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Do Best Practice Interviews with Child Abuse Victims Influence Case Outcomes?

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This study examined the effects of the NICHD protocol for interviewing suspected victims of abuse on case outcomes. The 1280 cases examined involved children between 2.80 to 13.97 years of age and included 729 cases in which interviews were conducted by police detectives following extensive training using the NICHD protocol (1997-2000), and 551 cases in which interviews were conducted by the same police detectives *prior* to NICHD training (pre-protocol, 1994 - 2000). Case and outcome information was coded based on all available sources of information (child protection and police reports, CJC intake forms, and the Children's Justice Center electronic data base).

Multivariate Logistic Regression analysis revealed that each of six variables was significantly related to the filing of charges against a suspect. Charges were significantly more likely to be filed (1) for cases involving NICHD protocol interviews than pre-protocol interviews; (2) for juvenile than for adult suspects; (3) for male suspects; (4) for cases involving alleged victims older than age 4 years; (5) for abuse involving penetration; (6) and for suspects who were not members of the alleged victim's

immediate family. An interaction between age and interview condition indicated that the strongest effect of the protocol was for the 7-9 year old children, with 22% more cases with charges filed compared to pre-protocol interviews.

Once charged, final dispositions of cases based on protocol and pre-protocol interviews were both highly (and similarly) likely to be resolved in a guilty plea to one or more counts as charged or to a reduced plea. Because more cases were charged following the introduction of the NICHD interview protocol than prior to it, more cases in the protocol condition also led to a guilty plea. The only variables significantly associated with the outcome "all charges dismissed" were victim age (with more cases for the youngest age group) and victim/suspect familiarity (familiar but not related suspects more likely to have all charges dismissed than non-immediate-family members). A minority of cases proceeded to trial (n = 30); of these significantly more NICHD protocol cases (94%) than pre-protocol cases (54%) resulted in a conviction.

These findings indicate that demonstrably improving the quality of children's evidence by improving the quality of investigative interviews increases the probability that cases of alleged sexual abuse will be prosecuted. The effects of the introduction of the NICHD structured protocol on case outcomes reported here provide the strongest possible endorsement of this approach to interviewing. The research has clear implications for policy and practice regarding child victims in the justice system and the way in which forensic interviews with suspected child abuse victims should be conducted.

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Overview

In the vast majority of cases involving allegations of child sexual abuse, the primary (and often the only) evidence is the child's verbal allegation and testimony. Decisions regarding both child protection and criminal proceedings, therefore, depend heavily on the quality of the information obtained from suspected victims during investigative interviews. As a result, it is important that interviews with suspected child victims elicit accurate and informative disclosures when abuse has occurred, without raising the risk of eliciting false allegations when abuse did not occur. Several approaches to investigative interviews, including the focus of the current research, the NICHD interview protocol, have been developed with these objectives in mind.

The goal of the research described here is, therefore, to examine whether the introduction of best-practice interviews following the NICHD protocol influences case outcomes within the justice system. The NICHD Investigative Interview Protocol has been adopted as the standard protocol for forensic interviews of child witnesses in a number of centers in the US and has been used in all interviews of suspected child abuse victims, witnesses, and suspects in Israel since 1997. Extensive research evaluating its effectiveness, comparing children interviewed using the protocol to children interviewed by the same investigators before the protocol was introduced,

demonstrated that implementation of the protocol across different international centers significantly improved the quality of the interviews and of the information elicited from children (see Lamb, Hershkowitz, Orbach, & Esplin, 2008, for review). The NICHD protocol has been demonstrated to be effective in enhancing the reports of both very young and older children using open-ended questioning. In protocol interviews, more information is elicited in response to open-ended prompts, and less in response to directive, option-posing, and suggestive prompts and questions, compared to non-protocol interviews. These findings are important in view of experimental research demonstrating that the way memories are accessed and accounts are elicited are crucial determinants of the accuracy of the information children report.

In the present study, therefore, we ask whether improved interviewing procedures influence the likelihood that the investigation leads to a suspect being arrested with criminal charges filed by the DA. Conversely, improved interviews might decrease the number of cases considered by law enforcement to be 'unfounded,' as well as those screened and declined by the DA without being carried over for prosecution. Further, for cases that result in filed charges, we examine the outcomes as the case proceeds through the criminal justice system, specifically, the legal dispositions through either plea negotiations or trial, including cases in which all charges are dismissed. We also examine the delays between important decision points during the investigative and judicial process to determine whether the introduction of the NICHD interview protocol led to speedier case processing.

Research Methodology

All cases in the present study involved interviews conducted at a Children's Justice Center (CJC) in a western mountain state between 1994 and 2000. Interviews were conducted by police detectives who specialized in conducting forensic interviews with children and who, in September 1997, were trained to conduct forensic interviews with children using the NICHD

protocol. We compared the outcomes of cases in which the investigative interviews were conducted using the NICHD investigative interview protocol in the period following its implementation, with outcomes of cases in which interviews were conducted by the same interviewers immediately prior to the introduction of the NICHD protocol. The fact that the detectives, prosecutors and judges who handled the cases throughout the study period were the same group of professionals and that there were no changes in leadership or policy during the study period minimized their potential as confounding influences on case outcomes.

The Sample

There were 551 pre-protocol cases and 729 protocol cases for a total sample of 1280 cases that met the criterion for inclusion in the study in terms of an allegation or suspicion of sexual abuse, the age range under consideration (2.80 to 13.97 years), and the availability of case outcome information. In cases involving multiple suspected victims, outcome information relating to only one victim was included in the analyses (see Final Report for further details).

Coding

Based on all available sources of information, including child protection and police reports, CJC intake forms, and the Children's Justice Center data base, case characteristics and case outcomes were coded for the following information.

Case characteristics included the type of abuse alleged (exposure, touch, penetration); suspect's familiarity with the victim (immediate family-co-residing, other family, familiar–not related, unfamiliar); victim's age (in years, 2.8-4, 5-6, 7-9, 10-13.97); suspect's age (juvenile, adult); victim's ethnicity; suspect's ethnicity (Caucasian, Hispanic, other).

Case outcomes included all points of decision making during the case flow in the criminal justice procedures from case referral for investigation to case disposition, namely, referral to another police department/jurisdiction; case assessed by police detectives as

unfounded, insufficient evidence and as not cleared (not submitted to the DA for screening); screened by DA/declined; **e**xceptionally cleared (forced inaccessibility); arrested/charges filed; arrested/charged /not filed; case diverted (e.g., treatment); carried over to the justice system; plea agreement (including guilty plea, plea reduced, case or counts dismissed); case disposed through court trial (found guilty; found not guilty); time delays between the date of initial reporting/referral of the incident and the dates of different points of important decision making along the investigative and judicial proceedings (see Final Report for further details of coding).

Results

Of the total sample of 1280 cases, 103 (8.0%) were exceptionally cleared (forced inaccessibility to suspect or victim); and 84 (6.6%) were referred to another jurisdiction. Of the remaining 1093 valid cases, 513 (46.9%) resulted in a filed charge of at least one count, 119 (10.9%) were judged 'unfounded' by police detectives; 57 (5.2%) were not submitted for screening (not cleared); 111 (10.2%) were not processed further because of 'insufficient evidence'; 231 (21.1%) were screened, but declined and charges were not filed by the DA; 6 (.5%) were pending; and 5 (.5%) were inactive. Fifty-one (4.7%) cases were categorized as charged but no charges were filed.

Details of Criminal Charges. Five hundred and thirteen cases (preprotocol and protocol interviews combined) were associated with charges being filed. Of these cases, 440 (85.8%) involved felony-only charges, 37 (7.2%) involved misdemeanor-only charges, and 36 (7.0%) involved both felony and misdemeanor charges. Distributions of charges did not differ for pre-protocol and protocol interviews, $\chi^2(2) = 1.75$, $p = .417$, $N = 513$. There was no significant difference between the pre-protocol ($M = 1.94$, $SD = 1.23$, $n = 198$) and protocol ($M = 1.97$, $SD = 1.31$, $n = 315$) interview conditions with respect to the number of counts per suspect (range =1-

10), with the majority having 1 or 2 counts, $t(511) = .23$, $p = .82$.

Predictors of Filed Charges.

Six variables were significantly related to filed charges (Likelihood Ratio Chi-square, $p<.05$), namely, type of interview, type of abuse, victim's age, gender of suspect, age of suspect, and victim/suspect familiarity. Multivariate logistic regression analysis with the six predictors entered concurrently revealed a significant effect of each variable, controlling for all others, as described below. Post-hoc analyses were also conducted to test whether interview type interacted with suspect and/or victim characteristics in predicting filed charges. For each analysis, the interaction effect was tested while controlling for the main effects of interview type and the second variable. Two interactions were significant, also described below.

- ***Interview condition***. The odds ratio indicated that the odds of filed charges were 1.52 times higher for NICHD protocol interview cases than for pre-protocol interview cases (54.4% vs 45.0% of cases).
- ***Victim age***. Compared to the youngest age group (2.8-4 year olds), the odds of a charge were 1.64 times higher for the 5- to 6-year olds, 2.53 times higher for the 7- to 9-year olds, and 2.09 times higher for the 10- to 13-year olds (36.5%, 49.2%, 59.6% and 52.5% of cases, respectively).
- ***Interaction between interview condition and victim age.*** Post-hoc analyses revealed a statistically significant two-way interaction for interview by victim age ($\chi^2(3) = 9.24$, $p < .03$). The percentage of protocol cases with charges filed was greater than for pre-protocol cases in all but the 5 to 6-year olds (in which filed charges were evenly split between the two interview types). This outcome was especially pronounced for the 7 to 9 year old age group with filed charges 22% higher in protocol than pre-protocol cases.
- ***Type of abuse.*** The odds of a case with abuse type of penetration resulting in filed

charges were 3.44 times higher than for exposure cases, and 1.72 times higher than for cases involving touch but no penetration (61.5%, 45.6% & 34.8% of cases, respectively).

- ***Suspect gender.*** The odds of filed charges were 9.30 times higher for males than for females (53.6% vs 13.3% of cases). There were, however, relatively few female suspects (7% of the sample).
- ***Victim/suspect familiarity.*** The odds ratio indicates that the odds of filed charges for familiar-not-related suspects were 1.40 times higher than for immediate-family suspects (56.2% vs 45.7% of cases, respectively). The odds ratio for the category "other family" was 1.46, suggesting a higher rate of filed charges than immediate family (53.9% vs 45.7% of cases, respectively), although this difference only approached significance, $p < .07$. Further, although the odds of filed charges for unfamiliar suspects was .22 of that for immediate-family suspects (15.4% vs 45.7% of cases), the difference did not achieve statistical significance, $p < .06$, because of the small number of unfamiliar-suspect cases ($n = 13$).
- ***Suspect age.*** The proportion of juveniles with filed charges was significantly larger than the proportion of adults with filed charges (63.1% vs 43.0%) with the odds ratio of filed charges being 2.33 times higher for juveniles than for adults.
- ***Interaction between interview condition, suspect age, and victim/suspect familiarity*** When victim/suspect familiarity was dichotomized as immediate family v. others, it interacted with interview condition and suspect age to predict filed charges; $\chi^2(1) = 7.11$, $p < .01$). The percentage of protocol cases with charges filed was higher compared to pre-protocol cases, when the suspect was adult and an immediate family member of the victim, and when the suspect was a juvenile and not an immediately family member of the victim.

Predictors of Final Disposition

Of the 513 cases in which the suspects were charged, 496 (96.7%) reached disposition. The majority of cases in which charges were filed led to a guilty plea to one or more charges (80%). The most common outcome was pled guilty as charged to at least one charge and other charges dismissed (29%, n= 147), and the second most common outcome was pled guilty as charged to all counts (25%, n = 121). There was no statistically significant correlation between disposition and interview condition.

- ***All Charges Dismissed***. Examination of predictors of all charges dismissed revealed that victim age and victim/suspect familiarity were statistically significant predictors. Logistic regression analysis' odds ratios revealed that cases involving 2.8- to 4-year olds were 2 to 3 times more likely to have all charges dismissed compared to the older age groups and familiar-but-not-related suspects were more likely to have all charges dismissed than suspects who were non-immediate family members.
- ***Trial Cases.*** For the cases that went to trial (n = 30), a "Found Guilty" outcome was significantly more likely for protocol than for pre-protocol cases ($\chi^2(1) = 6.68$, $p<.01$). Although the total number of cases that went to trial was small, only 1 (6%) of the 17 protocol cases did not result in a conviction of the suspect, in contrast to 6 (46%) of the 13 pre-protocol cases.

Speed of case processing

The delay from the date of referral to the date of the forensic interview was slightly longer for protocol (M = 13.92, SD = 48.40) than pre-protocol (M = 12.12, SD = 52.28) interviews, but the delay from date of interview to date of suspect being arrested and/or charged was longer for the pre-protocol condition (M = 61.36, SD = 73.54) than the protocol condition (M = 45.59, SD = 110.79). There was no difference across interview conditions for either the

delay from date of charges filed to disposition (*M* = 161.90, *SD* = 221.26, Median = 99, *n* = 487) or the delay from date of referral to disposition (*M* = 213.69, *SD* = 241.39, Median = 144, *n* = 469).

Discussion

There were significant effects of the introduction of the NICHD interview protocol on the outcomes of cases of suspected child sexual abuse at two crucial decision points in the flow of cases: the filing of charges by the DA following the screening process, during the investigative process, and the final case disposition, through either a plea negotiation or a trial, at the end of the judicial process. Specifically, following the introduction of the NICHD protocol, cases were more likely to result in charges being filed by the DA, the most crucial decision in the flow of a case through the judicial process. Once charged, final dispositions of cases based on pre-protocol and protocol interviews were both highly (and similarly) likely to be resolved in a guilty plea to one or more counts as charged or to reduced plea as part of a plea agreement. Thus, because more cases were charged following the introduction of the interview protocol than prior to it, more cases in the protocol condition also led to a guilty plea.

Arguably, because of the large numbers of cases potentially affected, the increased odds of a charge being filed following the introduction of the NICHD protocol is the most important finding in the present study. In percentage terms, whereas prior to the introduction of the protocol, 45% of investigated cases resulted in the DA's filed charges against the suspect, following the introduction of the protocol over 54% of the investigated cases had filed charges. In statistical terms, the odds ratio indicates that protocol interviews were 52% more likely to result in a suspect being charged compared to pre-protocol interviews. Conversely, proportionally fewer cases in the protocol condition were dropped by the police investigators prior to the screening (i.e., evaluated as 'unfounded', 'insufficient evidence', or classified as 'not

cleared', thus not submitted to the DA for screening) and by the DA during the screening process and prior to the filing of charges (i.e., cases that were screened, but the DA declined to file charges - 'screened declined', 'not filed', cases 'diverted' for an alternative intervention, cases that 'remained active', 'pending', and cases with 'missing information'). The largest group of cases that were not carried forward for prosecution was those that were declined by the DA during the screening process. Proportionally fewer cases were declined by the DA during the screening in the protocol (14.7%) than in the pre-protocol (22.5%) condition.

We had predicted that the use of the NICHD protocol would have an effect on case outcomes because previous studies have established that protocol interviews elicit higher quality information (significantly more central details, and a higher proportion of details before any interviewer input), which is more likely to be accurate, than are comparison interviews. Protocol interviews emphasize higher quality interviewing practices that allow children to provide the narrative account of what happened, whereas typically interviewers rely more on focused directive, or closed questions requiring a few word answers or a yes/no response. A reasonable speculation is that children's narrative accounts, in their own words with little or no interviewer input, are more compelling (and accurate) than those heavily contaminated by interviewer input.

Contrary to our expectations, the youngest children were not differentially advantaged by the introduction of the NICHD protocol. Independent of whether interviews were protocol or pre-protocol, cases involving the youngest children were less likely to result in charges being filed in the first instance, and were more likely to have all charges dismissed, once charges were filed. Further, the largest effect on case outcomes of introducing the NICHD interview protocol was for the 7-9 year old children with 22% more cases being filed in protocol than pre-protocol interviews. While firm conclusions await a more detailed analysis, insofar as it is reasonable to assume that suspected abuse was no less likely to have occurred for the very young children than

for other age groups, these children appear to be less well served by current investigative and judicial processes. Our findings raise the possibility that these very young children (and other potential young victims) remain vulnerable and point to the need for the development of interview techniques focusing on their capabilities. Similarly, lower rates of prosecution of cases involving an adult suspect who was an immediate family member may reflect the reluctance of the alleged victims to discuss the abuse as has been demonstrated in studies analyzing their interviews in detail (see Lamb et al., 2008, for review), and investigative approaches targeting reluctant witnesses also need to be developed.

A second finding of note and requiring further detailed examination is the much higher rates of filed charges for juvenile compared to adult suspects. Even controlling for other variables that predict case outcomes, such as the severity of the abuse, in this study juvenile suspects were much more likely to face charges than were adults. Juvenile and adult cases are, of course, processed through different court systems. Further, information relating to, for example, whether juveniles were more likely to confess than adults would be informative as would a detailed examination of other sources of evidence, including interviews with the minor suspects.

As in previous studies (e.g., see Cross et al., 2003, for review), only a small percentage of cases went to trial rather than being disposed through plea negotiation; indeed, in the present study, the percentages of cases going to trial, based on filed charged cases, were 6.6% and 5.4% for pre-protocol and protocol, respectively, and at the low end of rates reported in Cross et al's (2003) meta analysis. Although only a small number of cases proceeded to trial, the high rate of convictions at trial, following the introduction of the protocol interview, is nonetheless, striking. Only 1 of the 17 (6%) protocol cases decided at trial did not result in a conviction of the suspect, in contrast to 6 of the 13 (46%) pre-protocol cases. Previous studies have typically found conviction rates for trial cases between 50% and 75% (see Cross et al., 1995) in contrast to the

94% reported here for protocol interview cases. As Cross et al. (1995) point out, despite their rarity, tried cases are important because of both their potential impact on the child (or children) who must testify, and on future decisions by prosecutors and defendants (and their attorneys), potentially influencing the much larger category of plea negotiations.

One of the strengths of the current study was that the same detectives conducted the pre-protocol interviews and the protocol interviews. Differences due to interviewer, rather than the protocol, are therefore accounted for in the within-subjects design. The potential disadvantage of this design is, of course, that the outcome data are necessarily collected in different (albeit adjacent) time periods, pre and post training on the NICHD interview protocol. Investigations of child sexual abuse do not readily lend themselves to tightly-controlled experimental studies, for example, involving random assignment of the same interviewer to different interview conditions. With respect to possible threats to validity arising from this design, we confirmed that the supervisor of the Sex Crimes Unit detectives who conducted the interviews began as supervisor of the unit in 1994 and has remained in that position and that, from 1994 to 2000, the "historical characteristics" of the court and the system in general remained the same. Comparison of case outcomes on a year-by-year basis prior to (i.e., 1994 to mid 1997) and during (mid 1997 to 2000) the protocol interview period failed to reveal any systematic trend attributable to time-related variables other than the introduction of the protocol interview. There was year by year variability, as might be expected particularly in years with very small numbers of cases, and this was the case for both pre-protocol and protocol interview years, but no evidence of a general shift over time.

