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# Three models of child abuse consultations: a qualitative study of inpatient child abuse consultation notes

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## Introduction

Medical diagnoses require physicians to select, assemble and document relevant facts from the large amount of information available from patients and families. These facts, including the patient's chief complaint, history of present illness, past medical history, family and social history and current risk indicators for disease, are assembled in order to arrive at and order a list of likely diagnoses (Bickley, Szilagyi, & Bates, 2009). The differential diagnosis list then guides the medical work-up needed to confirm or rule out the diagnoses at the top of the differential list. The medical evaluation of suspected child physical abuse uses the same iterative process of differential diagnosis as other medical diagnoses. The medical diagnosis of child physical abuse, however, has unique elements that present potential challenges to the traditional process of diagnosis and to the process of documentation in the consultation note.

In contrast to a traditional medical consultation, in which a physician prepares a consultation intended to inform other medical colleagues, child abuse consultations also must be informative to outside agencies including children's protective services, the police, attorneys and judges (David, 2004). Clinicians who work with abused children have an awareness of how their medical evaluation and documentation will be used by this diverse audience. Although the majority of child abuse consultations never result in court proceedings, the potential for court involvement is present throughout the course of the medical evaluation (Palusci, Hicks, & Vandervort, 2001). Physicians may consciously or unconsciously selfedit their consultations in response to the perceived needs of investigating agencies or in anticipation of court proceedings.

Child abuse pediatrics is a new subspecialty that concentrates on the increasingly complex diagnosis and care of abused and neglected children. In 2012, the Children's Hospital

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Association (CHA) reported that there were 264 board certified child abuse pediatricians (CAPs) who consulted on 91,973 inpatient and outpatient cases at CHA hospitals ("Children's Hospital Association, 2012 Survey Findings Children's Hospitals Child Abuse Services," 2012). In addition to working with medical colleagues on these cases, child abuse pediatricians (CAPs) interact with social welfare agencies, law enforcement and the judicial system. A child abuse inpatient consultation for an injured child reflects this multidisciplinary audience, recommending diagnostic testing to rule out overlooked medical etiologies of physical findings (such as bleeding disorders) as well as testing to identify additional injuries that would not require medical treatment but would support a diagnosis of abuse (such as healing rib fractures). This dual role of the CAP, as both clinical and forensic expert, created controversy in the naming of the new pediatric subspecialty and highlighted a philosophical difference within child abuse pediatrics practice (Block & Palusci, 2006). Some physicians philosophically favored the name child abuse pediatrics to emphasize their clinical pediatric-based expertise, while others favored the term forensic pediatrics, to emphasize the legal and forensic aspects of their work. Currently, how child abuse pediatricians approach and document their work is unstudied. This study explores the content of inpatient child physical abuse consultation notes in order to elucidate both how CAPs approach their initial consultations and how this approach may reflect the CAPs underlying practice philosophy.

## Methods

## **Study Context**

Data for the current study were collected in the first year of a three-year period of data collection for a larger mixed method study of risk perception in child physical abuse. The larger study collected CAP consultation notes of three types of injury in children 4 years of age and younger: neurotrauma, long bone fracture, and skull fracture. The consultation notes were written after the evaluation of the injured child was completed and reflect the key features of the case that the CAP determined were pertinent to supporting his or her diagnostic decision-making. The study was reviewed and approved by the Institutional Review Board of the University of Utah and by each participant's Institutional Review Board. A Certificate of Confidentiality was obtained from the Eunice Kennedy Shriver National Institute of Child Health and Human Development.

## Study Design

Participants were asked to cut and paste their de-identified consultation notes from completed consultations of injured children into a secure, web-based interface. Participants selected consultation notes for the study based on random dates that were sent to participants every three months in order to reduce potential selection bias. The web-based interface asked participants to enter their notes in the order of a standard medical history including history of presenting illness, past medical history, review of systems, family history, social history and physical exam. In order to preserve participants' documentation style, participants were not constrained by this system and were allowed to place their de-identified note into the web-based system as an entire document if they did not use a standard pattern for their evaluations. Participants also entered laboratory values and

radiographic images with results for each case. Information about the participant's decision for each case (probable abuse, probable not abuse, and indeterminate) with their level of certainty in the diagnosis was collected.

