer." HCPs suggested a venue:

Maybe at a conference like this [Wisconsin pediatric healthcare conference], where the first day seems to be concentrated on a certain topic, maybe talk a half day, and bring in law enforcement and social workers and CPS and have them all in the room and each give a talk so that we can say, you know, really hear from them what they can do.

Participants in the focus groups also noted that they need to better understand each other's roles. For example, one law enforcement officer shared a desire to train with HCPs, "so they understand what we can and cannot do and what is realistic and why we're asking the questions we're asking." CPS summarized, "I think it's very important that the three parties at the table, law enforcement, medical and ... CPS, that we all have equal value and equal standing" One lawyer offered:

I think we have to understand what everybody's role is because if we didn't, we couldn't coherently present our case to a jury. So, you know, I think we generally understand other parties' roles. You know, it's getting them to understand our role and their part of the whole piece...

Judges discussed collaboration between counties and regions, not just between disciplines. A county with an effective collaborative practice process should share and model for other counties:

getting that information out to people who are—really believe this issue is of great import you know, would be happy to have conversations with people in other parts of the state who've tried this and have been successful.

Participants in each focus group discussed the need for disciplines to work collaboratively, which would begin with a better understanding of each other’s roles and what each profession needs from the others. All recognized that professions cannot work as silos, especially considering that the safety and health of vulnerable children is at risk.

4. Discussion

The purpose of this study was to report findings from the WI CAN Project. The WI CAN Project sought to identify barriers and needs amongst Wisconsin providers in soliciting and obtaining high-quality medical information in child abuse investigations in Wisconsin. Identifying barriers and needs may help WI CAN develop interventions to remove or mitigate these barriers and obstacles.

4.1. Themes of WI CAN project

Ten themes were identified regarding the needs and barriers in obtaining high-quality medical information in child abuse investigations (Table 2). The WI CAN Project identified both five discipline-specific and five universal themes. Discipline-specific themes were: (1) HCPs’ uncertainty in identifying, reporting and outcomes of suspected child abuse, (2) CPS’ lack of respect and trust from other professions, (3) law enforcement’s concern with HCPs overstepping professional boundaries, (4) lawyers’ concern with HCPs’ lack of cooperation in court, and (5) judges’ concern with lack of understanding between all professions. Universal themes among the focus groups included: (1) value of high-quality medical information in investigations; (2) burden of time and money in child abuse investigations; (3) unequal resources between urban and rural counties; (4) need for protocols, and (5) need for interprofessional collaboration. Nine of the ten themes offer opportunities for improvement, while the universal theme of “value of high-quality medical information in investigations” explains why the remaining nine themes need to be addressed.

Table 2. Table of identified themes in WI CAN Project regarding obtaining high-quality medical information in child abuse investigations.

Discipline Specific Themes	
Discipline	Supporting Participant Quotes
Healthcare providers: Uncertainty about child abuse (1) identification, (2) reporting, and (3) outcomes for the child	<i>“we don’t know the criteria, so it does get hard if it’s this then maybe this you should be doing but there is no flow sheet or criteria.”</i>
Child Protective Services: Lack of respect and trust from other professions	<i>“There’s not much lower than social services in the medical field.”</i>
Law Enforcement: HCPs overstepping boundaries	<i>“I don’t ever question their medical opinion, but they need to not question our investigative tracking and what we’re doing.”</i>
Prosecuting Attorneys: HCPs’ hesitancy to cooperate with court	<i>“We absolutely need them to do our job and they don’t need us. I mean, they’ve done their thing with this patient. They’ve treated them and moved on...”</i>
Judges: lack of understanding of other’s roles	<i>“...it’s almost like they [HCPs, CPS, law enforcement]’re all saying, ‘Well, they’re not doing enough. So, whatever it is that the others are doing, it’s not enough. But, you know, they’re</i>