It is also the case that our study focused on one county in the state of Utah, which has unique ethnic and religious demographic characteristics. There is no obvious reason for suspecting our findings should be limited to the demographics of the group under study, given

the NICHD interview protocol has now been shown to be effective as an investigative protocol in studies conducted in several different countries, with a wide range of suspected victims. However, future studies will establish whether the changed interview practices similarly translate into differences in outcomes in the context of other investigative and judicial systems. Replication of the current study in different jurisdictions, particularly in a prospective design involving multiple baselines, would be both an ethical and effective means of overcoming the limitations noted here.

Conclusions & Policy Implications

The effects of the introduction of the NICHD structured protocol on case outcomes reported here provides the strongest possible endorsement of this approach to interviewing and has implications for policy and practice regarding child victims in the justice system and especially concerning with the way in which forensic interviews with suspected child abuse victims are conducted throughout the US.

The quality of forensic interviewing practices is of utmost importance if child victims are to be protected, at the same time as the rights of innocent suspects are to be upheld. In cases of suspected child abuse, very frequently the only evidence of the crime is the child's verbal allegation, and the interview, conducted properly, is the equivalent of the 'DNA' of the case. Our research group has been developing and evaluating the NICHD protocol as evidence-based approach for forensic interviews for the past fifteen years. Evidence of more cases with charges filed against suspects and proceeding to the criminal justice system through either a plea negotiation or a trial provides strong endorsement indeed of the NICHD approach to interviewing.

As Cross et al. (1995) concluded "… enhancing the quality of investigations may have a substantially larger impact on prosecution than rulings that affect the admissibility of evidence,

even if we take into account the "ripple" effect that new precedents have on the whole system." (Cross et al., 1995, p. 1439). The critical component of the investigation when child sexual abuse is suspected is the investigative interview conducted with the child. The findings reported here show that when interviews are conducted following recommended best practices of the NICHD approach, there is a significant effect on case outcomes.

While the findings reported here provide very strong support for the use of the NICHD investigative interview protocol, and complement the large number of studies that have evaluated its use in the field for investigative purposes (Lamb, et al., 2008; Pipe, Lamb, Orbach & Cederborg, 2007; Orbach et al., 2000), until such time as other approaches to investigative interviewing are evaluated and the training on those other approaches is demonstrated to translate into practice, the findings reported here for the NICHD interview protocol cannot necessarily be generalized to other approaches. As many studies have shown, there is often a gap between theory and practice in investigative interviewing, and whether the findings we report can be generalized needs to be demonstrated, not assumed. Disappointing findings revealing effects on trainees' knowledge but no demonstrable impact on the quality of their behavior when conducting interviews have often been reported when specialized training has been evaluated (See Lamb et al., 2008, Ch 10, for review).

We have argued elsewhere and reiterate here, that approaches to interviewing and the effectiveness of the training behind them need to be evaluated. In 2008, more than 10 years after the widespread acknowledgement of the importance of getting the interview with the suspected child victim right, it remains the case that only one protocol has undergone detailed examination of how the theory is translated into practice, with demonstrated effects on the quality of information that children provide when interviewed in forensic contexts. This situation is unacceptable, given the widespread use of other approaches to interviewing. Our argument is

not that these other approaches are necessarily or inherently problematic; they, like the approach we have examined, are based on perceived best-practice principles, although there are notable differences across the different approaches, including provision for the use of non-verbal aids such as dolls and body diagrams in some of the most widely used protocols in the US. Our argument is, however, that the approaches to interviewing that are used and endorsed by various agencies, and the training based on them, should be evidence based. This is clearly not solely the responsibility of professionals in the field. Rather it requires collaboration between those professionals, researchers, and funding agencies. The benefits of increasing the quality of interviewing are significant; the findings of the present study indicate that demonstrably improving the quality of children's evidence by improving the quality of investigative interviews increases the probability that cases of alleged sexual abuse will be prosecuted. The implications are clear.

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Background literature review and overview

Every year, investigative and protective service agencies in the US receive reports indicating that more than 4 million children may have been abused, neglected or otherwise maltreated (e.g., see U.S. Department of Health and Human Services, Administration on Children, Youth and Families., 2006; National Clearinghouse on Child Abuse and Neglect, 2005). According to the annual publication of data collected via the National Child Abuse and Neglect Data System (NCANDS), in 2004 approximately two thirds of these referrals were accepted for investigation and/or treatment. In that year alone, an estimated 3 million children were alleged to have been abused or neglected and received investigations or assessments by State and local child protective services (CPS) agencies, and approximately 872,000 children were determined to be victims of child maltreatment. Between 8-10% of these cases in any one year involve suspected sexual abuse, and in the vast majority of these cases, the primary and often the only evidence is the child's verbal allegation and testimony. As a result, decisions regarding both child protection and criminal proceedings depend heavily on the quality of the information obtained from suspected victims of sexual abuse during investigative interviews.

Although structured interview protocols for conducting forensic interviews with children are now widely advocated in the US, and several are currently in use in many states, only one, the NICHD investigative interview protocol, has been subjected to systematic evaluation in the field. Moreover, there have been no studies evaluating the effects of recommended approaches to interviewing on case outcomes in the justice system. The goal of the research described here is to examine whether the introduction of a structured interview protocol, namely the NICHD

investigative interview protocol, influences outcomes within the justice system of cases involving suspected victims of child sexual abuse.

Specifically, in the present study, we assess the effects of the NICHD protocol on decisions made during the "investigative process", that is, whether to arrest and charge a suspect, to submit a case for prosecution and to carry a case forward to the justice system, or conversely, to assess the suspicion of abuse as 'unfounded', or as lacking sufficient evidence to proceed with the filing of charges; and during the "judicial process" when charged cases reach court disposition, through either plea agreement or trial.

To address the question of whether improved interviewing procedures increase the likelihood that child sexual abuse cases proceed through the processes of the criminal justice system and that these processes are conducted with minimal time delay, matched cases from before (1994 to mid-September 1997) and after (mid-September 1997 to 2000) the introduction of the NICHD protocol for interviewing suspected child abuse victims were compared with respect to outcome variables, as well as the time delay from referral to disposition and to other significant temporal points in the judicial proceedings. The fact that the detectives, prosecutors and judges who handled the cases throughout the study period were the same group of professionals, and that there were no changes in leadership or policy during the study period, minimized their potential effects.

Phases in the investigation process of suspected child abuse

Although there are differences in the way in which allegations of child abuse are dealt with both across and within states, in particular relating to who conducts the forensic interviews with children and where they are conducted, there are commonalities in the general flow of cases through the child protection and criminal justice systems. The following description is based on the procedures followed in the one county in the state of Utah on which the present

study focused, and provides a general outline of the procedural phases cases typically follow, labeled as 'case flow' by Cross and his colleagues (Cross, Walsh, Simone, & Jones, 2003; Cross, Whitcomb, & DeVos, 1995; Finkelhor, Cross, & Cantor, 2005).

When child abuse allegations are reported to the authorities (i.e., Police Department, or CPS), CPS workers examine the child's allegation and any available corroborative evidence and determine whether or not the case is 'substantiated', that is, whether the balance of evidence indicates a likelihood that the alleged abuse had occurred. If substantiated, the case is referred for a criminal investigation. Police detectives, trained as specialist investigative interviewers of child witnesses, conduct forensic interviews with the suspected victim(s), suspect(s) and, if available, witnesses, gather evidence, and decide whether to refer the case for 'screening' with an Assistant District Attorney.

The Children's Justice Division of the Attorney General's Office investigates and prosecutes child abuse cases. Attorneys of this division serve as consultants on child abuse cases for prosecutors and law enforcement officers throughout the state of Utah, provide training and technical assistance to child abuse investigators, and administer Children's Justice Centers (CJCs) in Utah. The Assistant DA (Prosecutor) evaluates the case and makes the final decision – during the screening process - as to whether charges will be filed against the suspect and the case goes forward for prosecution, or the case is 'declined' and will be closed because of insufficient evidence or other reasons (e.g., the victim is considered too young to be a credible witness, the suspect is unknown, or the victims' parents refuse to cooperate with the police). To evaluate whether prosecution is likely to succeed, the Assistant DA looks at the age and maturity of the child, the child's ability to testify in trial, the availability and strength of corroborating evidence including a suspect's statement or admission, the nature and seriousness of the crime, as well as potential negative effects that a trial may have on the child victim.

The criminal court becomes involved in cases where an adult is charged with a criminal act. If the suspect is a juvenile under the age of 18, the assistant district attorney with the juvenile court may file charges. Although decisions on acceptance for prosecution of cases involving adult and juvenile suspects are made within the same District Attorney's Office, different attorneys (or separate teams) make the filing decision on juvenile and adult suspects, respectively, because the cases are prosecuted in different courts.

Upon acceptance of a case, the District Attorney's Office files criminal charges, submits the case to the criminal justice system for prosecution, and pursues convictions against the defendant in all cleared cases. After prosecution is initiated, however, cases may still be dismissed by the judge, dropped by the prosecutor, or diverted to an agreed upon treatment program. Similarly, the prosecutor may later file charges on a case previously dismissed, when new evidence is revealed, or the victim's status regarding the ability to testify has changed.

Once cases are carried forward, it is up to the alleged perpetrator to decide whether to plead guilty or to go to trial. A plea bargain is a procedure in which the defendant's attorney negotiates with the prosecutor a reduction of the severity, or a dismissal, of some of the charges against his/her client in return for a guilty plea to other charges. The results of a plea bargain must be approved by the judge. The case could proceed to trial if a plea bargain between the alleged perpetrator and the prosecutor is not reached.

Recent reforms recognizing child witnesses' rights: Policy, procedure, and practice

In 1994 the state legislature in Utah passed the victims' rights amendment to the "Victims' Bill of Rights" (i.e., originally passed as a law in state constitution in 1987). With respect to child victims and witnesses, the Bill of Rights adds "the right to have interviews relating to a criminal prosecution kept to a minimum; the right to be questioned in a manner which is appropriate to the child's age and understanding; the right not to be questioned in a

manner that implies that they are responsible for the inappropriate behavior of adults; the right to protection from physical and emotional abuse during their involvement with the criminal justice process; and the right to be informed of available community resources and how to gain access to those resources." (Crime Victims Bill of Rights in the Criminal Justice System, Constitution of the State of Utah, 1994, Section 77-37-3).

Reforms focusing on the acceptance and empowerment of children as reliable witnesses by the court have been introduced in most states throughout the United States (e.g., Office of the Attorney General, State of New Hampshire, 2001, 2004a, 2004b) and in other countries throughout the world (Badgley, 1984; Bertrand, Hornick, & Bolitho, 1995; Canada Evidence Act, 1985; Deswirek Sas, 1992; Myers, Cordon, Ghetti, & Goodman, 2002; Pipe & Henaghan, 1996; Sternberg, Lamb, & Heshkowitz, 1996; Welder, 2000; Whitcomb, 1992, 2003; Wilson, 1997; Yuille, 1988). In the US, recognition of the 'hearsay exception' in child abuse cases (modeled after Federal Rule of Evidence 807), allowing children's out of court accounts and videotaped forensic interviews with child witnesses with no corroborative evidence to be presented in court in lieu of testimony is potentially a very important reform. Investigative interviews may carry more weight as reliable sources of evidence, in turn, facilitating the prosecution of child abuse cases if gaining court admissibility via the 'hearsay exception' rule (Aldridge & Freshwater, 1993; Heck, 1999; Henry, 1999; Jones, Cross, Walsh, & Simone,2005; McAuliff & Bull Kovera, 2002; Myers, 2002b, 2005; Myers, Cordon, Ghetti, & Goodman, 2002; Veith, 1999; Welder, 2000). The Supreme Court ruling in 1980 applied to Ohio v. Roberts (U.S. Supreme Court, 1980) established the basis for permitting hearsay evidence. However, its ruling in Crawford v. Washington in 2004 (U.S. Supreme Court, 2004) limited the hearsay exception to 'non-testimonial' statements (in addition to those admitted under 'excited utterances' and 'statements provided during medical diagnosis and treatment'). Although the rulings in both

cases applied to adults, both have had important implications for cases of child sexual abuse. The prosecution's reliance on victims' out of court statements to forensic interviewers has been essential for introducing the quality of information necessary for case resolution, and for assessing child witnesses' credibility and the validity of their accounts (see Goodman, 2006; Myers, 2004; Raeder, 2005; Veith, 2004 for discussion.).

In addition to prosecutorial innovations intended to increase the rates of case prosecution in child abuse cases (see American Bar Association, 1981), many researchers and clinicians have advocated for reforms, taking into consideration the well-being of child witnesses, by protecting child witnesses from the accumulated stress they may endure following disclosure due to major delays in case prosecution, and by empowering child witnesses by providing them with knowledge about court proceedings and investigative rules (for a review, see Deswirek Sas, Wolfe, & Gowdey, 1996; Sas, 1997).

The expedition of judicial proceedings

Requests to expedite all investigative interactions with child witnesses have been made by many law professionals and mental health clinicians within and outside of the US (e.g., Plotnikoff & Woolfson, 1995; Utah's Crime Victims Bill of Rights, 1994; Lanning, 2002). The victims' rights amendment to the Utah "Victims' Bill of Rights" emphasizes that victims and witnesses, particularly children, should have a speedy disposition of the entire criminal justice process and requires that all involved public agencies establish policies and procedures to encourage speedy disposition of criminal cases.

Several researchers have examined the time delays between decision making phases in the case flow of child abuse investigations, that is, between the maltreatment reports and the disposition of cases in the criminal court. (Stroud, Martens, & Barker, 2000; Tjaden and Thoennes, 1992) and between the initial reporting and the filing of criminal charges.

Researchers in the UK and Scotland (Flin, Boon, Knox, & Bull, 1992; Plotnikoff & Wolfson, 1995, respectively) compared the delays within the case flow of 100 cases of child abuse reported prior to the implementation of the Criminal Justice Act, implemented in 1992 to expedite the prosecution of child abuse, with those of 100 child abuse cases reported in the first year after the implementation of the Criminal Justice Act. The time from the filing of charges to the last court appearance took twice as long after the implementation of the act than before it and, further, the "new statutory procedures to expedite cases were little used and were ineffective in delay reduction" (Plotnikoff & Woolfson, 1995, p. 82). In contrast, findings in the US (Halemba, Siegel, Gunn, & Zawacki, 2002) showed marked improvements in the handling of child abuse cases by the juvenile court in the four counties examined following the implementation of the Court Improvement Project (CIP), with considerable reductions in the amount of time needed to reach most early case-processing milestones.

In a recent study, Walsh, Lippert, Cross, Maurice, and Davison, (2008) explored the length of time between key events in the criminal prosecution of child sexual abuse cases (charging decision, case resolution process, and total case-processing time), using a sample of 160 cases of three communities served by the Dallas County District Attorney. A wide range in case resolution time was found, with only a minority of the cases having resolution time of one year or less (Walsh et al., 2008). Charging decisions, however, were reached for the majority of the cases within 60 days of a law enforcement report. Very few case-level variables were related to case processing time and Walsh and colleagues suggested that the significant differences revealed among communities in case resolution time were related to system level factors involving the DA's offices and the courts. Cases handled in a Child Advocacy Center (see below for discussion), where an interdisciplinary team shared the evaluation process with the Assistant DA, had a shorter time to charging decisions than the two comparison communities

(Walsh et al., 2008).

Joint investigations

The United States Department of Criminal Justice Services (DCJS) has worked with a great number of localities within the different states to develop protocols to clarify professional responsibilities of interagency multidisciplinary teams (MTDs). The multidisciplinary approach and establishment of MDTs is mandated statutorily under Federal law and has been implemented in the majority of states (e.g., Cross, Finkelhor, & Ormrod, 2005; Ells, 1998, 2000; Finkelhor et al., 2005; Jones et al., 2005; Kolbo & Strong, 1997; Sedlak et al., 2006; U.S. Department of Justice, 2000).

The first Children's Advocacy Center (CAC) was founded in Huntsville, AL in 1985 by the Madison County Alabama District Attorney (see Anderson & McMaken, 1990) and its model has been adopted in many communities throughout the United States, with the aims of providing children with a supportive environment for a multidisciplinary investigation and developmentally-appropriate interviewing practices. The National Training Center at the National Children's Advocacy Center in Huntsville offers training for professionals working with children suspected of being abused, providing guidelines for best practice interviewing, based on research in child development, cognitive and cultural development, trauma's impact on memory, and state statute information demands in criminal cases, as well as for defending interview practices in court. The effects of introducing CACs on case outcomes are discussed in detail, below.

In a recent study conducted by Cross and his colleagues (Cross, Jones, Walsh, Simone, & Kolko, 2007), forensic investigation methods in four Children's Advocacy Centers (CACs) were compared with those used in within-state non-CAC communities. Using a sample of 1,069 child sexual abuse cases, the researchers found that CAC cases were significantly more likely than

comparison cases to feature multidisciplinary team interviews and case reviews, joint police/child protective services (CPS) investigations, and video/audio-taped interviews. In addition, CAC interviews showed an advantage in interview setting, compared with non-CAC interviews. The findings were explained in view of changes implemented by CACs in forensic investigative procedures, aiming to limit the number of interviews child witnesses have by coordinating investigations across the multiple agencies involved (e.g., child protective, law enforcement, medical), typically using one forensic interview to provide information to all professionals involved in the case (Cronch, Vilioen, & Hansen, 2006; Cross et al., 2007).

Interviews with child victims

The most important finding of the Rand Corporation study on Criminal Investigation more than 30 years ago was that more than half of the police departments polled had no formal training for new investigators (Chaiken, 1975). While this situation has almost certainly changed in the intervening decades, there remains no standardized training for the investigation of child abuse, in particular as to how to conduct interviews with a child witness or victim. Because corroborating physical evidence is often not present in cases of sexual abuse, the alleged victims are often the only available sources of information about their abuse experiences and the prosecution rests largely on the child's victim testimony (Berliner & Barbiery, 1984; Melton, Bulkey, & Wulkan, 1981). Interviews conducted with suspected child victims are thus critically important, especially when sexual abuse is suspected, both for decisions regarding child protection, and for decisions as to whether criminal proceedings will follow (Berliner, & Barbieri, 1984; Baum, Gordon, Alpert, & Glantz, 1987; Melton et al.,1981, Wakefield, & Underwager, 1988). The challenge of forensic interviewing is, therefore, to obtain accurate and informative disclosures of suspected abuse without raising the risk of false allegations when abuse did not occur.