## Participants

Study participants were 32 CAPs who were recruited from two national, professional physician child maltreatment groups: the Ray E. Helfer Society and the American Academy of Pediatrics, Section on Child Abuse and Neglect. Participants were recruited through notices posted to the listserv of each group. In order to be eligible to participate, CAPs were required to have five years in pediatric practice post-residency, have obtained board certification in pediatrics, spend at least 50% of their clinical time evaluating possible child abuse cases including physical abuse, and be at an institution with an Institutional Review Board. Board certification in CAP was not required because board certification was not offered until the year participant recruitment began (2009). In order to insure a diverse physician group, minority physicians were over-recruited through snowball sampling in addition to the listservs. This resulted in a participant group that was primarily female (84%), Caucasian, non-Hispanic (81%), and highly experienced, with most participants reporting greater than 10 years of child abuse practice (62.5%).

#### Qualitative analysis

Thirty-seven consultation notes were selected for analysis from the 248 consultation notes submitted in the first two 3-month data collection cycles using purposive sampling to include the full range of evaluation styles and at least one note by each participant. Selection was stopped when no new categories of information were identified in the notes. Consultation notes were analyzed using content analysis, a research method used to develop an understanding of the meaning of communication (Hsieh & Shannon, 2005). Content analysis may be used to understand critical processes and to address meanings, intentions, consequences and context (Elo & Kyngas, 2008). Our process of content analysis followed the description of inductive content analysis as described by Elo (Elo & Kyngas, 2008). First, two investigators reviewed each note independently to develop an understanding of the content as it related to understanding CAP practice. One investigator is a CAP who brought an insider perspective to the analysis of the notes; the other investigator is a critical care physician who brought a medical perspective outside of the CAP field. The two perspectives allowed for analytic negotiation, which brought a richer understanding to the data (Thomas, Blacksmith, & Reno, 2000). This process also revealed individual biases, allowing investigators to recognize and reduce bias in the final analysis. Next, initial impressions of the types of content were formed (open coding) and basic codes were defined. Text descriptive of the codes was selected and new codes were created. Each note was re-read in detail, and codes were grouped into categories under higher-order headings. Categories again were condensed into larger or main content categories that reflected the characteristics of the consultation notes and formed the highest-order headings, or models. Finally, the investigators went back to the data to check the reliability of the models against the data.

## Results

Three main models emerged from the data. Investigators labeled these models the base model, the investigative model, and the family-dynamic model. The three models reflected distinct practice approaches, potentially reflective of physicians' underlying practice philosophies, including methods of interviewing, the type of information recorded, and emphasis on different parts of the history. The language used in these three models differ in tone, in the use of direct quotations from caregivers, and in the use of direct statements of CAPs' observations. While all notes contained some elements of the base model and some notes contained elements of all models, one model tended to dominate each consultation note.

### The base model

The base model conformed to the traditional medical history in both content and use of language, similar in framework to a history used for other pediatric illnesses. Base model consultation notes included descriptions of the precipitating event that caused the parent or caregiver to seek medical treatment, a detailed description of the child's injury event, a targeted past medical history, and risk indicators for disease. The language in these notes was neutral and medically based.