	<i>doing more – they’re doing all that they can do, but their perception is that the others are not doing what they need to do.”</i>
Universal Themes	
Value of high-quality medical information	<i>“It’s the only way you are going to prove some of these cases and it’s increased our ability to prosecute and prove cases that I don’t know we were touching 10 years ago.”</i>
Burden of time and money	<i>“You want to do what’s best for the kid, but if nothing’s gonna happen, and it takes twenty minutes to do it [report to CPS] in the middle of ten minute appointments all day long, it would be useful to know something is going to happen. “</i>
Unequal resources	<i>“I come from a rural county, and there are not a lot of medical professionals at all in our community...So I tend to use [hospital X] which is about an hour and a half drive away.”</i>
Protocols needed	<i>“It always seems like they [CPS] ask more questions than I thought they were gonna ask. It would be nice to have a list or a form at our end that we could have someone fill out so when you call it’s all done instead of running in and asking more questions [from the child’s family].”</i>
Need for interprofessional collaboration	<i>“so they understand what we [CPS] can and cannot do and what is realistic and why we’re asking the questions we’re asking.”</i>

4.2. HCPs' discomfort with uncertainty

The diagnosis of child abuse is different than most other medical diagnoses. Reporting suspected abuse requires that HCPs act upon a *reasonable suspicion* of abuse (Wisconsin State Legislature (2018) 48.981(2)), a diagnosis is not required or even expected. The legal determination of abuse occurs through external investigations and court proceedings, not by HCPs. Even so, HCPs sometimes are uncomfortable referring externally when their medical judgment lacks certainty. Additionally, this external referral may mean that HCPs will never know the outcome of the suspected diagnosis and referral. HCPs’ discomfort with uncertainty is understandable and is not unique to Wisconsin (Gunn, Hickson, & Cooper, 2005; Herendeen, Blevin, Anson, & Smith, 2014; Jones et al., 2008; Tiyyagura, Gawal, Koziel, Asnes, & Bechtel, 2015). While uncertainty is expected and acceptable, these concerns may be mitigated through further education. Recognizing that other professionals do not expect a definitive diagnosis when reporting may alleviate some of HCPs’ discomfort with uncertainty.

4.3. Need for equal resources between urban and rural counties

The two themes of burden of time and money and unequal resources between urban and rural counties may demonstrate disparate resources within the state. The requirement of time and financial resources required in child abuse investigations was pervasive between the focus groups. However, these burdens may be more pronounced within rural counties. In Wisconsin, those in rural counties have fewer specialized resources, requiring traveling further to the Child Advocacy Centers and to child abuse pediatricians. Lawyers and judges reported that a single child abuse investigation might exhaust the county’s annual budget for investigations. Thus, they were judicious in choosing when to request additional experts. Further, the locum tenens providers were primarily used in rural counties, adding to

the time and financial burden of completing legal actions. While a lack of collaboration was identified as a statewide issue, those in rural counties had fewer opportunities to attempt collaboration, given their limited resources. The state of Wisconsin might explore strategies to equalize counties' access to child abuse medical expertise. One possible solution may involve re-allocating funding to rural counties, easing the financial burden and increasing the safety of all at-risk children in Wisconsin.

4.4. Interprofessional education

The remaining six themes speak to the need for interprofessional education (IPE). The World Health Organization (2010) explains that IPE occurs when two or more professions learn about, from, and with each other. IPE is taught through its four core competencies: (1) values/ethics, (2) roles/responsibilities, (3) interprofessional communication, and (4) teams and teamwork (Interprofessional Education Collaborative, 2016). IPE proposes to increase interprofessional collaboration (IPC), which may improve patient outcomes, in this case to improve outcomes for abused children.

While not explicitly stated, each discipline spoke to the need for IPE. CPS' theme of lack of respect and trust might be addressed through the IPE core competency of teams and teamwork. Law enforcement's concerns of professional boundaries are related to the core competency of roles/responsibilities. Lawyers' theme of HCPs discomfort in court speaks to the core competency of interprofessional communication. Additionally, judges' findings related to lack of understanding may address the final competency of values/ethics. Finally, the universal themes of the need for protocols and collaboration both identify three of the four core competencies of IPE: roles/responsibilities, interprofessional communication, and teams and teamwork.