Cognitive, developmental, and child witness research during the last three decades brought about significant changes in the understanding of children's memorial and communicative capabilities and limitations, demonstrating that children are capable of providing accurate information about experienced events if appropriately interviewed. There is a broad-based international consensus regarding optimal interview practices that will maximize children's competence as witnesses and enhance their actual and perceived credibility (American Professional Society on the Abuse of Children [APSAC], 1997; American Prosecutors Research Institute, 2003a,b; Fisher & Geiselman, 1992; Home Office, 2002; Home Office & Department of Health, 1992; Jones, 1992; Lamb, Sternberg, & Esplin, 1995; Lanning, 2002; Memon, Wark, Holley, Bull, & Köhnken, 1996a, 1996b; Meyers et al., 2002; Perona, Bottoms, & Sorenson, 2006; Vieth, 1999; Walker, 1994; Walker & Hunt, 1998; Whitcomb, 1993). This consensus has triggered further development of non-suggestive interviewing techniques to maximize the tapping of free-recall memory and increase the likelihood of eliciting accurate information (See Orbach et al., 2000; Sternberg, Lamb, Orbach, Esplin, & Mitchell, 2001).

As a result of these developments, judges have been encouraged to recognize the reliability of children's accounts, and to replace their long-standing tendency to dismiss children's testimony as an inaccurate source of evidence with court preparation techniques designed to empower child witnesses, by helping reduce their stress and fears, resist suggestions, and by enhancing their reliability (see: APRI, 2003b; Berliner, 2003; Berliner, & Barbieri, 1984; Lamb, Sternberg, & Esplin, 1998; Lyon, 2004; Marxsen, Yuille, & Nisbet, 1995; McGough, 1994, 2002; Orbach et al., 2000; Pipe, Lamb, Orbach, & Esplin, 2004; Plotnikoff & Woolfson, 1998; Sas, 1997; Sternberg, Lamb, Esplin, Orbach, & Hershkowitz, 2002; Sternberg, Lamb, Orbach et al., 2001; Yuille, 1988; Wilson, 1997).

A number of interview protocols have been developed based on best practice

recommendations for conducting forensic interviews with children and are in use in the US, as discussed below. In 1985, the National District Attorneys Association established the National Center for Prosecution of Child Abuse (NCPCA) as a program of the American Prosecutors Research Institute (APRI), aimed at responding to an increasing volume of reported child abuse by improving the handling of child abuse cases. The NCPCA provides expert training and technical assistance to prosecutors, investigators and allied criminal justice professionals on all aspects of criminal child abuse and exploitation, as well as information on child abuse case law, statutory initiatives, court reforms, trial strategies, research funding on state and federal developments, best practices, and prosecutorial innovations (American Prosecutors Research Institute[APRI, 2003a, 2003b]). In 1998, in partnership with Corner House Interagency Child Abuse Evaluation and Training Center, APRI developed the *Finding Words* training program (APRI, 2003a), an intensive, 5-day course, grounded in scientific research, for interviewing children about abuse and for defending investigative interviews in court and launched "Finding Words: – Interviewing children and preparing for court" (APRI, 2003a). The program is based on research in child development, linguistics, and memory and focuses on the adaptation of the interview to children's age and case characteristics. To date, however, there has been no published research evaluating the program. Similarly, the interviewer training offered at the National Training Center in Huntsville, noted earlier with respect to joint investigations, has not been systematically evaluated in the field. To date, only one protocol, that developed at the National Institute for Child Health and Human Development (NICHD) by Lamb and his colleagues (e.g., Lamb, Sternberg, Orbach, Hershkowitz et al., 2002, Orbach et al., 2000; see Lamb, Hershkowitz, Orbach, & Esplin, 2008) has been extensively researched. This protocol is described in detail, in the section on the current study.

Evaluation of the effectiveness of training on protocols is necessary because extensive

research shows that achieving lasting changes in interviewers' behavior through training programs can be difficult and should not simply be assumed (Aldridge & Cameron, 1999; Freeman & Morris, 1999; Stevenson, Leung, & Cheung, 1992; Warren et al., 1999). Even when interviewers can demonstrate knowledge of best practice interviewing procedures, they do not necessarily adhere to them (e.g., Cederborg, Orbach, Sternberg, & Lamb, 2000; Craig, Scheibe, Raskin, Kircher, & Dodd, 1999; Davies, Westcott, & Horan, 2000; Lamb, Hershkowitz, Sternberg, Boat, et al., 1996; Lamb, Hershkowitz, Sternberg, Esplin, et al., 1996; Memon, Bull, & Smith, 1995; Memon, Holley, Milne, Koehnken, & Bull, 1994; Sternberg, Lamb, Davies, & Westcott, 2001; Sternberg, Lamb, Hershkowitz, Esplin, et al. 1996; Warren et al., 1999). For example, Lamb, Sternberg, Orbach, Esplin et al. (2002) found that didactic workshops and instruction in the utilization of highly structured interview procedures had little effect on interviewing practices (e.g., on the number of open-ended prompts used to elicit information or on the amount of forensically relevant information elicited by appropriate prompts). By contrast, interviewers who received intensive training in the use of the NICHD Investigative Interview Protocol, which was followed by continuing supervision in the form of monthly day-long seminars and supplemented by detailed individual feedback on recent field interviews, yielded dramatic improvements in both interviewing practices and the quality of the information elicited from child witnesses (Lamb, Sternberg, Orbach, Esplin et al., 2002; Lamb, Sternberg, Orbach, Hershkowitz et al., 2002). Both the detailed investigative protocol *and* ongoing supervision and feedback during and following the training period were effective (see also Adams, Fields, & Verhave, 1999; Clark, 1971; Frayer & Klausmeier, 1971; Sweet, 1966). Specific parameters of effective training have not been examined with respect to other protocols.

Research on Case Outcomes: Rates and Predictors

Outcomes of cases involving child sexual abuse allegations have been reported in a

number of studies (Chapman & Smith, 1987; Cross et al., 1995; Martin & Besharov, 1991; Stroud et al., 2000; Tjaden & Thoennes, 1992; Trocme, Tourigny, MacLaurin, & Fallon, 2003). While rates of acceptance for prosecution have varied somewhat across studies, with examples ranging from 17% (Tjaden & Thoennes, 1992), 45%, 51%, and 60% (in Martin & Besharov, 1991; Chapman & Smith, 1987; and Cross et al., 1995, respectively), to 92% (Sedlak et al., 2006), and overall rates of cases reaching disposition similarly varying from 40% (Chapman & Smith, 1987) to 54% (Cross et al., 1995), one clear generalization evolves, namely, that very few cases relating to charges of child sexual abuse go to trial.

Cross and his colleagues (1995) examined the case flow, tracking the progress from referral to disposition, of all child sexual abuse cases (ages 4- to 18-years) referred for prosecution over a one-year period (1998-1999) in four urban jurisdictions. Of the total sample of cases involving 552 suspects, 60% were accepted for prosecution, 38% were declined and 2% were assigned to a diversion program. Of the accepted 60%, 5% were dismissed by prosecutors, grand jury or the court, and less than 1% was transferred to another court or jurisdiction, leaving 54% of the total sample carried forward and disposed by either trial (9%) or plea agreement (46%).

In a meta-analysis based on 21 studies (a total of 24 samples) of prosecution of child abuse, Cross and his colleagues (2003) reported rates for several decision points within the child abuse case flow through the criminal justice proceedings, from the initial reporting of abuse to the prosecution of the suspects. Of the included studies, 79% (19) involved sexual abuse only cases, whereas 21% (5) included a combination of sexual and physical abuse cases. From 40% to 85% of the substantiated cases in four of the studies analyzed were referred to prosecutors for forensic investigation. Across the 14 studies that had charging rates, charges were filed by the DA in 28% to 94% of the cases referred to the prosecutors, with 79% of the cases referred to the

DA, carried forward for prosecution. Excluding cases that were dismissed, diverted, or transferred, in 94% of the cases that were carried forward for prosecution the suspects were convicted, 82% of the convictions involved plea agreements and 18% were the outcome of a trial (Cross et al., 2003). Via calculated aggregate statistics using meta-analytic techniques on the comprehensive sample of the represented studies, Cross and his colleagues (2003) generated a hypothetical case flow for 100 child abuse cases referred to prosecutors. For a 100 referrals (from CPS and Police, combined), 66 were charged; 2 were diverted to an alternative treatment, 12 were dismissed or transferred, thus 52 were carried forward for prosecution, of which 3 were acquitted and 49 were convicted (9 through trial and 43 through plea agreement). Cross et al.'s (1995; 2003) findings showed that studies varied with respect to the proportion of cases that were submitted for prosecution; the great majority of cases accepted for prosecution, however, resulted in a conviction, mostly by guilty plea and the minority through trial. All of these studies confirmed earlier reports (Goodman, Pyle-Taub et al., 1992; Smith, Goretsky, Elstein, Trost, & Bulkley, 1994; Whitcomb, 1985, 1992) that only "a minority of child sexual abuse cases that are accepted for prosecution go to trial" (Cross et al., 1995, p.1432), and that once charges are filed, by far the most common outcome is a guilty plea to some or all of the charges (Cross et al., 1995; 2003). Thus, the DA's acceptance of a case for prosecution is the single best predictor of outcomes (Cross et al., 1995, 2003).

Variation in the rates of prosecution reported across studies is likely to be the result of several factors, including the nature of the abuse (sexual, physical, neglect) and the different points in the flow of a case at which researchers obtained their measures of case outcome. Additionally, the exclusion of cases in some categories (e.g., those referred to other jurisdictions, not cleared by the DA, declined by the DA, or those rejected because of insufficient evidence) from the total number of cases referred for investigation by CPS or law enforcement complicates

across-study comparisons. Of the studies listed above, only Cross et al. (1995) based the assessment of child abuse prosecution rates on the total number of cases referred to CPS and law enforcement agencies, embracing the entire distribution of outcomes. Cross and his colleagues' (1995; 2003) were also among the first to recommend that understanding of prosecution of child sexual abuse should take into account the complete range of the referred abuse cases (including the large proportion of cases that are referred to CPS or law enforcement departments and are not accepted for screening because they are not substantiated, are judged as 'unfounded', or are referred to another jurisdiction), rather than starting the analyses at the point at which cases are accepted for prosecution.

Stroud and her colleagues (2000) also included cases of reported child sexual abuse that were not referred for prosecution ("dropped" cases, p. 689) and differentiated them from cases that were submitted to the DA for prosecution, thus providing insight into a population that was mostly ignored in earlier studies. However, they did not extend the process range to include the initial case referral, prior to the forensic interview (see Cross et al., 2003).

Differences in the unit of analysis used by the different researchers also make direct across-study comparisons difficult to interpret. In several studies 'child maltreatment investigation' rather than the investigated child was the unit of analysis (e.g., Trocme, Tourigny, MacLaurin, & Fallon, 2003). Thus. children investigated on more than one occasion during the year were counted as separate investigations. In other studies, in contrast (and the approach taken in the present study), each child appears only once in the study sample, regardless of the number of investigative interviews conducted. We need also to keep in mind that some of the reports were conducted in an earlier period, prior to the introduction of the mandatory child maltreatment reporting laws (enacted in all the states in the U.S. between 1964 and 1973; Giovannoni, 1991; Goodman, 2006; Myers, 2002b, 2005; U.S. Bureau of the Census, 1982; U.S.

Children's Bureau, 1963; 1966), the extended rules of evidence admissibility (American Bar association, 1981), and the stricter penalty laws for child abuse (American Humane Association, 1984).

Interestingly, comparison of the prosecution rate in child sexual abuse cases and non-abuse felony cases (Cross et al., 1995) showed no significant differences in the proportion of cases carried forward for prosecution. In both samples the majority of prosecuted cases ended up in Guilty Pleas, with similar conviction rates. The proportion of prosecuted cases that went to trial, however, was higher for sexual abuse cases (9%), compared with non-abuse felony cases (3%).

Several studies have examined case information and court records, looking for predictors of the filing and prosecution of child abuse cases in the criminal court system (e.g., Chapman & Smith, 1987; Cross, De Vos, & Whitcomb, 1994; Cross, Martell, McDonald, & Ahl, 1999; Cross, et al., 1994, 1995; Sedlaket al., 2005; Sedlak et al., 2006; Stroud et al., 2000; Tjaden & Thoennes, 1992).

Predictors of prosecution of child sexual abuse cases have included victim-suspect's familiarity, with a higher likelihood of prosecution for cases involving non-parental or stranger suspect than parental or familiar suspects (Brewer, Rowe, & Brewer, 1997; Chapman & Smith, 1987; Cross et al., 1994; Menard & Ruback, 2003; Stroud et al., 2000; Tjaden & Thoennes, 1992); abuse type, with a higher likelihood of prosecution for cases involving sexual abuse and the more severe abuse types (e.g., penetration) than those involving other abuse types and less severe abuse (Brewer et al., 1997; Chapman & Smith, 1987; Cross et al., 1994; Sedlak et al., 2005; Tjaden & Thoennes, 1992); number of occurrences, with a higher likelihood of prosecution for cases involving reports of multiple occurrences than a single incident of abuse (Chapman & Smith, 1987; Cross et al., 1994; MacMurray, 1989; Tjaden & Thoennes, 1992);

alleged victim's age, with a higher likelihood of prosecution for cases involving older victims than children of younger age groups (Chapman & Smith, 1987; Cross et al., 1994; Stroud et al., 2000; Tjaden & Thoennes, 1992); ethnicity, with cases involving suspects of ethnic minority more likely to be prosecuted (Stroud et al., 2000; Tjaden & Thoennes, 1992), victim's gender, with female victims more likely to be prosecuted (MacMurray, 1989; Sedlak et al., 2005; Stroud et al., 2000; Tjaden & Thoennes, 1992).

In addition, there was a greater likelihood of prosecution and conviction in cases involving a male suspect, older suspects, cases in which medical evidence (Bradshaw & Marks, 1990; Brewer et al., 1997; Cross et al., 1994; Menard & Ruback, 2003; Sedlak et al., 2005), and/or suspect's statement (Sedlak et al., 2005) were available; cases in which there was a shorter interval between occurrence and reporting (Bradshaw & Marks, 1990; Brewer et al., 1997; Menard & Ruback, 2003); and those involving multiple victims (Brewer et al., 1997; Menard & Ruback, 2003).

As noted above, collaborative investigative strategies based on the policy of conducting joint Law-Enforcement and CPS investigations have been implemented in many jurisdictions across the United States. Studies examining and comparing the investigative practices employed by each agency in independent and joint investigations (Steele, Norris, & Komula, 1994; Tjaden & Anhalt, 1994) provided empirical data demonstrating the impact of joint investigation strategies implemented in CACs on sexual abuse case processing and outcomes in the criminal justice system (for review see: Jensen, Jacobson, Unrau, & Robinson, 1996; Steele, Norris, & Komula, 1994; Tjaden & Anhalt, 1994; Walsh et al., 2008). These researchers identified case-specific factors that differentiated between independent and joint investigation cases, with significantly higher prosecution rates for CAC cases than for non-CAC cases. Interestingly, however, dismissal rates were also significantly higher following joint investigations compared

to independent investigations, and there were no significant differences in conviction rate following joint and independent investigations, respectively, in any of the 5 jurisdictions studies by Tjaden and Anhalt (1994).

Similarly, in a study examining the impact of Child Abuse Assessment Center (CAAC) evaluations on legal outcomes, Joa and Edelson (2004) found that CAAC children were significantly more likely to have cases filed for prosecution: Charges were filed in 76% of the cases in which the children were seen at the CAAC, compared with 39% of the cases in which the children were not seen at the CAAC. In addition, filed cases had more overall counts charged; more counts charged against biological fathers and stepfathers who were suspects; and a greater number of defendants pleading or being found guilty compared to cases involving children not evaluated at the CAAC. There were also significantly more cases filed for two age groups (4- to 6-year-olds and 12 year olds and older) in cases assessed at the CAAC compared to those assessed elsewhere (Joa and Edelson, 2004).

Jones and her colleagues (Jones et al., 2005) reviewed research relevant to seven widely recommended investigative practices, considered to be among the most progressive approaches to criminal child abuse investigations. Such “best practices” include procedures designed to improve investigation processes and case outcomes, i.e., multidisciplinary teams (MDTs) for addressing child abuse issues, video-taping of all forensic interviews, specialized training to child forensic interviewers, specialized training to forensic medical examiners, victim advocacy programs, improved access to victims’ mental health treatment, and the establishment of Children’s Advocacy Centers (CACs; see Maine State Department of Human Services; Bureau of Child and Family Services Child Abuse Action Network, 1999). Existing evidence suggests that “best practice” components in MDT investigations are associated with a higher likelihood of both CPS substantiation of victims’ allegations and filing of charges against the suspects by the

Prosecutors (Jaudes & Martone, 1992). Jones at al. (2005) concluded, however, that although preliminary research supports many of the practices, there is a paucity of much needed evaluative research regarding the effectiveness of specific programs. There was no one model of forensic interviewing, and the studies focused on investigative procedures, rather than examining the effect of investigative interviewing practices on case outcomes, including the criminal prosecution of the individuals suspected of victimizing children.

Only one unpublished study has explored the effects of different approaches to the investigative *interview* itself, and the measure was perceived credibility of allegations, rather than case outcomes. In an unpublished doctoral dissertation, Fairley (2005) compared the impact of two currently-used interview approaches, a non-structured interview protocol based on the APSAC guidelines (See APSAC, 1997; Myers, Berliner et al., 2002), and the RATAC semi-structured interview protocol developed at the Corner House Child Advocacy Center in Minneapolis, Minnesota (See APRI, 2003a,b). The researcher indicates that "…there were no data on the validity, reliability, or use of…" either protocol (Fairley, 2005, pp.11, 12). Based on the examination of 863 forensic interviews, the findings suggested the inverse relationship to that expected, with the semi-structured protocol yielding allegations that were rated by clinicians as 'more problematic', than allegations yielded using the non-structured protocol interviews. However, whether the interviewers adhered to the APSAC guidelines or the semi-structured protocol, respectively, is not reported. Further, clinicians, rather than CPS workers or police detectives *rated* the allegations, a very different "outcome" measure than those made formally within the investigative and judicial procedures. The study is mentioned, however, because it is the only one considering the interview specifically.

The present study

While many studies have examined a number of potential determinants of the rates of

prosecution in child sexual abuse cases, none has directly examined what potentially is the most important determinant, namely, the nature of the interview conducted with the suspected child victim. In the present study, therefore, we ask whether the introduction of an evidence-based approach to interviewing child witnesses, the NICHD investigative interview protocol, affected case outcomes within the justice system. The introduction of the NICHD protocol across different international centers has been shown to significantly improve interviewing practices and the quality of the information elicited from children (see Lamb et al., 2008, for review). The question we address here is whether improvements in the quality of interviews conducted using the NICHD provide a sounder basis for decisions throughout the investigative and legal proceedings as reflected in case outcomes.