Why did you come to the hospital today?—As in a traditional history, the base model opened with the question of "why did you come to the hospital today?". This question elicited a history of symptoms and events from the time that the child was last well and established the reason for seeking medical care. This model commonly included general timing around when was the child last well: "Mom stated that T was 'fine' when she went to bed around 7pm on the evening prior to admission." When available, the notes included a concise but detailed injury history including injury mechanics: "According to mother, P was on a cement ledge that was a frame for a sandbox. Mother thinks the ledge was approximately 6 inches from the ground. Mom stated that P was running on the ledge and then jumped off of the cement ledge onto the ground and twisted his left leg." These notes carefully recorded the symptom evolution prior to presentation for care as in this case of an infant with a skull fracture: "After the fall the child remained awake, alert and in no distress. He did not vomit and did not show irritability or lethargy and had no twitching or staring episodes. Mom did not notice any scalp swelling. ....At 0900 Mom noticed that the swelling had increased...when mom got back from work the child's scalp had further increased in size." When families reported treatments for symptoms prior to presentation, this was noted in a factual manner with no implied judgment: "At that time Dad said that he and Mom attributed the fussiness to possible teething, and they were using Orajel." In the same way, the base model CAP notes addressed the caregiver's reason for presentation for medical care: "That evening, because of the persistence of symptoms, an appointment was made to see the PCP in the morning." In the case of a 6-week old who was dropped and initially appeared well, both the symptom evolution and the reason to seek care were noted: "Mother said that after a little while, she noted that L's head began to swell. Mother called her mother, who instructed her (L's mother) to call L's doctor. Mother said that after she called

**Predisposing conditions/alternate diagnosis**—As in a traditional pediatric history, children's developmental stage was carefully documented partially with the intent of evaluating whether the injury mechanism was plausible or whether other factors might suggest an alternate diagnosis. In the case of a 7-month old with a femur fracture, the following developmental history was elicited: "*Scoots, sits on own. Rolls (back>stomach)*. *Babbles. Does not pull up.*" Important aspects of the child's past medical history that may have provided an alternate diagnosis are included: "*Excessive bleeding with circumcision led to hemophilia A diagnosis.*" A family medical history that concentrated on heritable illnesses potentially important to the diagnosis of the current injury was included: "*There is no family history of bone fragility, early tooth or hearing loss, abnormal skin texture, or joint hypermobility.*" A careful documentation of the child's previous injury history was provided: "*Mom also reported that she has noticed marks, on more than one occasion, on the baby's skin. Most recently, mom saw marks on the baby's chest and a bruise under his chin. Mom reported that the marks on the baby looked like 'pinch marks'."* 

**Risk indicators**—Risk indicators that reflected the child's social ecology and are associated with abuse were identified in a factual manner without judgment: "*Issues identified in the social work history include need for safety education, young parents, dad's previous use of drugs*"; "*Mom reported prior involvement with Children's Protective Services.*"

**Language**—The language used in this model tended to be neutral and clinical in tone: "10 of 14 systems reviewed and negative except as noted in the HPI. P has not had any recent illness and has been doing well."

## The investigative model

The investigative model contained additional elements of the history that would not be found in a traditional medical evaluation, but would support the non-medical investigation and narrow a list of potential perpetrators of abuse. Clinical interviews of informants were performed separately with the goal of noting inconsistencies. Text fitting this model typically juxtaposed external evidence against caregiver history, or history from one caregiver against another, seeking to confirm or refute the history. The language in these notes sometimes had judgmental overtones and suggested a more confrontational interaction with caregivers.

**Corroboration**—The base model reflected an assumption that events related by the parents were the truth as they knew it. In contrast, the investigative model questioned this assumption, corroborating events with precise timing, potential witnesses and separate parental interviews. Timing to the minute, while rarely relevant to a medical diagnosis, could be informative to child welfare or criminal investigators: "According to patient's medical record, he was a 3-month old transferred to our institution via helicopter around 4 a.m. EMS was called at 00:52 with arrival of EMS at patient's home at 00:59." Precise

timing of an injury was sought from both the mother and father of an injured three year old: "Mom said that she noted that the time on the clock in the car was 8:19 p.m.... FOC [father of child] estimated that this occurred at approximately 8:10 to 8:15 p.m. last night."