In the United States, a few IPE programs in child abuse are directed at university students, such as the Gundersen's National Child Protection Training Center's Child Advocacy Studies (CAST) certificate program (<http://www.gundersenhealth.org/ncptc/cast/>). However, a gap remains in IPE for practicing professionals, both in Wisconsin and nationally.

WI CAN has implemented two initial venues to begin to address IPE needs through education and protocols. First, WI CAN offers monthly educational webinars, open to all disciplines, who can interact via a one-hour online platform (accessible at <http://wichildabusenetwork.org/webinars>). The electronic format has proven valuable in teaching professionals across the state. While this is a valuable start, the education remains voluntary and may not capture HCPs and other professionals who do not actively seek education on child abuse. Thus, the HCPs who are already hesitant in identifying and reporting child abuse, might not be involved in these education resources.

Additionally, WI CAN has taken an initial step to protocolize the process between HCPs and CPS. For example, child abuse experts at CHW have created a one-page sheet on child abuse significance and evaluation guideline specific to bruising in children under two years (Image 1). As needed, Wisconsin CPS personnel have provided these guidelines to HCPs and investigators to improve the quality and consistency of child abuse medical evaluations. While preliminary, this *just-in-time* guideline has been used successfully to initiate medical evaluations of child abuse, which have led to improved detection of potentially life-threatening child physical abuse (LK Sheets, personal communication, May 29, 2018). This is a productive first step in creating a protocol for evaluating physical abuse. However,

implementation relies upon individual providers to seek and follow the guidelines. Further work needs to be done to standardize this process in Wisconsin.

Image 1

Physical Abuse Concerns in Infants Birth to 2 years of Age: Taking a Closer Look

Sentinel Injuries:

- What are they? Visible, poorly explained small injuries such as a bruise or mouth injury in pre-cruising infants are often from abuse and can precede more serious abuse. Cruising means the baby is able to pull to a stand and take a few steps holding onto something which babies learn to do between 7 and 12 months of age.
- What do they mean? Babies who are not yet cruising should not be bruising! Any bruise or mouth injury in a pre-cruising infant should raise concerns for abuse or a bleeding disorder (Sugar, Net al., Arch Pediatr Adolesc Med. 1999;153:399-403 and Sheets, LK et al., *Pediatrics*. 2013; 131:701-707).
- A baby with a small bruise from abuse may have severe internal injuries, so additional medical screening is necessary. Medical screening is performed to detect additional injuries and to rule out conditions that can cause easy bruising such as a bleeding disorder. In a recent study, 50% of babies with just a bruise who were evaluated for abuse had other serious injuries (Harper NS et al. *J Pediatr* 2014;165(2):383-388)
- Who should evaluate an infant with a sentinel injury? Ideally the infant should be evaluated by the most experienced medical provider available. If unsure about where to seek care or another opinion, consult with your Child Advocacy Center for further guidance.
- What if the further injury surveillance (see Medical Evaluation below) is negative? Even if no other injuries are present, the sentinel injury should be carefully considered as suspicious for abuse. Remember that a bruise or mouth injury may be the first injury from abuse! Injury surveillance is not complete until both parts of the skeletal survey are performed (initial and repeat in 3 weeks).

Other considerations:

- Fractures can be the first sign of physical abuse and 55% to 70% of abusive fractures occur in children under 1 year of age. Consider child physical abuse in any child with a fracture that is unexplained, poorly explained or in an infant < 12 months old.
- Sibling or household contacts of abused children should be evaluated for abuse. Researchers found that siblings or household contacts under 2 years of age had abusive fractures in almost 12% of cases! (Lindberg, DM et al., *Pediatrics*. 2012;130:1-9)

Guidelines (depends upon clinical judgment) when physical abuse is suspected in a child < 2 years of age:

- Obtain Photographs. Photos, while important, often cannot replace evaluation by a medical provider. Include photos of the face, knees and shins in every suspected case.
- Medical evaluation:
 - Dilated ophthalmology exam if there is a high suspicion for abusive head trauma (AHT) Head CT routinely < 6 months and if AHT is suspected in a child > 6 months.
 - MRI of head and neck if there is a high suspicion for AHT
 - Full skeletal survey including oblique ribs and a repeat skeletal survey in 3 weeks. So-called "baby grams" are inadequate.
 - Blood and Urine Laboratory testing
 - ✓ Abdominal labs to screen for abdominal trauma - Urinalysis and blood for AST, ALT, Lipase and Amylase. Obtain an abdominal CT for abused children with GCS less than 10 and/or abnormal abdominal laboratory screen (AST or ALT greater than 80)

- ✓ Coagulation screen *ONLY if* there is concerning bruising or bleeding- CBC with differential and platelets, PT, PTT, Platelet function assay, von Willebrand activity and antigen. Strongly consider adding fibrinogen, d-dimer, Factor VIII, Factor IX, and Factor XIII if severe bruising or extensive bruising.
 - ✓ Bone labs *ONLY if* there are fractures concerning for abuse - calcium, magnesium, phosphate, alkaline phosphatase, intact parathyroid hormone, and 25-OH-Vitamin D.
 - ✓ Consider comprehensive urine drug investigation testing with lab confirmation of any positive results
- Consider referring the child to the nearest Child Advocacy Center for follow-up
- 1.12.17 LK Sheets, HW Petska & J Yates 414-266-2090 lsheets@chw.org

4.5. Next steps

Telemedicine might be needed to address several issues raised by this study: HCPs uncertainty in diagnosing suspected abuse, disparities in resources between rural and urban counties, specifically access to medical expertise in child abuse, and IPE. Telemedicine has been used effectively in sexual abuse investigations (Miyamoto et al., 2014) and might be used effectively to facilitate high-quality medical information in child abuse investigations in Wisconsin, particularly if used as an interprofessional format. Telemedicine might alleviate some uncertainty of HCPs by offering increased access to child abuse experts. This might be particularly efficient and cost-effective for rural counties with limited access to Child Advocacy Centers and to child abuse experts. Additionally, if the program were state funded, telemedicine would increase resources in counties with smaller budgets for child abuse investigations. Finally, telemedicine might be used as an interprofessional format, thus offering IPE and increasing collaboration. If given a multi-disciplinary platform, telemedicine may offer an innovative format to address identified barriers and increase the quality of medical information in child abuse investigations in Wisconsin.

The proposed actions are only a few of several potential means to address the findings from the WI CAN Project. Any solution will require increased resources. Wisconsin legislators must engage with professionals involved in the identification, investigation, and prosecuting of suspected child abuse. This collaboration will provide the greatest results in protecting children in Wisconsin. These priorities are critical as the safety of children and accuracy of diagnosis depend on addressing these challenges.

4.6. Limitations

This qualitative study was comprised of five focus groups, each representing a convenience sample. As convenience samples, these groups may not be representative of each discipline throughout the state of Wisconsin. Additionally, little demographic information was obtained about the focus group participants. While this was intentional, to protect anonymity, this also limits the researchers' ability to speak to the diversity or representativeness of study participants within each profession. Finally, all researchers participating in the data analysis are HCPs. As noted in the qualitative methodology of narrative inquiry, the researchers' experiences and narratives related to child abuse cases may be different than those of the other four professions in this study.

5. Conclusion

Despite differenced voices in these focus groups, it was evident that all disciplines demonstrated a passion and sense of urgency about keeping children safe. The stakes are high, and all disciplines desire

to improve the process and collaborate to keep children safe. This shared goal will likely be a strength for WI CAN as they seek to change and improve practice in Wisconsin.

Funding

This work was supported by Children's Hospital of Wisconsin, American Family Children's Hospital, and the Wisconsin Department of Justice. The work of the first author was supported by the National Center for Advancing Translational Sciences, National Institutes of Health, through Grant Numbers [UL1TR001436](#) and [TL1TR001437](#). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the NIH.

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