The NICHD Interview Protocol.

Background

The realization that improving the quality of forensic interviewing for achieving higher quality – more accurate - information "can make the difference between prosecution, protection, or continued abuse" (Cantlon, Payne, & Ergbaugh., 1996, p.1113), triggered increasing demands for anchoring interviewing practices in cognitive and developmental research (e.g., Poole & Lamb, 1998; Lamb, Sternberg, Orbach, Hershkowitz et al., 2002, 2006; Lamb, Orbach, Warren, Esplin, & Hershkowitz, 2007; Lyon & Saywitz, 2006; Orbach et al., 2000), as well as for developing effective training programs leading to the acquisition of recommended forensic interviewing skills by all professionals who talk to children in abuse investigations – e.g., law enforcement officers, social workers, medical doctors, psychologists, and prosecutors (Aldridge, 1992; Aldridge & Cameroon, 1999; Lamb, Sternberg, Orbach, Esplin et al., 2002; Vieth, Bottoms, & Perona, 2006). To this end, structured interview protocols for forensic interviews conducted with children are widely advocated in the USA, Israel, Canada, UK and Europe

(Home Office, 2002; Home Office & Department of Health, 1992; Orbach et al., 2000; Perona et al., 2006; Poole & Lamb, 1998).

These protocols are based on any or all of best practice principals, research findings from laboratory-based studies, developmental considerations, and clinical experience. Only one, the NICHD Investigative Interview Protocol (Orbach et al., 2000; Sternberg, Lamb, Orbach et al., 2001), however, has been subjected to systematic evaluation in the field. The NICHD Investigative Interview Protocol has been adopted as the standard protocol for forensic interviews of child witnesses in a number of centers in the US and has been used in all interviews of suspected child abuse victims, witnesses, and suspects in Israel since 1997 (Hershkowitz, Horowitz, & Lamb, 2005; Sternberg, Lamb, & Hershkowitz, 1996).

Overview of the NICHD protocol

The NICHD protocol (Orbach et al., 2000) was developed to translate experimentally based professional recommendations regarding interviewing strategies (American Professional Society on the Abuse of Children [APSAC], 1997; Home Office, 2002; Home Office & Department of Health, 1992; Myers, Berliner et al., 2002; Poole & Lamb, 1998) into operational guidelines, given the difficulty forensic interviewers often have adhering to recommended interview practices in the field. The NICHD protocol trains interviewers to use open-ended prompts and techniques and guides them through all phases of the investigative interview to maximize the amount of information elicited from free recall memory. The protocol strategies and techniques were developed in accordance with widespread evidence that free recall memory prompts are likely to elicit accurate information, whereas prompts that depend on recognition processes are associated with more erroneous responses (Brady, Poole, Warren, & Jones, 1999; Bruck & Ceci, 1997; Ceci & Bruck, 1993; Dale, Loftus, & Rathbun, 1978; Dent, 1982, 1986; Dent & Stephenson, 1979; Garven, 2002; Garven, Wood, & Malpass, 2000; Garven, Wood,

Malpass, & Shaw, 1998; Goodman & Aman, 1990; Goodman, Hirschman, Hepps, & Rudy, 1991; Orenstein, Baker-Ward, Myers, Principe, & Gordon, 1995; Peterson & Biggs, 1997; Poole & Lindsay, 1998; Wood & Garven, 2000).

The NICHD Protocol introduces adaptations of forensic interviews to achieve age appropriate information requests (e.g., see Orbach & Lamb, 2007), including narrative enhancing techniques, shown to be especially effective in eliciting free-recall information from very young children (Lamb et al, 2003; Lamb, Sternberg, & Esplin, 2000; Orbach & Lamb, 2000). In the introductory phase, the interviewer clarifies the child's task, i.e., the need to describe events in detail and to tell the truth, and explains the ground rules and expectations, e.g., admit lack of knowledge, indicate when not understanding, and correct interviewer when necessary. The rapport-building phase aims to create a relaxed, supportive environment for children and establish rapport between the child and the interviewer. It also simulates the substantive phase of the interview, including the nature of questioning, and provides children with opportunities for practice and feedback in recall of an experienced neutral event, responding to input-free interviewing prompts and techniques. These initial phases are based on techniques that have been the subject of extensive prior research (see, for example, Lamb, Sternberg, Orbach, Hershkowitz, & Esplin, 1999; Saywitz, Goodman, & Lyon, 2002; Saywitz & Snyder, 1993, 1996; Sternberg et al., 1997)

Non-suggestive prompts are then used to identify the target event/s that is/are the focus of the interview. Following disclosure of the target event, the free recall phase begins with the main invitation: "Tell me everything that happened from the beginning to the end as best you can remember", and follow up open-ended prompts, like "Then what happened?", followed by cued invitations based on the child's responses, to secure incident-specific information, for example "Earlier you mentioned a [person/object/action]. Tell me everything about that", or "You

mentioned that he locked the door. Tell me everything that happened right after he locked the door", making reference to details mentioned by the child to elicit uncontaminated free-recall accounts of components or segments of time of the alleged incident/s, respectively.

Only after exhaustive open-ended questioning do interviewers proceed to directive questions, like "Where were you when that happened?", or "Who was it?". If crucial details are still missing at the end of the interview, interviewers are instructed that they may ask limited option-posing questions (mostly yes/no and forced-choice questions referencing new issues that the child failed to address previously), for example: "Did he say anything when he did that?", when suspect's action was mentioned by the child; or "Did he touch you over or under your clothes?", when having being touched by the suspect was mentioned by the child. Suggestive utterances, which communicate to the child what response is expected, are strongly discouraged in all phases of the interview. An example would be: "I understand that he grabbed you forcefully, didn't he?", when the child said that the suspect grabbed his hand, or "Tell me where he touched you", when the child had not mentioned being touched.

Following initial disclosure the interviewers use a scripted prompt to obtain an indication of the number of incidents experienced ('one' or 'more than one'). From that point on, the interviewers are only given general guidance regarding the types of utterances to employ (i.e., prioritize free-recall and reall prompts, tapping recall memory), undesirable practices to avoid (i.e., suggestive and option-posing prompts, tapping 'recognition memory'), and appropriate open-ended free recall (invitations and cued-invitations) and cued recall (directive, category-specific open-ended prompts, tapping recall memory) prompts to use, without having to follow an inflexible script.

Evaluative research

Extensive research evaluating the effectiveness of the NICHD Investigative Protocol by

comparing children interviewed using the protocol to a matched group of children (with respect to age, number of reported incidents, suspect familiarity, and abuse type) who were interviewed by the same investigators before the protocol was introduced has demonstrated that implementation of the protocol across different international centers significantly improved retrieval conditions in both the pre-substantive and substantive phases in the interviews analyzed, regardless of the children's age (Orbach et al., 2000; Lamb et al., 2008; Sternberg, Lamb, Davies et al., 2001; Sternberg, Lamb, Orbach et al., 2001). In several studies, the Protocol has been shown to be effective in enhancing the reports of children, including very young children, using open-ended questioning. In the protocol interviews absolutely and proportionally more information was elicited in response to open-ended prompts, whereas significantly fewer and proportionally fewer details were elicited in response to directive, option-posing, and suggestive utterances than in the non-protocol condition. In addition, interviewers utilized more open-ended prompts prior to the first option-posing utterance in protocol interviews than in non-protocol interviews, thereby minimizing possible contamination. Thus, significantly more free-recall information and proportionally more of the children's total output was elicited before being asked the first option-posing question in protocol interviews than in non-protocol interviews (Orbach et al., 2000; Lamb et al., 2008; Sternberg, Lamb, Orbach et al., 2001).

These findings are extremely important in view of experimental research demonstrating that the way memories are accessed is a crucial determinant of their accuracy and that information elicited using recall processes is more accurate than information elicited using recognition processes (see above-p.24). Moreover, children in the two youngest age groups (4- to 6-year-olds and 7- to 8-year-olds) interviewed using the NICHD protocol did not differ significantly with respect to the average number of details provided per invitation (i.e., open-ended free recall prompts) and the total number of forensically relevant details provided in

response to such invitations (Sternberg, Lamb, Orbach et al., 2001). Half of the information provided by the 81 4- to 6-year-olds studied by Lamb and his colleagues (Lamb et al. (2003) was elicited using open-ended invitations (i.e., free recall prompts), indicating that young children can respond informatively to open-ended free recall prompts, and thus provide free-recall, typically the most accurate form of memory reports (Carter, Bottoms, & Levine, 1996; Peterson & Bell, 1996; Steward, Bussey, Goodman, & Saywitz, 1993).

The research has demonstrated that the protocol facilitated the utilization of diverse recommended practices and techniques, that investigators could be trained to follow the protocol when conducting forensic interviews, and that establishing the superior retrieval conditions emphasized in the protocol facilitated the retrieval of information of higher quality by young interviewees (Lamb, Sternberg, Orbach, Hershkowitz et al., 2002; Orbach et al., 2000; Sternberg, Lamb, Orbach et al., 2001). The significant effects that were documented are especially impressive in light of other disappointing findings regarding the impact of specialized training where systematic evaluations revealed effects on trainees' knowledge but no demonstrable impact on the quality of their behavior when conducting interviews (Aldridge & Cameron, 1999; Craig et al., 1999; Davies & Wilson, 1997; Memon et al., 1995; Stevenson et al., 1992; Vieth et al., 2006; Warren et al., 1999). The results of a study on the effects of intensive training and on-going supervision on the quality of investigative interviews with alleged sexual abuse victims (Lamb, Sternberg, Orbach, Hershkowitz et al., 2002) strongly suggest that meaningful long-term improvement in the quality of information obtained from young alleged victims of sexual abuse are observed only when (a) well-established principles are operationalized in clear and concrete fashion and (b) training, involves intense, prolonged, quality-controlled practice, supervision, and feedback distributed over time.

Arguing that forensic interviewers should be informed by sound research, many

researchers provide practical substantiated recommendations for interviewing child witnesses and some go beyond to propose directions for future child witness research, including recommending a thorough examination of factors that may affect the outcomes of abuse prosecutions through the analyses of children's testimonies and other case evidence (Bottoms, Kovera, & McAuliff, 2002; Lyon and Saywitz, 2006; Myers, 2002a; Myers, Berliner et al., 2002; Myers, Saywitz, & Goodman, 1996; Perona et al, 2006; Poole & Lamb, 1998; Quas, Goodman, Ghetti, & Redlich, 2000; Westcott, Davies, & Bull, 2002).

Objectives of the present study

An important question of direct relevance to the justice system that has not been addressed in any research study to date is whether the introduction of evidence-based approaches to interviewing child witnesses affects the outcomes for the child and/or the suspect. It is the goal of the present study, therefore, to evaluate the effects of best practice interviewing on case outcomes in the justice system, by examining whether the NICHD Investigative Interview Protocol has had an impact on child sexual abuse case outcomes within the justice system.

Improvements in the quality of interviewing would be expected to reduce ambiguities in children's accounts, increase the amount of central information children report, especially in free recall, and in turn provide a sounder basis for decisions further "down the line" regarding child protection and possible legal proceedings. Specifically, we ask whether the introduction of improved interviewing procedures influences the likelihood that an investigation leads to a suspect being arrested with criminal charges filed by the DA. Conversely, improved interviews might decrease the number of cases considered by law enforcement to be 'unfounded,' and screened and declined by the DA. Further, for cases that result in charges, we examine the outcomes as the case proceeds through the criminal justice system, specifically, the legal dispositions through either plea negotiations or trial, or dismissals of some or all charges. We

also examine cases that proceeded to trial, and their outcomes. Finally, we examined the time period elapsing between the initial referral of the alleged offense by CPS workers or police detectives and the forensic interview, the delay from the date of the forensic interview to the filing of charges by the District Attorney following the screening process, and the delay from the filing of charges to court disposition.

Our sample includes a wide range of case outcomes, from referral through investigative interview, screening, prosecution, to disposition, including cases that were referred to other jurisdictions, those that were not submitted by the police detectives for screening with the DA, and cases that were referred for screening but were declined by the DA.

Research Methodology

All the forensic interviews included in the present study were conducted at the Salt Lake County CJC by police detectives who specialized in conducting forensic interviews with children, and who in September 1997 were introduced to the NICHD Investigative Protocol and were specially trained to conduct forensic interviews with children using the NICHD protocol. Prior to the introduction of the NICHD protocol, there was no formal training on forensic interviewing of suspected victims of child sexual abuse available in Utah. As a result, there was no consistent training across police detectives. Individual investigators attended one or more of the following training sessions: one-hour break out session at conferences; two-day training workshops focusing on the investigative process (focusing on the investigation as a whole, and not exclusively victim interviewing); two-day training based on the Kempe Center Model of interviewing (which included non-verbal aids, such as body diagrams and anatomically-detailed dolls, and the use of drawings. This was the chosen model of the Division of Child and Family Services at that time); the Attorney General Task Force on Satanic Abuse training conference; local conferences In many cases the primary training was “on the job,” with the acquisition of

skills from other interviewers including CP caseworkers.

To answer our research questions, i.e., whether an evidence-based protocol for interviewing suspected victims of child abuse increases the likelihood that case outcomes are positively affected along several outcome categories, we compared the outcomes of cases in which the investigative interviews were conducted using the NICHD Investigative Interview Protocol in the period following its implementation, with case outcomes of cases in which interviews were conducted by the same interviewers immediately prior to the introduction of the NICHD Protocol.

The Sample

The final sample examined in the present study consists of investigative interviews with 1280 alleged victims of sexual abuse with children between the ages of 2.8 to 13.97 years referred to the same police departments during the period before and after the implementation of the Protocol, i.e., from 1994 to mid-September, 1997 and from mid-September 1997 to 2000. Because the study is designed to examine case outcomes in relation to characteristics of the forensic interviews, we included interviews from these early time periods to allow for the time required for the post-adjudication proceedings. All suspected victims of sexual abuse referred to the Salt Lake County Police Departments in Utah were considered for inclusion if the interviews had been conducted by one of the 11 participating experienced police officers in two police departments in Salt Lake County, Utah, who had undergone training in the use of the NICHD investigative interview protocol. All interviewers received extensive training from researchers at NICHD on the use of the NICHD protocol while conducting simulated and actual forensic interviews, prior to conducting the protocol interviews included here. This inclusion criterion of interviewer applied to cases in which interviews were conducted *prior* to training with the NICHD protocol to control for possible interviewer effects (independent of training).

Exclusion criteria were as follows. We focused on alleged victims up to the age of 13.97 years. The youngest age at which children were interviewed was 2.80 years, setting the lower limit of the age range. Cases of physical abuse (n = 75) were excluded, as were cases in which the alleged victims were witnesses rather than victims of sexual abuse. A case was defined at the level of the suspect. Cases in which there were 2 or more potential victims (373 of an initial sample of 1561 potential victims) the victim for whom the most detailed and complete information concerning charges and outcomes was selected for that case. If 2 victims had similarly detailed information, one was randomly selected for that case. Cases in which more than 1 potential victim was interviewed typically involved two victims (82% of the multiple victim cases). We adopted this procedure so that no single case would have a disproportionate effect on our findings and because in several cases potential victims were interviewed because they were siblings, or friends who needed to be ruled out as victims, but with no other reason for suspicion. Of an initial sample of 1561 interviews, 1188 were cases involving an interview with only one child and a further 162 involved interviews with two or more potential victims, from which one child was selected according to the criteria described. Of this sample of 1350 cases, a further 70 cases had to be dropped because police outcome information was not available. The characteristics of cases excluded for this reason (no outcome information) are summarized by interview type (protocol and pre-protocol) in Appendix 1.

The characteristics of the remaining 1280 cases are shown in Table 1, including the division between pre-protocol (n = 551) and protocol (n = 729) conditions. Most interviews were the first formal forensic interviews of the alleged victims. Several second forensic interviews were included in cases where the alleged victim failed to disclose during the first interview.

Coding procedure

Based on all available sources of information, including child protection and police

reports, CJC intake forms, and the Children's Justice Center data base, two trained coders created the data file for the present study, including all the outcome variables under comparison for cases in both interview types.

Case characteristics

Case Characteristics include the number of occurrences of abuse (single, multiple), abuse type (exposure, touch over clothes, touch under clothes, penetration), suspect's familiarity with the victim (immediate family-co-residing, other family, familiar –not related, unfamiliar), suspect's age (juvenile, adult), suspect's ethnicity (Caucasian, Hispanic, other), number of suspects (single, multiple), number of victims (single, multiple).

Referral Date is the date a case was referred to Children's Justice Center (CJC) by Child Protective Services (CPS) or Law Enforcement personnel for undergoing a forensic investigation.

Case outcomes

Case outcomes include all points of decision making during the case flow in the criminal justice procedures from case referral to case disposition:

- *Substantiation (CPS).* An assessment process during an initial case evaluation by CPS workers to determine whether or not the balance of evidence indicates that abuse had occurred and the case would be supported (see Giovanonni, 1991). In Utah, CPS are given 30 days following the forensic investigation to close the case, based on the victim's interview and any available corroborative evidence (e.g., suspect interview, suspect admission, witnesses' interview, material evidence, findings of medical examination).
- *Referral to another Police Department*. The case is forwarded by police detective to another police department where the crime occurred when the detective who

conducted the interview does not have jurisdiction over it (an exception to this are cases for which a multi-jurisdictional agreement exists and the detectives collaborate with the out-of-state agencies in conducting the investigation).

- *Case assessed as 'unfounded'.* An assessment by law enforcement officers following the forensic investigative interview of a case. An implication is that there is no basis for the allegation and there is the suspicion that the allegation is not true.
- *Insufficient evidence.* Relates to cases with credible allegations, but no other evidence to corroborate the allegations. The child's statement cannot stand unsupported, to the standard that prosecutors use when making a decision whether or not to file criminal charges, thus has no reasonable likelihood of winning at trial and the police detective decides not to submit it for screening.
- *Screening.* A process conducted by the District Attorney (DA) who, based on evidence gathered by the Police Department, including the victim's interview, and other input from the Multi-Disciplinary Team, analyzes the case, estimates if it meets the standards for filing criminal charges and if there is a reasonable likelihood of winning at trial, and makes a decision as to whether to consider or decline possible prosecution of the case.
- *Not cleared.* Refers to a case which was not submitted by the police investigator for clearance with the DA during the screening process because of insufficient evidence or other reason (e.g., the victim was considered too young to be a credible witness, the abuser was unknown, or the victims' parents refused to cooperate with the police). Such cases are closed by the law enforcement detectives.
- *Screened/declined.* Refers to a case in which, during the screening process, the DA declined to file charges because of estimated low prospects of getting the case through

trial.