In the case of a child who fell in the park, witnesses to the injury event were sought: "MOC [mother of child] stated that there were witnesses; however, she is not aware of how to contact these people"; In this case, the history of a child's injury in the home was questioned when reports of multiple potential witnesses could not be confirmed: "According to mom, at approximately 6 am on the day of J's fall, mom was in the bathroom getting ready for work, and dad was in the kitchen. According to mom, dad was making J a bottle while holding him. He 'wiggled' and fell to the floor. Mom stated that she heard a loud 'thud'.... According to Mother, J's maternal aunt witnessed the fall; however, mom was in the bathroom, and maternal grandmother was in her own room."

Rather than presuming a therapeutic alignment between caregivers and patients, the investigative model triangulated caregiver histories in order to identify possible discrepancies. In a case where several different mechanisms had been offered prior to hospitalization for an infant's fracture, the consultant triangulated maternal and paternal interviews: "Interview of mother: Mother reports that mother and father conferred with each other prior to the transfer to urban hospital, and mother told father what had happened the night before...Mother reports that that history was not told until the arrival at current hospital....Interview of father:...". Discrepant histories from documentation in the medical record were also noted: "Nurse note: 'mom states when patient woke this a.m., noticed V's thigh swollen'." Physician note: 'in retrospect, parents state perhaps foot got caught in crib last night during feed, but patient cried briefly and went to sleep and didn't wake up until am'."

**Potential perpetrators**—Notes reflecting the investigative model presented details of the history that highlighted the positive and negative social ecology of the family, directing attention toward or away from potential perpetrators. For example, the medical history of family members commonly identified social risk indicators rather than an alternate medical diagnosis: "Mom receives therapy for one hour per week. Per Mom, she was diagnosed with Bipolar Disorder at age 15 and is currently taking Topamax, Lexapro, and Abilify. Mom also was diagnosed with Borderline Personality Disorder and participates in Dialectical Behavior Therapy." Behaviors were presented to describe the character of caregivers rather than potential injury mechanisms: "Mom described dad as 'controlling' and also stated that dad told mom to tell people that they 'both went out to the living room at the same time' on Wednesday night/early Thursday morning." Characterizing a young father and mother using quotes drew a portrait of the family and their social ecology: "Mom stated that there was a warrant out for dad's arrest for a prior incident of assault. Per mom, 'both times he [patient's father] was 'picked up,' I was with him.' Mom reported that dad was searched; however, he was 'not packing a knife'." The investigative model also included comments reflecting CAP judgment of caregiver actions or decisions: "The scalp swelling had not further increased. Mom asked BF what he thought the swelling could be 'besides his hemophilia'? BF didn't know but told mom to take him to the ED. She said she did not want to go. When I asked her why, she could not provide a reason. ... She said they had no

transportation (although when they eventually decided to seek help, they called 911). It was really not clear why they did not go to the hospital at this time." Suspicions of family members were recorded: "Paternal aunt feels that dad's girlfriend does not like baby H." Identification of those with access to the child was carefully documented: "Mom stated that patient is usually only with mom and dad. However, paternal great aunt was watching patient periodically when either mom or dad needed to go out. Mom stated that several of dad's cousins were at the house." These descriptions did not directly relate to the injury mechanism or medical risk, but implicitly or explicitly directed outside agencies such as CPS and police toward or away from a potential perpetrator.

**Language**—Language in this model reflected a more confrontational approach to the interview and the examiner's questions and interview style were inserted into the written note: In a case where mother reported lifting a child out of the crib and hearing a pop a more confrontational interview style was used: "*Mother (was) pressed on how the child was lying in the crib on the evening when she picked him up and he started crying.* " A confrontational style was similarly used in a case where the father uncharacteristically responded to a child crying at night: "*I repeatedly asked dad why he got up with the baby last night (early this morning) when he normally does not, and I never received a clear answer.*"

### The family-dynamic model

The family dynamic model emphasized the psychosocial dynamics of families and children in cases of suspected abuse. In contrast to the base and investigative models, this model described directly observed and reported family emotional states, interactions, child temperament and parental attachment to the child. The language used in these notes often included the physician's perception of the parent's observed behavior and psychological state. In a traditional medical consultation, these observations would not be directly relevant to the differential diagnosis. In this context, however, these observations may identify critical psychosocial needs for a high-risk family—or may suggest a potential perpetrator based on observed behaviors and reactions.