- *Charges Filed.* Refers to a case in which, following the screening process, the DA decided to file criminal charges against the alleged suspect and carry the case forward to the Criminal Justice System for prosecution.
- *Exceptionally cleared*. Cases that normally would go forward for filing criminal charges, but due to circumstances beyond the control of the DA or law enforcement (e.g., alleged victim refuses to cooperate, suspect cannot be located after exhaustive efforts, or suspect has died), charges cannot be filed and the case is dismissed.
- *Arrested/charged (filed).* Substantiated cases in which criminal charges are filed by the DA and the suspect is arrested by law enforcement personnel
- *Arrested/Charged / Not filed*. Cases in which charges are eventually not filed for criminal proceedings (although the DA initially decided to have the suspect arrested and charged) because of newly revealed information following further review of the case.
- *Case diverted*. A charged case diverted by the DA from prosecution to an alternative intervention, such as treatment.
- *Plea Agreement.* An agreement reached between the Prosecutor and the suspect following negotiations, mostly involving a Guilty Plea. The suspect may benefit from making a guilty plea by reduced charges as part of the bargain. The prosecutor benefits by obtaining a conviction without the risk of a jury trial; and the alleged victim may benefit by not having to go through the stressful experience of testifying in court (American Prosecutors Research Institute, 2003; Berliner, & Barbieri, 1984; De Jong, & Rose, 1989; Goodman, Pyle-Taub et al., 1992; Saywitz & Nathanson, 1993; Sternberg, Lamb, & Hershkowitz, 1996; Whitcomb, 1992; Whitcomb, Goodman,

Runyan, & Hoak, 1994).

- *Plea reduced.* A reduction in the number of counts charged, or the level of charge (e.g., as in a reduction from a felony charge to a misdemeanor charge), as part of the plea agreement reached by the prosecutor during negotiations with the suspect/defense attorney.
- *Case submitted for trial.* A case, in which a plea agreement following charges is not reached, and it proceeds though the criminal justice system and is submitted for trial by a criminal court, or a juvenile court if the suspect is under 18-years at the time of the incident.
- *Counts dismissed.* Dismissal of charged counts during a plea agreement or a trial.
- *Case dismissed.* Dismissal of all charges against the defendant.
- *Case disposition.* A court statement specifying the court decision regarding the upholding, reduction, or dismissal of criminal charges against the suspect following s plea agreement or a trial. This is the final court action before the sentencing of the alleged suspect.

Time delays

Time delays refer to the time intervals between the date of initial reporting/referral of the incident and the dates of different points of interest along the judicial proceedings (e.g., forensic interview; prosecutorial screening; filing of charges by the DA and arrest by law enforcement personnel; case disposition).

Results

Because we wanted to control for the variable of interviewer in comparing the effects of the protocol interview, throughout our analyses we compared cases before and after the introduction of the protocol conducted by the same interviewers. As a result, there is necessarily

a confound between type of interview (pre-protocol and protocol) and the years from which cases were drawn. In Appendix 2 we have included a break down of case outcomes by year. The proportions of cases in which the suspect was charged were, for successive pre-protocol years (beginning in 1994), 40%, 38.5%, 34.8%, and 39.6% (first part of 1997). Following the introduction of the protocol, the percentages of cases charged were (second part of 1997), 47.3%, 38.7%, 53.2% and 35.2% (for 2000). While there is some variation across years, both prior to and following the introduction of the NICHD interview protocol, attributable to very small number of cases available for the earliest pre-protocol years in particular, there was clearly no increasing trend in the rates of charging suspects prior to the introduction of the protocol (see Appendix 2).

As described above, cases were coded with respect to interview type (pre- protocol, protocol), characteristics of the alleged victim, suspect, and the nature of the abuse as summarized in Table 1; case outcomes as summarized in Table 2; and time in the judicial process in terms of days as summarized in Table 11. A number of the variables had to be excluded from all analyses because of missing information for too many cases. Excluded variables included victim's disability, suspect's race, number of incidents, corroborative evidence, and delay between the last alleged incident of abuse and the first forensic interview. Cases were omitted from specific analyses when there were missing data for specific variables under examination/analysis. The numbers contributing to each analysis and reasons for variation are noted where appropriate.

Overview of the analyses

The results are structured as follows. We were primarily interested in identifying the case characteristics that predicted (i) cases in which criminal charges against the suspect were filed by the DA, as part of the investigative process, and which were carried forward to the criminal

justice system for prosecution, and (ii) disposition with respect to convictions on the one hand, and acquittals as well as all charges being dismissed on the other, once the charges were filed and the case proceeded through the judicial process. We also examined the delays that elapsed between crucial decision points in the investigative and judicial processes, and whether these differed across interview types or other case characteristics. A more detailed description of the steps in the analyses is as follows.

The first step in the analysis concerns decisions made as part of the investigative process. A preliminary chi-square analysis was conducted to examine the association between interview type and each of the predictor variables. To examine predictors of whether a case was filed with criminal charges against the suspect, focusing, in particular, on the contribution of interview type as a significant predictor, we then conducted a series of univariate Logistic Regression analyses to test the relationship between each predictor and the dependent variable, followed by a multivariate Logistic Regression analysis to examine the unique effects of each of those predictors that reached the $p < .05$ criteria of statistical significance in the univariate analysis, controlling for the other variables.

In the second step of the analysis, we examined the outcomes of cases in which a suspect had been charged (and charges filed) on at least one count of sexual abuse (felony and/or misdemeanor). Focusing only on cases with filed charges, we examined all outcomes of plea negotiations and trial (i.e., guilty plea, plea reduced, dismissal of all charges, found guilty, and acquitted). To identify predictors of cases in which all counts were dismissed or those in which the suspect was acquitted, as opposed to cases resulting in a guilty plea, plea reduced, or guilty verdict at trial, the analyses followed those of the first step, and univariate and multivariate Logistic Regression analyses were conducted. Cases that went to trial were also examined separately, comparing the outcomes (conviction or acquittal) by interview type.

Third, we examined the effects of the introduction of the interview protocol on the delays in the case flow from the date of referral for investigation to the date of interview, from date of interview to the filing of charges, from the filing of charges to the final disposition, and overall, from referral for investigation to the final disposition.

The association between interview type and case-related variables

There were 551 pre-protocol cases and 729 protocol cases for a total sample of 1280 cases that met the criterion for inclusion in the study in terms of the age range under consideration and the availability of outcome information. To identify the victim and suspect characteristics that significantly correlated with type of interview, separate Chi-square analyses were conducted, examining the relationship between type of interview and type of abuse, victim age, victim gender, victim race, suspect gender, suspect age and suspect-victim familiarity, respectively. Using a significance criterion of $p < .05$, type of interview was significantly related to victim age ($\chi^2(3) = 15.95$, $p < .01$, $n = 1280$). A greater than expected proportion of interviews with 2.8- to 4-year old alleged victims were Pre-protocol, and a greater than expected proportion of interviews with 5- to 6-year olds were Protocol (see Table 1). Of the non-significant chi-squares, only that for victim race approached significance, $\chi^2(2) = 5.60$, $p < .06$, $n = 1231$; Chi-squares for remaining variables ranged from 2.72, $p < .4$ to .28, $p < .87$.

Predicting Filed Charges v Other Outcomes

Table 2 shows the frequency of possible case outcomes separately for pre-protocol and protocol interview types. Of the total sample of 1280 cases, 8% (103) were exceptionally cleared (forced inaccessibility to suspect or victim); and 6.6% (84) were referred to another jurisdiction. These cases are presented in the tables for descriptive purposes. They are not considered further in any analyses because these outcomes were not determined by a decisional process but rather a legal or situational circumstance out of the control of law enforcement, the

DA, or judicial processes. Appendix 3 provides a summary of the characteristics of these cases.

Of the remaining 1093 valid cases, 46.9% (513) resulted in a filed charge of at least one count, 10.9% (119) were judged 'unfounded' by police detectives; 5.2% (57) were not submitted for screening (not cleared); 10.2% (111) were not processed further because of 'insufficient evidence'; 21.1% (231) were screened, but declined and charges were not filed by the DA; 0.5% (6) were pending; and 0.5% (5) were inactive. Nearly 5% (51)of the cases were categorized as charged but no charges were filed (according to police records available to the Children's Justice Center, these cases were indicated as having been charged but there was no further record of the charge or of a disposition; see Appendix 4 for a summary of the characteristics of these charged/not filed cases).

Because a large number of cases had to be dropped from the analyses when simultaneously including all the predictor variables in the logistic regression, due to missing data on one or more variables of interest, we first tested the relationship between the outcome of filed charges (compared to all other outcomes), and the predictor variables individually to identify those that reached the $p < .05$ criteria of statistical significance using the Likelihood Ratio Chi-square. We then conducted a multivariate Logistic Regression entering the significant predictors concurrently to test which variables were statistically significant predictors while controlling for the other variables in the equation.

Univariate analyses.

The data were subjected to Logistic Regression Analysis to examine, first, whether interview type was significantly related to the outcome of a filed charge(s) of at least one count of sexual abuse, and second, whether there were additional (or other) case characteristics that predicted filed charges (see Table 3). Outcomes were dichotomized: all cases with filed charges were compared to the total of unfounded, not cleared, insufficient evidence, screened/declined,

pending, inactive, and arrested/charged not filed cases (Table 2). As noted above, cases that were exceptionally cleared or were referred to another jurisdiction were excluded from these analyses.

Table 4 shows the results of the univariate analyses. The table columns show the number of cases for each predictor, the percentage of those cases that had filed charges, the Likelihood Ratio χ^2, and the Nagelkerke R^2 which gives the proportion of null model deviance attributable to the variable. The variables that were significantly related to filed charges were type of interview, type of abuse, victim's age, gender of suspect, age of suspect, and victim/suspect familiarity (*ps* < .001). These six variables were then entered concurrently into a Logistic Regression equation.

Multivariate analyses.

Because cases had missing values on one or more of the six predictors in the multivariate analysis, the sample was reduced to 886 cases. Table 5 presents the proportions of filed charges cases by predictor variable for this reduced sample, and the Likelihood Ratio Chi-square for each predictor when it was entered as the last variable into the Logistic Regression equation. The multivariate results revealed that the six predictors as a set significantly predicted filed charges outcome, $\chi^2(11) = 138.66$, $p < .001$, and accounted for 19.3% of the null model deviance according to the Nagelkerke R^2 (adjusted so maximum deviance equal 100%). Further, each of the variables significantly predicted the outcome of filed charges while controlling for the other predictors.

Table 6 shows the logistic regression coefficient, standard error, Wald test, odds ratio, 95% Confidence Interval for the odds ratio, and % change for the dummy-coded variables representing the levels of the predictor variables. The odds ratios and the *p*-values indicate how the groups constituting a predictor variable differ from a designated comparison group while controlling for all other variables in the equation.

Interview type was dummy coded with pre-protocol as the reference group. A majority of protocol interviews resulted in filed charges while a minority of pre-protocol interviews were associated with filed charges (see Table 5). The odds ratio indicates that the odds of filed charges were 1.52 times higher for protocol than for pre-protocol interviews (Table 6).

Type of abuse was dummy-coded with penetration as the reference category. More than 60% of cases with the abuse type of penetration resulted in charges being filed, and this proportion was significantly larger than the proportion of filed charges of exposure and touch (see Table 5). The inverse of the odds ratios indicate that the odds of a case with abuse type of penetration resulting in filed charges were 3.44 times higher than for exposure cases, and 1.72 times higher than for cases involving touch but no penetration (Table 6).

Victim age was coded with the 2.8- to 4-year olds as the comparison group. The youngest group had significantly fewer cases with filed charges than the other three age groups and was the only age group for which the majority of cases did not lead to filed charges (Table 5). Compared to the 2.8- to 4-year old group, the odds of a charge were 1.64 times higher for the 5- to 6-year olds, 2.53 times higher for the 7- to 9-year olds, and 2.09 times higher for the 10- to 13-year olds (Table 6).

Victim/suspect familiarity was dummy coded with immediate family member as the reference group. Only the Familiar-not-related group was significantly different from the comparison group (Table 5). The odds ratio indicates that the odds of filed charges for familiar-not-related suspects were 1.40 times higher than for immediate-family suspects (Table 6). The odds ratio for the category of other family was 1.46, suggesting a higher rate of filed charges than for the category of immediate family, although this difference only approached significance, $p < .07$ (Table 6). Further, although the odds of filed charges for unfamiliar suspects was 78% lower than for immediate-family suspects, the difference did not achieve statistical significance,

$p < .06$ (Table 6) because of the small number of unfamiliar-suspect cases (n = 13).

Suspect gender was dummy coded with female as the reference group. There were few female suspects--constituting only 7% of the reduced sample (n = 886), and few of these cases had charges filed (Table 5). The odds ratio revealed that the odds of filed charges were 9.30 times higher for males than for females (Table 6). *Suspect age* was dummy coded with adults as the reference group. The proportion of juveniles with filed charges was significantly larger than the proportion of adults with filed charges (Table 5) with the odds ratio of filed charges being 2.33 times higher for juveniles than for adults (Table 6). Appendix 5 provides a summary of juvenile and adult case characteristics and shows that compared to adult suspect cases, juvenile suspect cases were less likely to involve the oldest (10-13 year olds) alleged victims (44.6% v 25.9%) and were more likely to involve male alleged victims (34.3% v 18.9%). Juvenile-suspect cases were also more likely to include abuse involving penetration than were adult-suspect cases (48.1% v 38.7%) and less likely to involve 'touch' (48.1% v 57.3%).

Interactions between interview type and other predictors.

Post-hoc analyses were conducted to test whether interview type interacted with suspect and/or victim characteristics in predicting the outcome of charges filed. Two-way interactions were tested by conducting separate logistic regressions for each combination of interview type with abuse type, victim age, victim gender, victim race, suspect gender, suspect age, and victim/suspect familiarity. For each analysis, the interaction effect was tested while controlling for the main effects of interview type and the second variable. A statistically significant interaction was found for interview type X victim age ($\chi^2(3) = 9.24$, $p < .03$). There were no other statistically significant two-way interactions involving interview type (*p*s ranged from $p = .10$ to $p = .92$). Table 7 shows the percentage of cases with filed charges for interview type at each level of victim age. Except for the 5- to 6-year olds, the percentage of protocol cases with

charges filed was greater than for pre-protocol cases. This outcome was especially pronounced for the 7- to 9-year-old age group where the percentage of protocol cases with filed charges was 22% more than the pre-protocol cases. For the 5- to 6-year-old group, however, the percentage of cases that had charges filed versus not filed were nearly evenly split for both interview types.

A significant three-way interaction was revealed, predicting the outcome of charges filed involving interview type, suspect age, and victim/suspect familiarity with the latter predictor dichotomously coded immediate family vs all other victim-suspect familiarity categories ($\chi^2(1) = 7.11$, $p < .01$). The interaction was tested using Logistic Regression while controlling for all main and two-way interaction effects involving the three predictors. Table 8 shows the percentage of cases with filed charges for interview type at each level of suspect age and victim/suspect familiarity. There was a statistically significant higher percentage of protocol than of pre-protocol cases with charges filed when the suspect was an immediate family member and was an adult but not when the suspect was a juvenile. When the suspect was not an immediate family member, there was a statistically significant higher percentage of protocol case with charges filed when the suspect was a juvenile but no difference when the suspect was an adult.

Details of the Criminal Charges

Five hundred thirteen cases (pre-protocol and protocol interviews combined) were associated with charges being filed. Of these cases, 85.8% (440) involved felony-only charges, 7.2% (37) involved misdemeanor-only charges, and 7.0% (36) involved both felony and misdemeanor charges. Case proportions for these three categories of charges were similar for the pre-protocol and protocol interview types, $\chi^2(2) = 1.75$, $p = .417$, $N = 513$ (see Table 9). Of the 513 cases with suspects having filed charges of at least one count, the total number per suspect ranged from 1 to 10 ($M = 1.79$, $SD = 1.31$), with 45% having one count, 33% having two

counts and 22% having three or more counts (Table 10). There was no statistically significant difference between the pre-protocol (M = 1.94, SD = 1.23, n = 198) and protocol (M = 1.97, SD = 1.31, n = 315) conditions with respect to the number of counts per suspect, $t(511) = .23$, $p = .82$, nor with respect to the proportion of cases having one, two, or three or more total counts, $\chi^2(2) = .07$, $p = .96$, n = 513 (see Table 10).

Felony charges. Among the 476 suspects with felony charges, the number of counts per suspect ranged from 1 to 10 (M = 1.92, SD = 1.25, n = 476), with 46.2% (220) of suspects charged with one felony count, 33.4% (159) charged with two felony counts, and 20.4% (97) charged with three or more felony counts. There was no significant difference between the pre-protocol (M = 1.91, SD = 1.19, n = 180) and protocol (M = 1.94, SD = 1.30, n = 296) conditions with respect to the number of felony counts per suspect, $t(474) = .26$, $p = .80$, nor with respect to the proportion of cases having one, two, or three or more felony counts, $\chi^2(2) = .01$, $p = .99$, n = 476.

Misdemeanor charges Among the 73 suspects charged with a misdemeanor, the number of misdemeanor counts ranged from 1 to 4 per suspect (M = 1.23, SD = .64, n = 73), with 84.9% (22) of suspects charged with 1 misdemeanor, 9.6% (7) charged with two misdemeanor counts, and 5.5% (4) charged with three or more misdemeanor counts. There was no significant difference between the pre-protocol (M = 1.35, SD = .76, n = 31) and protocol (M = 1.14, SD = .52, n = 42) conditions with respect to the number of misdemeanor counts per suspect, $t(71) = 1.42$, $p = .16$, nor with respect to the proportion of cases having one, two, or three or more misdemeanor counts, $\chi^2(2) = 2.71$, $p = .26$, n = 73.

Final Dispositions

Of the 513 cases in which the suspect had filed charges, 96.7% (496) reached disposition, 2.7% (14) cases remained active, and 0.6% (3) cases were missing information about the

disposition. The possible dispositions included guilty plea, plea reduced (e.g., charge changed from first degree felony to a second degree felony, or charge was changed from sodomy of a child to sexual abuse of a child), dismissed, found guilty at trial, and found not guilty at trial (Table 11). Fifty-six percent of cases (288) resulted in a single type of disposition (e.g., suspects pled guilty to all counts or had all counts dismissed), and 40% had multiple dispositions, a combination of either two (n = 194) or three (n = 5) different dispositions. Of the 513 suspects charged, the most common outcome was pled guilty as charged to at least one count and other counts dismissed (29%, n = 147), and the second most common outcome was pled guilty as charged to all counts (25%, n = 121). Of the 288 cases in which there was a single disposition for all counts, 42% (121) resulted in pled guilty as charged, 33.7% (97) resulted in pled guilty to a reduced plea, and 17.7% (51) resulted in all counts dismissed. Of the 203 cases in which there were multiple dispositions, 79% (161) resulted in pled guilty as charged to at least one count and the remaining counts were reduced or dismissed (Table 11; see also Appendix 6 for a more detailed description of disposition information)

The majority of cases in which charges were filed led to a guilty plea to one or more counts (80%). To determine if there were differences in disposition related to interview type, the possible combinations of disposition were sorted into one of eight categories: pled guilty as charged, plea reduced, all charges dismissed, trial-not guilty, trial-found guilty, still active, diverted, or no information (see Table 11). Chi-square analyses revealed a statistically significant association between trial-not guilty and interview type (results described in more detail below). There were no other statistically significant associations between interview type and other disposition categories (ps < .08 to .97).

Cases in which all counts were dismissed

Two kinds of cases were of particular interest and are considered separately, namely,

those in which all counts were dismissed, and those proceeding to trial. To address the first kind of case, we conducted analyses to determine the case characteristics that predicted all counts dismissed. Univariate Chi-square analysis revealed that victim age and victim/suspect familiarity were statistically significant predictors (see Table 12). Logistic regression analysis' odds ratios revealed that cases involving 2.8- to 4-year olds were 2 to 3 times more likely to have all charges dismissed compared to the older age groups, and familiar but not related suspects were more likely to have all charges dismissed than suspects who were non-immediate family members (see Table 13).

Cases proceeding to trial

For the cases that went to trial (n = 30), we also compared the relative frequency for pre-protocol and protocol cases, respectively, of Found Guilty outcomes. A 2 x 2 chi-square revealed that a Found Guilty outcome was significantly more likely for protocol than for pre-protocol cases (χ^2 (1) = 6.68, $p<.01$). Although the total number of cases that went to trial was small, only 1 of the 17 protocol cases did not result in a conviction of the suspect, in contrast to 6 of the 13 pre-protocol cases (Table 11). For a description of the characteristics of cases going to trial, see Appendix 7. Appendix 7 shows that relatively few cases involving the two youngest age groups went to trial. There was a higher percentage of cases involving 7-9 year old alleged victims going to trial from the protocol interview type (52.9% of protocol trial cases) compared to pre-protocol (30.8% of pre-protocol trial cases) and, conversely, proportionally fewer of the oldest children from the protocol condition (35.3%) than from the pre-protocol condition (46.2%). However, it must be remembered that in total only 30 cases proceeded to trial.

Delays across the flow of the case

The delays in days from date of case referral for investigation to date of interview, from date of interview to the filing of charges, from the filing of charges to final disposition, and

overall, from referral for investigation to final disposition were compared across the two interview types. Because the distribution for each time period was significantly positively skewed, we report the median and mean of the distribution.

Delay from date of referral for investigation to date of interview ranged from -11 to 1096 days (*M* = 13.15, *SD* = 50.09, Median = 6.0, *n* = 1244). Eight cases had negative delays meaning that the date of referral for interview occurred after the interview. Although suspects generally were referred then interviewed, the negative delays may be attributed to errors in the police record or to the referral paperwork being submitted after the police interview.

Delay from date of interview to date of suspect being arrested and/or charged ranged from -56 to 1406 days (*M* = 52.37, *SD* = 96.79, Median = 28, *n* = 556). Sixteen cases had negative delays which may be the result of an error in the police record, the suspect being arrested based on preliminary evidence and the victim formally interviewed later, or the alleged victim may have come forward after the suspect was arrested on charges stemming from another victim.

Delay from date of charges filed to disposition ranged from -3 to 1888 (*M* = 161.90, *SD* = 221.26, Median = 99, *n* = 487). Only one case had a negative value for this delay, and this was the result of an error on the police record for either the arrest date or the disposition date. For those cases that went to disposition, *the delay from date of referral to disposition* ranged from 4 to 1918 (*M* = 213.69, *SD* = 241.39, Median = 144, *n* = 469).

Because of the significant positive skew of the distribution, comparisons of delays between the interview types were conducted after log transformation of the data. Where necessary, a constant was added to the scores due to zero values. There were statistically significant differences between the interview types for delay from referral to interview with a longer delay for the Protocol condition than the Pre-protocol condition (Pre-protocol log

transformed $M = 1.28$, $SD = .20$; Protocol log transformed $M = 1.32$, $SD = .22$; $t(1242) = 3.30$, $p < .001$); and from interview to the filing of charges with a longer delay for the Pre-protocol condition than the Protocol condition (pre-protocol log transformed $M = 2.01$, $SD = .22$; Protocol log transformed $M = 1.95$, $SD = .21$; $t(554) = 3.38$, $p < .001$). There were no statistically significant differences between interview type for delays from the filing of charges to disposition or referral to disposition (see Table 14 for the non-transformed means and standard deviations).

Discussion

The primary objective of the present study was to determine whether the introduction of an evidence-based protocol for interviewing children, the NICHD investigative interview protocol, had an impact on the outcomes of cases of suspected child sexual abuse. We found significant effects of the introduction of the protocol at two crucial decision points in the flow of cases within the investigative process and the criminal justice system, namely, the filing of charges by the DA following the screening process, during the investigative process, and the final case disposition, through either a plea negotiation or a trial, at the end of the judicial process.

Specifically, following the introduction of the NICHD protocol, cases were more likely to result in charges being filed by the DA, arguably the most crucial decision in the flow of a case through the judicial process (Cross et al., 1995; 2003). Once charges were filed, final dispositions of cases based on pre-protocol and protocol interviews were both highly (and similarly) likely to be resolved in a guilty plea to one or more counts as charged or to a reduced plea as part of a plea agreement. Thus, because more cases were charged following the introduction of the interview protocol than prior to it, more cases in the protocol condition also led to a guilty plea. As in earlier studies of the outcomes of child sexual abuse cases (see Cross et

al., 2003, for review), a minority of cases in the present sample proceeded to trial. For the cases that proceeded to trial, the introduction of the interview protocol was associated with a significantly higher rate of conviction compared to pre-protocol cases. Each of these findings relating to the introduction of the NICHD interview protocol is discussed in more detail, below, following which we discuss other case characteristics that also affected case outcomes.

The increased proportion of cases in which the DA filed charges against the offender following the introduction of the NICHD protocol for interviewing suspected victims of abuse is the most important finding in the present study. In percentage terms, whereas prior to the introduction of the protocol, 45% of investigated cases resulted in the DA's filed charges against the suspect, following the introduction of the protocol over 54% of the investigated cases had filed charges. In statistical terms, the odds ratio indicates that protocol interviews were 52% more likely to result in a suspect being charged compared to pre-protocol interviews. Conversely, proportionally fewer cases in the protocol condition were dropped by the police investigators prior to the screening (i.e., evaluated as unfounded, or classified as having insufficient evidence, or as not cleared, thus not submitted to the DA for screening) and by the DA during the screening process and prior to the filing of charges (i.e., cases that were screened but the DA declined to file charges, classified as screened/declined, not filed, diverted for an alternative intervention, remained active, pending, or cases with missing information). As in previous studies (e.g., Cross et al., 1995, 2003; MacMurray, 1989), the initial screening point seemed to be a crucial decision-making stage for case prosecution. The largest group of cases that were not carried forward for prosecution were those that were declined by the DA during the screening process. Proportionally fewer cases were declined by the DA during the screening in the protocol (14.7%) than in the pre-protocol (22.5%) period. This resulted in a higher proportion of protocol cases carried forward to the justice system for prosecution than of pre-protocol cases.

We had predicted that the use of the NICHD protocol would have an effect on case outcomes because previous studies have established that protocol interviews elicit higher quality information than those conducted prior to training in the use of the protocol. Protocol interviews emphasize higher quality – mostly input-free - interviewing practices, and allow children to provide narrative accounts of what happened, whereas typically interviewers rely more on very specific, directive, or closed questions requiring only a few words in answer, or a yes/no response (e.g., Lamb, Sternberg, Orbach, Esplin et al., 2002; Lamb et al., 2003, 2006, 2007; Orbach et al., 2000; Sternberg, Lamb, Orbach et al., 2001). Although we cannot, of course, measure the impact of introducing the protocol on information accuracy, which is unknown in field interviews, NICHD interviews have been shown to significantly increase the amount of information children report about incidents of sexual abuse in their narrative accounts (i.e., in the child's own words) with little or no interviewer input (e.g., Hershkowitz, 2001, 2002; Lamb et al., 2003; Lamb et al, 2006; Orbach et al., 2000). Such accounts are likely to be more compelling and accurate than those heavily contaminated by interviewer input.

Moreover, forensic interviews conducted using the NICHD investigative interview protocol are also more effective in yielding investigative leads (i.e., reported information which suggests new directions in which to seek corroborative evidence) that facilitate the verification of forensic allegations than non-protocols interviews (Darvish, Hershkowitz, Lamb, & Orbach, 2008). Darvish et al reported that NICHD protocol interviews produced leads that were more central, stronger, and more verifiable than leads produced in non-protocol interviews, and that leads mostly arose during the free-recall narrative portion of the child's account. In another study, Hershkowitz and colleagues (Hershkowitz, Lamb, & Orbach, 2008) found that interviews conducted using the NICHD protocol facilitated credibility assessment of child witnesses, by eliciting statements which are richer in the CBCA criteria demonstrated to differentiate between

plausible and implausible event reports.

While the quality of the information elicited in protocol interviews is the most likely explanation of the increased number of cases going forward for prosecution, we cannot rule out the possibility that other procedural changes, perhaps associated with the introduction of the protocol, contributed to its effectiveness. Indeed, as noted above, the protocol itself might have increased the availability of corroborative evidence by producing stronger leads. Further, that fewer of the youngest age group, those younger than age 4 years, were included in protocol interviews than prior to the introduction of the protocol might reflect a changed awareness of the children most likely to be able to provide acceptable testimony as a result of interviewing using the protocol.

In addition to interview type, several other variables were significantly related to the filing of charges, and in two instances, modified the effects of the protocol. With respect to victim age**,** alleged victims between the ages of 2.8 and 4-years were the least likely to have criminal charges filed against the suspect and those that were charged resulted in a significantly higher proportion (almost double) of all charges dismissed than cases involving older children. Lower rates of filed charges for the youngest age groups studied have also been reported in previous studies (e.g., Cross et al., 1994, 1995; Stroud et al., 2000; Tjaden & Thoennes, 1992). Contrary to our predictions, however, the NICHD protocol did not have a disproportionate influence on the outcomes of cases involving the youngest children. For 5- to 6-year olds, there was no difference in the proportion of cases with filed charges for protocol and preprotocol interviews, respectively, and for the younger children the advantage of the protocol was lost at the point of disposition, with more cases dismissed than in the other age groups. Rather it was the 7- to 9-year-old children who showed the greatest benefit from the introduction of the protocol.

There are several reasons that the reduced rate of prosecution of cases involving the youngest children may not be surprising. Although young children can remember and provide coherent accounts of their experiences, even over long delays (Dent & Stephenson, 1979; Flin et al., 1992; Pipe, Gee, Wilson, & Egerton, 1999), they typically retrieve significantly less information than older children do and interviewers often need to provide additional prompts to elicit the information, compared to those given to older children. Previous studies based on investigative interviews have found that a surprisingly large proportion (more than half) of young (3- to 6-year-old) children suspected of having being abused do not allege abuse when interviewed, compared to older children, (Hershkowitz, Horowitz, & Lamb, 2007; Pipe et al., 2007). Hershkowitz et al. suggested that younger children are disproportionately likely to misunderstand the purpose and focus of the investigative interview or the abuse itself, thereby failing to report abuse experiences that they remember and would be willing to discuss if they recognized the investigators' interest.

Younger children may also be more reluctant to disclose and talk about abuse because of motivational factors. Pipe et al. (2007), for example, found that young children were particularly unlikely to disclose suspected abuse when the suspect was an immediate family member, consistent with research showing that children in younger age groups may be particularly vulnerable to requests to keep secrets (see Pipe & Goodman, 1991, for review). Moreover, several researchers suggested that young victims may not understand that they have been abused and may have failed to encode or remember experiences that did not appear salient to them (e.g., Cedeborg, Lamb, & Laurell, 2007; DeVoe and Faller, 1999; Hershkowitz, Orbach et al., 2007). Thus, it is reasonable to speculate that both cognitive and motivational factors might have affected the quality of the information children provided in their interviews, even when interviewed under the optimal conditions of the NICHD interview protocol, and thus affected the

case outcomes. Less complete accounts of the younger children in the present study may have meant they did not provide sufficient evidence to meet the standard required by the DA for the case to stand trial, and hence for the filing of charges. To the extent that these findings mean these children remain vulnerable and in potentially risky situations, they point to the need for investigative processes, including interviews, that address the needs of some of the most vulnerable child victims.

In the present study, cases involving an immediate family suspect were less likely to have charges filed than those involving other family members or familiar but unrelated suspects, confirming a widely reported finding (Brewer et al., 1997; Chapman & Smith, 1987; Cross et al., 1994; Menard & Ruback, 2003; Stroud et al., 2000; Tjaden & Thoennes,1992). Further, once charges were filed, cases involving immediate family members were significantly more likely to have all counts dismissed compared to other family members or familiar suspects. The effects of suspect-victim familiarity, interacted with both age of suspect and interview type. In particular, protocol interviews led to more charges filed when the suspect was an *adult* immediate family member, but not when the suspect was a *juvenile* immediate family member, and when the suspect was *juvenile* non-immediate family, but not when the suspect was *adult* non-immediate family.

As noted above, children may be motivated to withhold information or deny that they were abused because they wish to protect familiar suspects, especially those in caregiver roles with attendant authority over the child, and/or when they have been exposed to external pressures to remain silent (Hershkowitz et al., 2007; Paine & Hansen, 2002; Pipe et al., 2007; Yuille, Tymofievich, & Marxsen, 1995). Hershkowitz, Orbach, and colleagues (2007), for example, found that children who were suspected victims of parental abuse provided proportionally fewer informative responses and more uninformative responses (e.g., omission,

'don't know,' 'don't want to talk,' 'don't remember') than children who were suspected victims of non-parental suspects. They also provided fewer details per response than did counterparts believed to have been abused by individuals other than their parents. Similarly, Hershkowitz, Horowitz, & Lamb (2007) reported that almost half of the children whose parents were divorced failed to disclose sexual abuse when this was suspected and that very young children more readily made allegations against familiar non-family members and were less likely to make allegations against parents and step-parents.

The possibility that some child victims remain vulnerable because they are reluctant to discuss the abuse and/or lack the linguistic cognitive abilities to provide detailed accounts of abuse that might lead to protective action being taken is of concern. Approaches to the investigation of abuse in these cases, and the development of interviewing techniques sensitive to the needs of these children are clearly needed (see Hershkowitz, Orbach et al., 2007, for further discussion.).

Juvenile suspects were significantly more likely to be charged (63% of the 347 juvenile cases had filed charges cases) than were adult suspects, a finding consistent with those of Tjaden & Thoennes, 1992 (although only 3% of the suspect were juvenile in that study). Compared to adult suspects, juvenile suspect cases were less likely to involve the oldest (10-13 year old) victims, were more likely to involve male victims, and were also more likely to include abuse involving penetration, the most severe cases of abuse. Information relating to, for example, whether juveniles were more likely than adults to confess, would be informative as would a detailed examination of other sources of evidence, including interviews with the children.

Juvenile suspects were also more likely to be charged following protocol interviews than following pre-protocol interviews, although only when they were not part of the immediate family of the victim. This is in contrast to the findings for adult suspects, which showed

increased rate of charges following protocol interviews involving an immediate family member. A different pattern of findings for juvenile and adult suspects itself may not be unexpected given in one case the relationship is one of authority and caregiver, and the other, a sibling relationship. However, why the protocol should be particularly useful with juvenile suspects when they were other than a sibling, is not at all clear.

Interestingly, protocol interviews that went to trial were also more likely to involve juvenile suspects (50%, 8 cases) than was the case for pre-protocol interviews (18%, 2 cases), although given the small numbers of cases the difference cannot be considered reliable without further data. The fact that juvenile suspects are tried by judges in Juvenile Courts, whereas adult suspects are tried by juries in District or Criminal Courts, may affect the DA's decision to file charges in cases involving juvenile perpetrators, although why this should be the case following protocol interviews in particular is not clear.

Two other variables were associated with the filing of charges, namely abuse type and gender of suspect. Cases involving the most severe abuse type (penetration in the present study) were more likely to have filed charges, as found in previous studies (Brewer et al., 1997; Chapman & Smith, 1987; Cross et al., 1994, 1995; Sedlak et al., 2005; Stroud et al., 2000; Tjaden & Thoennes, 1992). Once charges were filed, however, there was no difference in dispositional outcomes, nor in the likelihood that a case would proceed to trial. The likelihood of cases involving a male suspect being charged was considerably higher than for cases involving a female suspect, although cases involving female suspects were, relatively rare (6.4%). With respect to gender of the alleged victim, in the present study this had no effect on case outcomes. This is in contrast to previous studies reporting a higher likelihood for cases involving female victims to have filed charges (e.g., Cross et al., 1994, 1995; Stroud et al., 2000; Tjaden & Thoennes, 1992). Unfortunately, problems associated with the retrospective data collection of the

pre-protocol cases resulted in a less complete data base for the pre-protocol than the protocol period on several of the variables (e.g., suspects' gender and abuse type) as discussed below.

As in previous studies (e.g., Cross et al., 1995; Stroud et al., 2000), only a small percentage of cases went to trial rather than being disposed through plea negotiation; indeed, in the present study, the percentages of cases going to trial, based on filed charged cases, were 6.6% and 5.4% for pre-protocol and protocol, respectively, and at the low end of rates reported in Cross et al's (2003) meta analysis. Plea agreements, often to reduced counts from those charged, circumvent the greater uncertainty of a trial and may appeal to both prosecution and defense alike. The advantage for the child victim is, of course, that he or she does not have to appear in court and be cross-examined, potentially distressing experiences, and that disposition is likely to be reached more quickly following a plea agreement than as the result of a trial.

Comparing the distribution of case characteristics of those cases that proceeded to trial and the total sample in which charges were filed revealed that cases proceeding to trial tended to involve a higher proportion of the two older age groups of alleged victims, a higher proportion of adult than juvenile suspects, more cases involving an allegation of touch, and fewer cases involving allegations of penetration. Acknowledging that cases going to trial constitute a minority of all cases, the high rate of convictions at trial, following the introduction of the protocol interviews, is nonetheless striking. Only 1 of the 17 protocol cases (6%) decided at trial did not result in a conviction of the suspect, in contrast to 6 of the 13 pre-protocol cases (46%).

Previous studies have typically found conviction rates for trial cases between 50% and 75% (see Cross et al., 1995). Although cases going to trial are relatively rare, as Cross et al. (2003) point out, they are important because of both their potential impact on the child (or children) who must testify (see, for example, Goodman, Batterman-Faunce, & Kenney, 1992), and on future decisions by prosecutors and defendants (and their attorneys), potentially

influencing the much larger category of plea negotiations.