**Emotional responses**—Physician's impressions and interpretations of families' behaviors and reactions in the hospital were documented in these consultation notes. In the case of a 6-month old with chronic illness and a new skull fracture, the mother's affect during the interview was noted: "*Throughout much of the interview mom had a very flat affect. Later on she smiled and laughed a bit, but was still reserved.*" Observations in the consultation note of a child who died from a fatal subdural included the mother's reactions at the child's bedside: "*Of note, mom was tearful, at times, throughout our interaction.*", Observations of the father of the same child presented a vivid contrast: "…*Please note that, upon obtaining history from dad, he never appeared upset and talked about the events leading up the baby being taken to the hospital in a very 'matter-of-fact manner' with no emotion.*"

**Family relationships**—Relationships between parents, parents and children, and extended family members were a focus in the family-dynamic model, as in the description of the relationship between parents of an injured child: "*Mother reports that she met father at a*"

time when she was grieving from the death of a fiancée. She reports that father was very supportive to her during this during this time in her life."

The warm parent-child relationship was explored in the case of a 3-month old with a femur fracture whose father reported that he heard a pop when swaddling the infant: "*Mother said that she and father enjoy playing with the baby before he is put down for the night. She stated that the other two children are asleep so she and father can focus on the infant.*" A father's description of a child's temperament revealed as much about the parent as the child: *"Her personality was described as fairly timid, but more outgoing with people she knows. The foster father said that she will warm up to men in general, but she does not like to bond to 'sissy men.' She also does not like to bond to controlling mother-type figures, though she does get along well with grandmother types and teens." A mother's affection for her child was captured in this description of her child's temperament: <i>"Mother described R as being 'the happiest baby in the world'. Mom reported that she calls R 'smiley butt'."* 

This model also documented intra-familial relationships. One case focused on the father's difficult relationship with mother's extended family: "I asked dad about his relationship with mom's family, and he stated that he did not want to talk about them. .... Dad did not mention anything about G's maternal grandmother thinking that [he] dropped G on purpose. I asked Father if he feels like Mother's family does not like him and he said he did not care." In contrast, another case described warm extended family relationships for a 5-month old with a skull fracture: "Both parents indicated that maternal and paternal family members are very supportive of their relationship and of the birth of M."

**Parental coping**—The family dynamic model included observations on how parents were managing the stress of a new baby in the home. In this exploration of parenting skills, the physician asked mother how the family coped when their infant cries: "*I asked mom what happens when E becomes fussy and how she handles it. She stated that she either puts him in his swing or in his bassinet and pats his back. Mom stated that when E becomes fussy, dad puts him in his bouncer.* " Documenting lack of parental coping in a note from a 7-week old admitted to the intensive care unit, one note detailed: "*Father reported he became angry at the baby's crying.*" Positive parental coping of a new infant's schedule included reporting of parental affect: "*Mother shared that they are learning how to sleep when F sleeps (both parents laughed about this comment) and commented that they are 'taking turns' sleeping.*"

**Language**—Language in these notes used the first person to record the physician's observations. In this note, the physician conveyed a detailed picture of both observations of a parent and of the physician's own actions upon entering the patient's room: "*I noted that G was sleeping in a crib and mom was asleep on the bedside couch. The phone was ringing and mom did not awaken. I was able to awaken mom and alert her that the phone was ringing.*"

## Discussion

Child abuse pediatrics is a new subspecialty in which clinicians fill multiple roles, including diagnosis of injuries for abuse, provision of clinical care for abused and foster children,

Page 9

service as medical experts for outside agencies, and provision of expert court testimony. How these diverse roles are incorporated into practice may vary dependent on the philosophy of the CAP, and may be reflected in what and how the CAP chooses to document in their consultation note. In order to explore how CAPs approach the initial inpatient evaluation of injured children for abuse in current practice, we examined child abuse consultation notes from a national sample of CAPs. We identified three main categories of notes used in child abuse consultations: the base model, the investigative model, and the family-dynamic model. While all models contained elements of the base model and elements of the recommended evaluation of suspected child abuse by experts in this community (Asnes & Leventhal, 2010; Kellogg, 2010; Leventhal, 2000), these three models reflected distinct approaches to the physical child abuse consultation that are reflected by their content.