While statistically significant, and very encouraging, because of the small number of cases involved, we would like to see this finding regarding trial outcomes replicated, for example, by examining more recent cases in which interviews were conducted by interviewers trained on the NICHD protocol. It would also be possible to compare outcomes of trial cases in which interviewers from the same jurisdictions did not use the NICHD approach, to further validate and confirm the effect of the protocol on this important outcome.

We had expected that the introduction of the NICHD interview protocol might lead to speedier processing of cases. Overall, however, this was not the case. The delay from the date of referral to the date of the forensic interview was longer for protocol than pre-protocol interviews, but the delay from the interview to the filing of charges was shorter for protocol than pre-protocol cases. There were no other significant differences between the interview types for delays between other significant decision making points in the prosecution process, from the filing of charges to disposition, as well as overall, from the initial referral for investigation to court disposition. While the shorter delay between interview and charges being filed for protocol interviews would be consistent with better quality of information provided during interviews facilitating both the investigator's understanding of the target incident and the assessment of the interviewee's credibility, why protocol interviews should have been delayed following referral is not clear. Unfortunately, information relating to the timing of crucial points in the case flow was not always recorded or recorded accurately.

Limitations of the present study

One of the strengths of the current study was that the same detectives conducted the pre-protocol interviews and the protocol interviews. Differences due to interviewer, rather than the protocol, are therefore accounted for in the within-subjects design. The potential disadvantage of

this design is, of course, that the outcome data are necessarily collected in different (albeit adjacent) time periods, pre and post training on the NICHD interview protocol. A between-subjects design in which the same detectives were randomly assigned to conduct either protocol or pre-protocol interviews, while desirable in terms of design, was not feasible, given that it is impossible for the same interviewer to be both trained and untrained at the same time! Random assignment of different detectives to continuing existing practices and for training might have been a possibility, had this not been a retrospective study. However, in view of what is known about the advantages of trained interviewers following the NICHD protocol, we believe that such a study would not now be in the best interests of children suspected of having been abused.

With respect to possible threats to validity arising from the design, we confirmed that the supervisor of the Sex Crimes Unit detectives who conducted the interviews began as supervisor of the unit in 1994 and has remained in that position. He, together with our on-site research collaborator from the Children's Justice Center, also confirmed that, from 1994 to 2000, the "historical characteristics" of the court and the system in general remained the same. Specifically, the detectives, prosecutors and judges who handled these cases at the time were the same group of professionals, and there were no changes in leadership or policy during the study period. Expert witnesses were not used during this time period, in regard to the child interviews.

Nonetheless, despite continuity of personnel and formal policy over the period of data collection, there may have been a general "drift" or variation in the interpretation and implementation of policy and practice that might have influenced outcomes, as well as an accumulated interviewing experience by the participating interviewers during the protocol period, compared with their prior experience when conducting the pre-protocol interviews. It is also likely that trained interviewers, who continue to be exposed to peer review and feedback, become more aware of their interviewing practices and continue to be more cautious, guarding

against contaminating children's evidence throughout the entire investigative process than their untrained counterparts. Comparison of case outcomes on a year-by-year basis prior to (i.e., 1994 to mid 1997) and during (mid 1997 to 2000) the protocol interview period failed to reveal any systematic trend attributable to time-related variables other than the introduction of the protocol interview. There was year by year variability, as might be expected particularly in years with very small numbers of cases, and this was the case for both pre-protocol and protocol interview years, but no evidence of a general shift over time.

A second limitation due to the retrospective nature of the study is that for pre-protocol cases, in particular, there were some missing data with respect to case (victim and suspect) characteristics and delays. That pre-protocol cases were more likely to have missing data is due to the fact that once the protocol was introduced, case characteristics were often tabulated as part of the on-going research. Thus while differences in the extent of the missing information might reflect, in part, different administrative practices, a more significant factor was the collection of much of the relevant data by the researchers, as part of the evaluation of the NICHD protocol as reported in previous studies.

It is also the case that our study focused on one county in the state of Utah. Utah has unique demographic characteristics, with a relatively high proportion of Caucasions and people belonging to the Mormon faith. Salt Lake County is perhaps not as homogeneous in these demographic characteristics as are other parts of the state, but approximately 55% of the population identified as Mormon. Previous studies have found regional differences in prosecution rates, with higher rates in rural and urban areas (e.g., Menark & Ruback, 2003), and differences across ethnic groups, with higher rates of prosecution for ethnic minority suspects (e.g., Stroud et al., 2000; Tjaden & Thoennes, 1992). It is also possible that the number of reported cases does not represent the full range of sexual abuse incidence in this community. The

inclination of the Mormon community to resolve social issues, including criminal offenses, internally by the Bishop, for example, may be an influence on the handling and investigation of child sexual abuse incidents, as, anecdotally, we noted was hinted at in several forensic interviews with child witnesses. Having acknowledged these differences, there is no obvious reason for suspecting our findings should be limited to the demographics of the group under study. The NICHD interview protocol has now been shown to be effective as an investigative protocol in studies conducted in several different countries, with a wide range of suspected victims (see Lamb et al., 2008, for review). Further studies are necessary to establish whether the changed interview practices similarly translate into differences in outcomes in the context of other investigative and judicial systems.

Investigations of child sexual abuse do not readily lend themselves to tightly-controlled experimental studies. Gathering information that has been recorded as part of an investigation for very different purposes than those of a research study, such as in the current study, is time consuming and not without frustrations. Nonetheless, in the present study, we were able to follow up the case flow of a very large number of cases, adding to earlier studies involving similarly large sample size of sexual abuse cases and following through on case outcomes of this kind (e.g., Cheit & Goldschmidt, 1997; Cross et al., 2007; Davis & Wells, 1996 and Stroud et al., 2000). Replication of the current study in different jurisdictions, particularly in a prospective design involving multiple baselines, would be both an ethical and effective means of overcoming the limitations noted here.

Conclusions

The effects of the introduction of the NICHD structured protocol on case outcomes reported here provides the strongest possible endorsement of this structured approach to interviewing within the justice system and has implications for policy and practice regarding

child victims in the justice system and especially concerning with the way in which forensic interviews with suspected child abuse victims are conducted throughout the US, as well as internationally. The present study contributes to the development of sound evidence-based approaches to obtaining evidence and testimony from child victims.

The quality of forensic interviewing practices is of utmost importance if child victims are to be protected, at the same time as the rights of innocent suspects are to be upheld (Wakefield & Underwager, 1988). In cases of suspected child abuse, very frequently the only evidence of the crime is the child's verbal allegation. In cases involving children, the verbal interview with the child is the equivalent of the 'DNA' of the case. Our research group has been developing and evaluating an evidence-based protocol for forensic interviews for the past fifteen years. This study provides an evaluation of this approach in terms of the outcomes of cases of suspected abuse by law enforcement and within the justice system. Evidence of more cases with charges filed against suspects and proceeding to the criminal justice system through either a plea negotiation or a trial provides strong endorsement indeed of a best-practice approach to interviewing.

As Cross et al. (1995) concluded, given the relative infrequency of cases going to trial "… it seems more productive to focus improvement efforts on the pretrial phase of prosecution. For example, enhancing the quality of investigations may have a substantially larger impact on prosecution than rulings that affect the admissibility of evidence, even if we take into account the "ripple" effect that new precedents have on the whole system." (Cross et al., 1995, p. 1439). The critical component of the investigation when child sexual abuse is suspected is the investigative interview conducted with the child. The findings reported here show that when interviews are conducted following recommended best practices of the NICHD approach, there is a significant effect on case outcomes.

While the findings reported here provide very strong support for the use of the NICHD investigative interview protocol, and complement the large number of studies that have evaluated its use in the field for investigative purposes (Lamb et al., 2008; Pipe et el., 2007; Orbach et al., 2000; Orbach & Lamb, 2007), we conclude with some cautionary comments. First, there is a need for further research related to several findings, including the very striking effect of the protocol interview on trial outcomes. There is also clearly a need for further development of approaches to interviewing reluctant and as well as the youngest victims, those who were not *differentially* helped by the introduction of the protocol in the present study, as we had hoped they might be. Findings relating to the higher rate of juvenile suspects being charged also require further examination and explanation.

Finally, until such time as other approaches to investigative interviewing are evaluated and the training on those other approaches is demonstrated to translate into practice, the findings reported here for the NICHD interview protocol cannot be generalized to other approaches. As many studies have shown, there is often a gap between theory and practice in investigative interviewing, and whether the findings we report can be generalized needs to be established, not assumed. Disappointing findings revealing training effects on trainees' knowledge but no demonstrable impact on the quality of their behavior when conducting interviews have often been reported when specialized training has been evaluated (See Lamb et al., 2008, Ch 10, for review).

We have argued elsewhere and reiterate here, that approaches to interviewing and the effectiveness of the training behind them need to be evaluated. In 2008, more than 10 years after the widespread acknowledgement of the importance of getting the interview with the suspected child victim right, it remains the case that only one protocol has undergone detailed examination of how the theory is translated into practice, with demonstrated effects on the quality of

information that children provide when interviewed in forensic context. This situation is unacceptable, given the widespread use of other approaches to interviewing. Our argument is not that these other approaches are necessarily or inherently problematic; they, like the approach we have examined, are based on perceived best-practice principles, although there are notable differences across the different approaches, including the use of non-verbal techniques which are not a part of the NICHD protocol. Our argument is, however, that they have not been evaluated, and as a result, practices for interviewing suspected child victims that are not evidence-based are currently being endorsed. This is clearly not solely the responsibility of professionals in the field. Rather it requires collaboration between those professionals, researchers, and of course funding agencies. The findings of the present study indicate that demonstrably improving the quality of children's evidence by improving the quality of investigative interviews increases the probability that cases of alleged sexual abuse will be prosecuted. The implications are clear.

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Table 1. Sample Characteristics by Interview Condition

	Pre-Protocol		Protocol		Total	
Variable	n	Valid %	n	Valid %	n	Valid %
Type of abuse						
Exposure	25	5.0	41	5.7	66	5.4
Touch	299	59.7	426	59.0	725	59.3
Penetration	177	35.3	255	35.3	432	35.3
Valid total	501	100.0	722	100.0	1223	100.0
Missing	50		7		57	
Total	551		729		1280	
Victim's age (years)						
2.8 to 4	119	21.6	102	14.0	221	17.3
5 to 6	99	18.0	173	23.7	272	21.3
7 to 9	148	26.9	192	26.3	340	26.6
10 to 13	185	33.6	262	35.9	447	34.9
Total	551	100.0	729	100.0	1280	100.0
Victim's gender						
Male	147	26.7	214	29.4	361	28.2
Female	404	73.3	515	70.6	919	71.8
Total	551	100.0	729	100.0	1280	100.0
Victim's race						
Caucasian	432	83.2	610	85.7	1042	84.6
Hispanic	49	9.4	72	10.1	121	9.8
Other Race	38	7.3	30	4.2	68	5.5
Valid total	519	100.0	712	100.0	1231	100.0
Missing	32		17		49	
Total	551		729		1280	
Suspect's gender						
Male	414	94.1	641	93.3	1055	93.6
Female	26	5.9	46	6.7	72	6.4
Valid total	440	100.0	687	100.0	1127	100.0
Missing	111		42		153	
Total	551		729		1280	
Suspect's age						
Juvenile	189	39.5	280	40.6	469	40.2
Adult	289	60.5	409	59.4	698	59.8
Valid total	478	100.0	689	100.0	1167	100.0
Missing	73		40		113	
Total	551		729		1280	
Victim/suspect familiarity						
Immediate family	194	35.8	254	36.2	448	36.0
Other family	105	19.4	137	19.5	242	19.5
Familiar, not related	222	41.0	295	42.0	517	41.6
Unfamiliar	21	3.9	16	2.3	37	3.0
Valid total	542	100.0	702	100.0	1244	100.0
Missing	9		27		36	
Total	551		729		1280	

Table 2. Outcome by Interview Condition

	Pre-protocol		Protocol		Total	
Case outcome (variable)	n	%	n	%	n	%
Unfounded	58	10.5	61	8.4	119	9.3
Not cleared	34	6.2	23	3.2	57	4.5
Screened declined	124	22.5	107	14.7	231	18.0
Insufficient evidence	49	8.9	62	8.5	111	8.7
Exceptionally cleared	46	8.3	57	7.8	103	8.0
Referred	18	3.3	66	9.1	84	6.6
Arrest/ charges filed	198	35.9	315	43.2	513	40.1
Arrest charges not filed	19	3.4	32	4.4	51	4.0
Pending	3	.5	3	.4	6	.5
Inactive	2	.4	3	.4	5	.4
Total	551	100.0	729	100.0	1280	100.0

Table 3. Characteristics of Cases with Filed Charges (Total *N* = 513)

	Pre-protocol		Protocol		Total	
Variable	n	Valid %	n	Valid %	n	Valid %
Type of abuse						
Exposure	7	3.5	13	4.1	20	3.9
Touch	100	50.5	169	53.8	269	52.5
Penetration	91	46.0	132	42.0	223	43.6
Valid total	198	100.0	314	100.0	512	100.0
Missing	0		1		1	
Total	198		315		513	
Victim's age (years)						
2.8 to 4	28	14.1	35	11.1	63	12.3
5 to 6	42	21.2	65	20.6	107	20.9
7 to 9	56	28.3	106	33.7	162	31.6
10 to 13	72	36.4	109	34.6	181	35.3
Total	198	100.0	315	100.0	513	100.0
Victim's gender						
Male	53	26.8	85	27.0	138	26.9
Female	145	73.2	230	73.0	375	73.1
Total	198	100.0	315	100.0	513	100.0
Victim's race						
Caucasian	153	82.7	273	88.9	426	86.6
Hispanic	18	9.7	24	7.8	42	8.5
Other race	14	7.6	10	3.3	24	4.9
Valid total	185	100.0	307	100.0	492	100.0
Missing	13		8		21	
Total	198		315		513	
Suspect's gender						
Male	155	98.7	296	98.0	451	98.3
Female	2	1.3	6	2.0	8	1.7
Valid total	157	100.0	302	100.0	459	100.0
Missing	41		13		54	
Total	198		315		513	
Suspect's age						
Juvenile	87	49.2	152	48.9	239	49.0
Adult	90	50.8	159	51.1	249	51.0
Valid total	177	100.0	311	100.0	488	100.0
Missing	21		4		25	
Total	198		315		513	
Victim/suspect familiarity						
Immediate family	59	29.9	111	35.7	170	33.5
Other family	45	22.8	58	18.6	103	20.3
Familiar, not related	88	44.7	139	44.7	227	44.7
Unfamiliar	5	2.5	3	1.0	8	1.6
Valid total	197	100.0	311	100.0	508	100.0
Missing	1		4		5	
Total	198		315		513	

Table 4. Percent of Cases with Filed Charge(s), and Univariate Analyses for Each Predictor Variable

Variable	*n*	% of filed charges	[1]χ^2	*df*	R^2
Interview condition					
Pre-protocol	487	40.7	13.95***	1	.017
Protocol	606	52.0			
Total	1093	46.9			
Abuse type					
Exposure	55	36.4	26.78***	2	.034
Touch	612	44.0			
Penetration	374	59.6			
Total	1041	49.2			
Victim's age (years)					
2.8 to 4	198	31.8	24.82***	3	.030
5 to 6	223	48.0			
7 to 9	302	53.6			
10 to 13	370	48.9			
Total	1093	46.9			
Victim's gender					
Male	293	47.1	.004	1	.000
Female	800	46.9			
Total	1093	46.9			
Victim race					
Caucasian	880	48.4	4.78	2	.006
Hispanic	108	38.9			
Other	60	40.0			
Total	1048	46.9			
Suspect's gender					
Male	898	50.2	36.45***	1	.050
Female	62	12.9			
Total	960	47.8			
Suspect's age					
Juvenile	393	60.8	37.07***	1	.049
Adult	605	41.2			
Total	998	48.9			
Victim/suspect familiarity					
Immediate family	400	42.5	18.39***	3	.023
Other family	194	53.1			
Familiar not related	436	52.1			
Unfamiliar	34	23.5			
Total	1064	47.7			

[1]Likelihood Ratio Chi-square from univariate analyses predicting Filed Charges. Nagelkerke R^2 gives the proportion of null model deviance accounted for by predictor (maximum deviance is 1.0).

***$p < .001$

Table 5. Percent of Cases With Filed Charge(s) for the Multivariate Logistic Regression Sample (*N* = 886)

Variable	*n*	% with filed charges	[1]χ^2	*df*
Interview condition				
Pre-Protocol	333	45.0	7.62**	1
Protocol	553	54.4		
Total	886	50.9		
Abuse type				
Exposure	46	34.8	19.64***	2
Touch	515	45.6		
Penetration	325	61.5		
Total	886	50.9		
Victim's age (years)				
2.8 to 4	159	36.5	19.14***	3
5 to 6	179	49.2		
7 to 9	245	59.6		
10 to 13	303	52.5		
Total	886	50.9		
Suspect's gender				
Male	826	53.6	44.10***	1
Female	60	13.3		
Total	886	50.9		
Suspect's age				
Juvenile	347	63.1	30.13***	1
Adult	539	43.0		
Total	886	50.9		
Victim/suspect familiarity				
Immediate family	361	45.7	11.77***	3
Other family	165	53.9		
Familiar not related	347	56.2		
Unfamiliar	13	15.4		
Total	886	50.9		

[1]Likelihood Ratio Chi-square for predicting Filed Charges while controlling for the other predictor variables in the multivariate model (designated predictor entered the equation last).

**$p < .01$; ***$p < .001$

Table 6. Results of Multivariate Logistic Regression Predicting Filed Charges (*N* = 886)

Predictor	B	*SE*	Wald χ^2	*df*	*p*	Odds ratio	95% CI for odds ratio Lower	Upper	% Change
Protocol	.42	.15	7.58	1	<.01	1.52	1.13	2.04	+52%
Victim's age (years)									
5 to 6	.49	.24	4.19	1	<.05	1.64	1.02	2.63	+64%
7 to 9	.93	.22	17.04	1	<.001	2.53	1.63	3.93	+153%
10 to 13	.74	.22	11.43	1	<.001	2.09	1.36	3.21	+109%
Abuse type									
Exposure	-1.23	.35	12.42	1	<.001	.29	.15	.58	-71%
Touch	-.54	.16	11.94	1	<.001	.58	.43	.79	-.42%
V/S familiarity									
Family-other	.38	.20	3.46	1	<.07	1.46	.98	2.17	+46%
Familiar not related	.34	.16	4.17	1	<.05	1.40	1.01	1.93	+40%
Unfamiliar	-1.50	.79	3.59	1	<.06	.22	.05	1.05	-78%
Suspect--male	2.23	.40	30.78	1	<.001	9.30	4.23	20.44	+830%
Suspect--juvenile	.85	.16	29.26	1	<.001	2.33	1.72	3.17	+133%
Constant	-3.08	.47	42.67	1	<.001	.05			

Results represent the unique effects of each predictor variable after controlling for the other predictor variables in the table. % Change = % increase or decrease in odds relative to the comparison group. The comparison groups were Type of Interview: Pre-protocol; Victim Age: 2.8- to 4-year olds; Abuse Type: Penetration; Victim/Suspect Familiarity: Immediate Family; Suspect Gender: Female; Suspect Age: Adult.

Table 7. Percentage of Cases with Filed Charges and Univariate Chi-square Results for Interview Condition X Victim Age (N = 1093)

Victim's age (years)	Interview condition	*n*	% with filed charges	[1]χ^2	*df*
2.8 - 4	Pre-protocol	108	25.9	3.80[†]	1
	Protocol	90	38.9		
	Total	198			
5 - 6	Pre-protocol	83	50.6	.36	1
	Protocol	140	46.4		
	Total	223			
7 - 9	Pre-protocol	135	41.5		
	Protocol	167	63.5	14.61***	1
	Total	302			
10 - 13	Pre-protocol	161	44.7	2.01	1
	Protocol	209	52.2		
	Total	370			

[1]Likelihood Ratio Chi-square
[†]$p < .06$; ***$p < .001$

Table 8. Percentage of Cases with Filed Charges and Univariate Chi-square Results for Interview Condition X Suspect Age X Victim/Suspect Familiarity (N = 994)

Victim/suspect familiarity	Suspect age	Interview condition	*n*	% with filed charges	[1]χ^2	*df*
Immediate family	Juvenile	Pre-protocol	48	62.5	.001	1
		Protocol	74	62.2		
		Total	122			
	Adult	Pre-protocol	121	21.5	15.51***	1
		Protocol	145	44.1		
		Total	266			
Other	Juvenile	Pre-protocol	111	51.4	6.54**	1
		Protocol	157	66.9		
		Total	268			
	Adult	Pre-protocol	144	44.4	.68	1
		Protocol	194	49.0		
		Total	338			

[1]Likelihood Ratio Chi-square
$^{**}p < .02$; $^{***}p < .001$

Table 9. Proportion of Suspects Charged with Felony and Misdemeanor Counts

	Pre-protocol		Protocol		Total	
Type of charges	n	%	n	%	n	%
Felony only	167	84.3	273	86.7	440	85.8
Felony and misdemeanor	13	6.6	23	7.3	36	7.0
Misdemeanor only	18	9.1	19	6.0	37	7.2
Total	198	100.0	315	100.0	513	100.0

Table 10. Frequency (Number of Cases) of Total Number of Counts per Case

	Pre-protocol		Protocol		Total	
Total # counts per case	*n*	%	*n*	%	*N*	%
1	88	44.4	142	45.1	230	44.8
2	67	33.8	103	32.7	170	33.1
3	25	12.6	41	13.0	66	12.9
4	10	5.1	11	3.5	21	4.1
5	5	2.5	12	3.8	17	3.3
6-10	3	1.5	6	1.9	9	1.8
Total	198	100.00	315	100.00	513	100.00

Table 11. Disposition by Interview Condition

	Pre-protocol		Protocol		Total		
Disposition	*n*	%	*n*	%	*N*	%	$\chi^2(1)$
Still active/No information	10	5.05	7	2.22	17	3.31	3.04
All charges dismissed	15	7.58	36	11.43	51	9.94	2.02
Trial	13	6.57	17	5.40	30	5.85	.30
Not guilty	6	3.03	1	.32	7	1.36	6.65**
Guilty	7	3.54	16	5.08	23	4.48	.67
Plea agreement	160	80.81	255	80.95	415	80.90	.00
Pled guilty	105	53.03	177	56.19	282	54.97	.49
Plea reduced	52	26.26	76	24.13	128	24.95	.30
Diverted	3	1.52	2	.63	5	.97	.97
Total	198	100.00	315	100.00	513	100.00	

Chi-square tests compared Pre-protocol to protocol for each disposition.
**$p < .02$ using Fisher's Exact Test.

Table 12. All Counts Dismissed (% of Charged Cases) and Univariate χ^2 Analyses

Variable	*n*	% with all counts dismissed	[1]χ^2	*df*	*p*
Interview condition					
Pre-protocol	198	7.6	2.08	1	.149
Protocol	315	11.4			
Total	513	9.9			
Abuse type					
Exposure	20	10.0	.95	2	.621
Touch	269	11.2			
Penetration	223	8.5			
Total	512	10.0			
Victim's age (years)					
2.8 to 4	63	20.6	8.88*	3	.031
5 to 6	107	7.5			
7 to 9	162	10.5			
10 to 13	181	7.2			
Total	513	9.9			
Victim's gender					
Male	138	11.6	.56	1	.454
Female	375	9.3			
Total	513	9.9			
Victim's race					
Caucasian	426	9.2	1.48	2	.476
Hispanic	42	11.9			
Other	24	16.7			
Total	492	9.8			
Suspect's gender					
Male	451	10.4	.03	1	.853
Female	8	12.5			
Total	459	10.5			
Suspect's age					
Juvenile	239	11.7	.80	1	.371
Adult	249	9.2			
Total	488	10.5			
Victim/suspect familiarity					
Immediate family	170	9.4	12.56**	3	.006
Other family	103	2.9			
Familiar not related	227	13.7			
Unfamiliar	8	0.0			
Total	508	9.8			

[1]Likelihood Ratio Chi-square for predicting Arrest Charged with only the predictor in the equation. Non-statistically significant Chi-squares *p*s < .15 to .85.
*$p < .05$, **$p < .01$

Table 13. Logistic Regression Predicting All Charges Dismissed from Victim Age and Suspect Familiarity with Victim

Predictor	B	*SE*	Wald χ^2	*p*	Odds Ratio	95% CI for Odds Ratio Lower	Upper	% Change
Victim's age (years)								
5 to 6	-1.19	.49	5.96	.015	.30	.12	.79	-70%
7 to 9	-.79	.41	3.72	.054	.45	.20	1.01	-55%
10 to 13	-1.41	.44	10.27	.001	.24	.10	.58	-76%
Suspect familiarity								
Immediate family	-.38	.33	1.33	.250	.68	.36	1.31	-32%
Other family	-1.71	.62	7.59	.006	.18	.05	.61	-39%
Constant	-.95	.34	7.81	.005	.39			

Table 14. Time Delays (Days) by Interview Condition

	Pre-Protocol			Protocol		
Type of Delay	n	Mean	Standard deviation	n	Mean	Standard deviation
Referral to interview	535	12.12	52.28	709	13.92	48.40
Interview to arrest/charged	239	61.36	73.54	317	45.59	110.79
Charges filed to Disposition	182	197.81	234.59	307	203.15	229.44
Referral to disposition	177	208.07	241.82	292	217.10	241.48

APPENDIX 1

Characteristics of Cases with Missing Outcomes

	Pre-protocol		Protocol		Total	
Variable	n	%	n	%	n	%
Type of abuse						
Exposure	4	7.8	2	10.5	6	8.6
Touch	30	58.8	13	68.4	43	61.4
Penetration	17	33.3	4	21.1	21	30.0
Total	51	100.0	19	100.0	70	100.0
Victim's age (years)						
2.8 to 4	15	28.3	4	21.1	19	26.4
5 to 6	14	26.4	2	10.5	16	22.2
7 to 9	12	22.6	4	21.1	16	22.2
10 to 13	12	22.6	9	47.4	21	29.2
Total	53	100.0	19	100.0	72	100.0
Victim's gender						
Male	18	34.0	7	36.8	25	34.7
Female	35	66.0	12	63.2	47	65.3
Total	53	100.0	19	100.0	72	100.0
Victim's race						
Caucasian	42	91.3	16	88.9	58	90.6
Hispanic	2	4.3	2	11.1	4	6.3
Other race	2	4.3	0	0.0	2	3.1
Total	46	100.0	18	100.0	64	100.0
Suspect's gender						
Male	37	92.5	17	94.4	54	93.1
Female	3	7.5	1	5.6	4	6.9
Total	40	100.0	18	100.0	58	100.0
Suspect's age						
Juvenile	20	46.5	9	50.5	29	47.5
Adult	23	53.5	9	50.0	32	52.5
Total	43	100.0	18	100.0	61	100.0
Victim/suspect familiarity						
Immediate family	15	29.4	4	21.1	19	27.1
Other family	11	21.6	5	26.3	16	22.9
Familiar, not related	24	47.1	8	42.1	32	45.7
Unfamiliar	1	2.0	2	10.5	3	4.3
Total	51	100.0	19	100.0	70	100.0

APPENDIX 2

Outcomes broken down by Year

	Pre-protocol								Protocol							
Outcomes	1994		1995		1996		1997		1997		1998		1999		2000	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Unfounded	1	20.0			41	9.8	14	13.9	7	9.5	37	10.2	10	4.9	7	8.0
Not cleared			2	7.7	32	7.6	2	2.0	2	2.7	11	3.0	7	3.4	3	3.4
Screened declined			9	34.6	82	19.6	33	32.7	6	8.1	57	15.7	25	12.3	19	21.6
Insufficient evidence	2	40.0	2	7.7	39	9.3	6	5.9	10	13.5	26	7.1	13	6.4	13	14.8
Exceptionally cleared			2	7.7	39	9.3	5	5.0	3	4.1	24	6.6	23	11.3	7	8.0
Referred			1	3.8	16	3.8	1	1.0	8	10.8	49	13.5	6	3.0	3	3.4
Arrest/Charges filed	2	40.0	10	38.5	146	34.8	40	39.6	35	47.3	141	38.7	108	53.2	31	35.2
Pending					3	.7			1	1.4	2	.5				
Inactive					2	.5			2	2.7	3	.8				
Arrest/Charges not filed					19	4.5						3.8		5.4		5.7
Total	5	100.0	26	100.0	419	100.0	101	100.0	74	100.0	364	100.0	203	100.0	88	100.0

APPENDIX 3

Characteristics of Cases Exceptionally Cleared or Referred to Another Jurisdiction

	Pre-protocol		Protocol		Total	
Variable	n	%	n	%	n	%
Type of abuse						
Exposure	6	10.2	5	4.1	11	6.0
Touch	42	71.2	71	57.7	113	62.1
Penetration	11	18.6	47	38.2	58	31.9
Total	59	100.0	123	100.0	182	100.0
Victim's age (years)						
2.8 to 4	11	17.2	12	9.8	23	12.3
5 to 6	16	25.0	33	26.8	49	26.2
7 to 9	13	20.3	25	20.3	38	20.3
10 to 13	24	37.5	53	43.1	77	41.2
Total	64	100.0	123	100.0	187	100.0
Victim's gender						
Male	30	46.9	38	30.9	68	36.4
Female	34	53.1	85	69.1	119	63.6
Total	64	100.0	123	100.0	187	100.0
Victim's race						
Caucasian	53	86.9	109	89.3	162	88.5
Hispanic	4	6.6	9	7.4	13	7.1
Other race	4	6.6	4	3.3	8	4.4
Total	61	100.0	122	100.0	183	100.0
Suspect's gender						
Male	43	89.6	114	95.8	157	94.0
Female	5	10.4	5	4.2	10	6.0
Total	48	100.0	119	100.0	167	100.0
Suspect's age						
Juvenile	29	54.7	47	40.5	76	45.0
Adult	24	45.3	69	59.5	93	55.0
Total	53	100.0	116	100.0	169	100.0
Victim/suspect familiarity						
Immediate family	17	27.9	31	26.1	48	26.7
Other family	12	19.7	36	30.3	48	26.7
Familiar, not related	32	52.5	49	41.2	81	45.0
Unfamiliar	0	0.0	3	2.5	3	1.7
Total	61	100.0	119	100.0	180	100.0

APPENDIX 4

Characteristics of cases with Outcome: Charged/Not Filed by Interview condition

	Pre-protocol		Protocol		Total	
Variable	n	%	n	%	n	%
Type of abuse						
Exposure	1	7.1	3	11.1	4	9.8
Touch	8	57.1	11	40.7	19	46.3
Penetration	5	35.7	13	48.1	18	43.9
Total	14	100.0	27	100.0	41	100.0
Victim's age (years)						
2.8 to 4	2	10.5	5	15.6	7	13.7
5 to 6	5	26.3	10	31.3	15	29.4
7 to 9	3	15.8	8	25.0	11	21.6
10 to 13	9	47.4	9	28.1	18	35.3
Total	19	100.0	32	100.0	51	100.0
Victim's gender						
Male	4	21.1	13	40.6	17	33.3
Female	15	78.9	19	59.4	34	66.7
Total	19	100.0	32	100.0	51	100.0
Victim's race						
Caucasian	15	100.0	23	74.2	38	82.6
Hispanic	0	0.0	4	12.9	4	8.7
Other race	0	0.0	4	12.9	4	8.7
Total	15	100.0	31	100.0	46	100.0
Suspect's gender						
Male	16	100.0	25	96.2	41	97.6
Female	0	0.0	1	3.8	1	2.4
Total	16	100.0	26	100.0	42	100.0
Suspect's age						
Juvenile	10	58.8	12	46.2	22	51.2
Adult	7	41.2	14	53.8	21	48.8
Total	17	100.0	26	100.0	43	100.0
Victim/suspect familiarity						
Immediate family	9	47.4	11	42.3	20	44.4
Other family	2	10.5	3	11.5	5	11.1
Familiar, not related	8	42.1	11	42.3	19	42.2
Unfamiliar	0	0.0	1	3.8	1	2.2
Total	19	100.0	26	100.0	45	100.0

APPENDIX 5

Characteristics of Cases with Juvenile and Adult Suspects

	Juvenile		Adult		Total	
Variable	n	%	n	%	n	%
Interview Condition						
Pre-protocol	87	36.4	90	36.1	177	36.3
Protocol	152	63.6	159	63.9	311	63.7
Total	239	100.0	249	100.0	488	100.0
Type of abuse						
Exposure	9	3.8	10	4.0	19	3.9
Touch	115	48.1	142	57.3	257	52.8
Penetration	115	48.1	96	38.7	211	43.3
Total	239	100.0	248	100.0	487	100.0
Victim's age (years)						
2.8 to 4	36	15.1	25	10.0	61	12.5
5 to 6	62	25.9	40	16.1	102	20.9
7 to 9	79	33.1	73	29.3	152	31.1
10 to 13	62	25.9	111	44.6	173	35.5
Total	239	100.0	249	100.0	488	100.0
Victim's gender						
Male	82	34.3	47	18.9	129	26.4
Female	157	65.7	202	81.1	359	73.6
Total	239	100.0	249	100.0	488	100.0
Victim's race						
Caucasian	207	89.2	201	84.5	408	86.8
Hispanic	18	7.8	21	8.8	39	8.3
Other race	7	3.0	16	6.7	23	4.9
Total	232	100.0	238	100.0	470	100.0
Suspect's gender						
Male	213	97.3	231	99.1	444	98.2
Female	6	2.7	2	0.9	8	1.8
Total	219	100.0	233	100.0	452	100.0
Victim/suspect familiarity						
Immediate family	76	31.9	90	36.1	166	34.1
Other family	50	21.0	49	19.7	99	20.3
Familiar, not related	110	46.2	106	42.6	216	44.4
Unfamiliar	2	0.8	4	1.6	6	1.2
Total	238	100.0	249	100.0	487	100.0

APPENDIX 6

Disposition Frequencies and Proportions

	Pre-protocol		Protocol		Total			
	n	%	n	%	n	%		
Disposition	198		315		513		$\chi^2(1)$	*p*
Felony								
Pled guilty	93	47.0	159	50.5	252	49.1	.60	.44
Dismissed	77	38.9	151	47.9	228	44.4	4.03	<.05
Plea reduced	34	17.2	61	19.4	95	18.5	.39	.53
Plea reduced to misdemeanor	20	10.1	28	8.9	48	9.4	.21	.65
Found guilty	5	2.5	14	4.4	19	3.7	1.23	.26
Found not guilty	6	3.0	3	1.0	9	1.8	FE	.09
Misdemeanor								
Pled guilty	15	7.6	21	6.7	36	7.0	.15	.70
Dismissed	14	7.1	18	5.7	32	6.2	.38	.54
Plea reduced	2	1.0	0	.0	2	.4	FE	.15
Found guilty	2	1.0	3	1.0	5	1.0	FE	1.00
Found not guilty	2	1.0	0	.0	2	.4	FE	.15

Note: Cell frequencies are the number of cases that had a least one count in the disposition category. Since 55% of cases had multiple counts, column frequencies do not add to the number of cases in the interview condition. Pre-protocol percentages based on $n = 198$, Protocol percentages based on $n = 315$, Total percentages based on $n = 513$. Chi-square tests are 1 df tests for interview condition (protocol vs pre-protocol) X disposition (e.g., plead guilty vs not plead guilty), n = 513 for each test. FE = Fisher's Exact Test.

APPENDIX 7

Characteristics of Cases That Went to Trial by Interview Condition

	Pre-protocol		Protocol		Total	
Variable	n	%	n	%	n	%
Type of abuse						
Exposure	2	15.4	0	0.0	2	6.7
Touch	6	46.2	15	88.2	21	70.0
Penetration	5	38.5	2	11.8	7	23.3
Total	13	100.0	17	100.0	30	100.0
Victim's age (years)						
2.8 to 4	1	7.7	1	5.9	2	6.7
5 to 6	2	15.4	1	5.9	3	10.0
7 to 9	4	30.8	9	52.9	13	43.3
10 to 13	6	46.2	6	35.3	12	40.0
Total	13	100.0	17	100.0	30	100.0
Victim's gender						
Male	1	7.7	8	47.1	9	30.0
Female	12	92.3	9	52.9	21	70.0
Total	13	100.0	17	100.0	30	100.0
Victim's race						
Caucasian	9	75.0	14	87.5	23	82.1
Hispanic	1	8.3	0	0.0	1	3.6
Other race	2	16.7	2	12.5	4	14.3
Total	12	100.0	16	100.0	28	100.0
Suspect's gender						
Male	9	100.0	15	100.0	24	100.0
Female	0	0.0	0	0.0	0	0.0
Total	9	100.0	15	100.0	24	100.0
Suspect's age						
Juvenile	2	18.2	8	50.0	10	37.0
Adult	9	81.8	8	50.0	17	63.0
Total	11	100.0	16	100.0	27	100.0
Victim/suspect familiarity						
Immediate family	4	30.8	4	23.5	8	26.7
Other family	2	15.4	4	23.5	6	20.0
Familiar, not related	6	46.2	9	52.9	15	50.0
Unfamiliar	1	7.7	0	0.0	1	3.3
Total	13	100.0	17	100.0	30	100.0