The base model conforms to the traditional medical approach of creating a differential diagnosis. CAPs who use this model ask why the child was brought for medical care, the signs, symptoms, and associated risk indicators just as they would for other medical diagnoses. The history concentrates primarily on mechanisms of injury and alternate medical diagnoses. Risk indicators are reviewed as present or absent similar to a cardiologist reporting cholesterol levels and blood pressure measurements as risk indicators for a patient presenting with chest pain. The base model reflects a general pediatrics-based philosophy and is firmly situated in the tradition of pediatric training.

The base model may be less accessible to the non-medical audience reading the consultation note than the investigative or family dynamic model. While nuances of medical content are easy for physicians to decipher, the language and neutrality of this model may make the note opaque for others. This disadvantage can be overcome by physicians' use of a concluding paragraph that relays their impressions. The impressions paragraph spells out the medical findings and thought process underlying the diagnosis in clear, non-medical terms. The use of this clarifying paragraph at the end of the consultation note has been shown to be variably included in CAP consultation notes even at a single center (Mian, Schryer, Spafford, Joosten, & Lingard, 2009).

The investigative model differs from the base model in that the CAP's approach is one of more active engagement in the non-medical abuse investigation. In the investigative model, the CAP methods of history-taking are quite distinct from a traditional medical approach and may reflect an underlying forensic philosophy. CAPs using this model interview parents separately and actively note inconsistencies, record suspicions voiced by other family members, and more aggressively interview parents about reasons for their actions or inactions. Although all diagnostic processes carry an investigative element, this traditionally involves triangulation of history, exam, and laboratory and radiologic findings against medical evaluation to arrive at not only a medical diagnosis, but also a potential timeline and potential perpetrator of a crime, they have stepped outside of a traditional medical model. Whether the CAP should adopt the perspective of the non-medical audience in his or her consultation or maintain a more focused medical perspective is debated in the CAP

community, with some arguing for a clear distinction between the diagnostic and investigative roles (Richards et al., 2006).

Finally, the family-dynamic model includes observations of complex family relationships and interpretations of observed behaviors. This model may reflect a more secondary prevention-oriented philosophy. The strengths of this model lie in the potential for treatment and secondary prevention of child abuse (Cicchetti & Toth, 1995). Family interactions can indicate risky situations, such as a family with unrealistic expectations of the child or a misunderstanding of the child's behavior (Leventhal, 2000). These observations may inform whether secondary prevention therapies intended to change family perceptions of the child or improve parenting skills might mitigate future risk; however, they are not diagnostic of the current injury. The risks associated with this model arise when the CAP's perceptions of the observed positive or negative family interactions bias the reader who may interpret observations of seemingly maladaptive parental responses as suggestive of guilt.

The use of language is strikingly different among the three models and reflects how the CAP perceives his or her role in the diagnostic process. The language in the base model is neutral and the CAP's role is as a neutral entity who is reporting the factual information without judgments. For example the quote, "Mom reported that the marks on the baby looked like 'pinch marks'" conveys the obvious concerns of the CAP, but does not tell us how this concern was elicited from the parent or imply who caused the marks. In contrast to the base model, the CAP plays a more active role in the investigative model, confronting parents to answer questions and relaying whether the CAP thought the answers were adequate. This is reflected in the language from the CAP who was not satisfied with a father's explanation for why he was atypically caring for his child in the middle of the night "I repeatedly asked dad why he got up with the baby last night (early this morning) when he normally does not, and I never received a clear answer." The CAP also plays an active role in the family dynamic model. In this model the CAP is an observer of the family as shown in this quote of a mother who was being interviewed in the hospital "Throughout much of the interview mom had a very flat affect." The language in the family dynamic model inserts the CAP into the interview as he or she reports perceptions of the family using the first person, for example "I asked Father if he feels like Mother's family does not like him and he said he did not care." The language choices used in these models reflect a different philosophical approaches to the medical evaluation of suspected child abuse, and shape the information available to medical and non-medical members of the child protection team through the consultation note.

U.S. child abuse pediatricians have not yet defined best practices in child abuse consultation notes for their new subspecialty. Best practices may depend on the evolution of the CAP's role in this new subspecialty. All CAPs included medical information in their notes suggesting a broad consensus among our participants that a primary role of the CAP is as the medical expert. Consensus does not exist among our participants for the investigative role or the role of evaluating family dynamics as reflected by the clear distinctions in the consultation notes. Is a more "investigative" model one that CAPs should follow or does it diminish the role of an impartial medical expert? Is this "investigative" note helpful to law enforcement or do they rely on their own investigations? Does documenting observations of

the family in the hospital help CPS or the CAP provide resources for the family or do these observations bias the end users of the notes toward the family? These are as yet unanswered questions that need to be addressed by the CAP community before best practices in documentation can be addressed.

The experiences of other forensic subspecialists both inside and outside the U.S. may be relevant to child abuse pediatrics. Psychiatry, for example, has formally separated the forensic role from the diagnostic or treatment roles of the physician, noting that in a forensic evaluation there is no therapeutic relationship between the client and physician, that there are clear limits to confidentiality, and that the primary purpose of the forensic exam is to answer a legal question (Kraus et al., 2011). The American Academy of Child and Adolescent Psychiatry (AACAP) places emphasis on role clarity between the forensic psychiatrist and the child and family being assessed, and suggests a purposeful lack of bias with an attempt to be neutral and objective (Kraus et al., 2011). In Canada, best practices in forensic pathology as related to the justice system were addressed as the result of a public inquiry (Goudge, 2010). The results of the inquiry emphasized, among other items, the need for accurate and factual report writing with use of appropriate language (Glancy & Regehr, 2012). In the UK, writing about forensic child abuse reports, David suggests that a major pitfall in writing medical reports that will be used in court proceedings are selective extraction of negative information (bias) and using a profile of a caregiver to make a diagnosis (David, 2004). While psychiatry, pathology, and pediatrics have myriad differences, and Canada and the UK have different practice of law than the U.S., the experiences of these different professional groups may still prove relevant when considering U.S. CAP practice. The widely varying practice models identified in this study suggest that there is an opportunity for U.S. CAPs to develop a best practice model for performing and documenting child abuse consultations.

This analysis of CAP notes has weaknesses and strengths. The primary weakness of the analysis is that it cannot assess whether the physician's approach impacts the medical diagnosis, investigative response or legal outcome. If the differing approaches noted in the model descriptions have no relationship to these outcomes, then the use of multiple practice styles may not be relevant. Another weakness is that while we ascribe philosophical styles to the model types, the CAPs using the model type may not have had that intent. It is possible that CAPs choose model types because they feel it gives the most complete documentation of the case, because they wish to sway CPS by providing a more full positive or negative picture of the family, or because they wish to identify malleable risk indicators that need to be addressed to insure child well-being. The main strengths of the analysis are the use of notes from 32 experienced CAPs from programs across the United States, and the identification of models that incorporate elements of recommended approaches to child physical abuse evaluations. This increases the generalizability of the study and the chance that we have identified the main models of evaluation.

## Conclusion

CAPs use three different models to evaluate injuries that may have been caused by abuse and to inform the many audiences of the child abuse consultation. These models reflect the

variety of roles that CAPs play in diagnosis, treatment, and prevention of child abuse and as the medical expert to outside agencies. These notes at times blur the lines among CAP roles and may open CAP practice to criticism. U.S. practitioners have the opportunity to learn from the experiences of others performing forensic work who call for role clarity, precision, and lack of bias with the use of uniform language in documentation that may be used by non-medical agencies.

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