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Sexual Assault Evidence

National Assessment and Guidebook

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1 Introduction

A. Aims and Goals

This project's goal was a survey of the collection, preservation and use of physical evidence in sexual assault cases, an assessment of the value of the methods used, and development of a guidebook for law enforcement, medical and forensic science personnel indicating the most effective methods, and recommendations for their implementation. It started in 1992 and most data collection was complete by the end of 1993. Completion of a draft final report was delayed until 1996, and required revisions were delayed until 1999.

We were interested in gathering information from police, prosecutors and defense attorneys about the value of various physical evidence and the information its analysis can provide in cases. We were also interested in looking at sexual assault evidence collection practices, and getting the views of clinical and victim services personnel on them.

Some of the data collected is out of date or irrelevant because of changes that have taken place since the surveys. The biggest changes include: 1) advances in DNA technology, with the growth of databases and databanks; 2) displacement of all traditional laboratory typing methods by DNA procedures; 3) progress in developing both sexual assault nurse examiner (SANE) and sexual assault response team (SART) practices, at least in some jurisdictions; (4) an apparent increase in drug-assisted sexual assault; and 5) a significant decrease in the incidence of violent crime, including sexual assault. There are principles underlying physical evidence collection, analysis and use in these cases that are unchanged, however. And there is no reason to think that many of the perceptions of the value of physical evidence in sexual assault cases, from various points of view, would differ because of the changes noted above.

B. Scope and Methods

We selected seven locations for detailed study. The locations are in different parts of the U.S., and are representative of urban, suburban and rural settings. In each location (except Illinois and Connecticut), we centered our efforts on the forensic science laboratory serving the area, because the laboratory serves as a focal point for physical evidence processing and analysis. Through the study site contact, we contacted with representative law enforcement, medical, and victim services personnel, and prosecutors and defense attorneys in each jurisdiction. In Illinois, a colleague at the University of Illinois at Chicago established contacts for the project, and in Connecticut, we knew who to sample.

We developed questionnaire surveys for law enforcement personnel, prosecutors and defense attorneys. Information was solicited in separate questionnaires from law enforcement agencies and individual law enforcement officers, and from prosecutor's offices and individual prosecutors. In addition, we visited each location to meet with laboratory personnel, prosecutors, law enforcement officers and supervisors. This helped fill in gaps in the survey data. We also met with medical and hospital representatives, victim services agencies (including some devoted to child abuse investigations), and others involved in investigations, evidence collection and documentation, victim assistance, prosecution and defense.

The purposes of the data gathering were several fold: 1) to determine how law enforcement, prosecutors and defense attorneys view sexual assault cases, and how they perceive the value of different types of physical evidence; 2) to determine how often different types of physical evidence were encountered in sexual assault cases; and 3) to get some first hand information on sexual assault evidence collection kits, methods used for examination of complainants, and on the way cases are processed.

We looked at some prior studies and projects on responses to sexual assault and to child abuse and neglect, along with some published literature in these areas. Nationally collected crime rate data was consulted to include some information about the incidence and trends of sexual assault and child sexual abuse. Selected statutes were collected from some of the study jurisdictions. Some of this information is included in appendices to the report.

We never saw this project's final product as a prescription for procedures for sexual assault evidence collection for the whole country. There are too many differences at too many levels for such a prescription to be realistic. In addition, there are too many differences in the types of cases that are all gathered under the general heading of "sexual assault." The goal was to try to find general principles that could be used as guidelines to formulate more detailed methods, and apply them to various types of cases in various jurisdictions. The conclusions and recommendations are thus based on several different data sources and current trends. The most important of these are: (1) coordination of resources in response to sexual assault complaints; (2) the types of cases, such as whether victims are minors, or whether offenders are stranger; (3) the explosive growth in DNA typing technologies along with the growth of databanks and databases; (4) the apparent increase in drug-assisted sexual assault; (5) the data on case type collected in the study; (6) the data on police and prosecutor perceptions of the value of physical evidence collected in the study; and (7) ideas and experience from prior studies and projects.

C. Physical Evidence in Sexual Assault Cases

This study was designed to look at sexual assault in the U.S. primarily from a physical evidence point of view. The physical evidence in these cases is mainly of two types: medical evidence, and physical evidence for subsequent laboratory analysis. "Medical evidence" generally consists of histories and observations made or taken by medical experts examining complainants in medical settings. The histories and observations may be documented in various ways, including notes, reports, or photographs. Medical experts are also responsible for collecting "rape kit" evidence during their examination of a complainant. "Physical evidence for subsequent laboratory analysis" certainly includes the "rape kit" evidence. But it can include any other type of physical evidence found at the scene or elsewhere in connection with the investigation. Physical pattern evidence, such as fingerprints, and footwear or tire impressions, questioned documents, firearms or other weapons, and trace evidence, such as fibers, soil, glass, and paint, are some examples.

The primary responsibility for the investigation of sexual assault cases, as for other criminal cases, rests with the police. Police investigators are the primary gatherers of all evidence in a case, including the physical evidence. The physical evidence collected in criminal cases is generally analyzed in a forensic science laboratory, and the results reported to the police agency (and generally to a prosecutor, once the prosecutor's office is involved in the case).

Sexual assault cases differ from most other criminal cases involving physical evidence because of the involvement of medical experts and, often, victim services personnel. The recognition and collection of physical evidence in these cases is significantly influenced by the involvement and interdependent roles of police, medical experts and victim services personnel. Investigation of these cases is a team effort, and specialists from all the involved parties and agencies were included in our effort to gather information for this project.

There are different types of sexual assault cases as well, and the type of case has a significant influence on which agencies are involved, what type of evidence is likely to be gathered, the kind of analysis to which the evidence is subjected, and the interpretation of the results.

There is a major distinction between cases involving adult victims and those involving child victims. The definition of who is an adult and who is a child can be a strictly legal one. Generally, though, cases involving children are likely to be handled differently than cases involving adult victims, and different agencies (such as child protective services) and different professionals (psychologists, and other specialists in interviewing child victims) are likely to be involved. Further, the type of evidence gathered in cases involving children depends on whether sexual abuse or sexual assault is alleged, the nature of the abuse or assault, and the time that has intervened between the incident and the investigation.

Another important distinction in cases involving adult victims is whether the complainant knows the suspect. It has been said that sexual assault investigations involve two major issues: identification and consent. If identification is not a major investigative issue (because the complainant knows the alleged perpetrator), the case may well be handled differently with respect to both the investigation and with respect to the collection, submission, and analysis of physical evidence than a comparable case in which the alleged perpetrator is unknown.

In this study, we have made an effort to take these different variables into consideration in looking at the role of medical and physical evidence in the cases.

D. Components of Sexual Assault Case Investigation and Adjudication

There are several different components of sexual assault (including child sexual abuse) investigation, evidence collection, evidence analysis and use of the results in legal proceedings. All of them are interrelated, in that activities or evidence from one component can affect activities or evidence in another. In addition, these components will tend to differ in practice depending on whether the case involves an adult or a child, and on the type of case (such as stranger rape vs. acquaintance rape). The distinction between "adult" and "child" cases is not always a function of the victim's age. A 15-year old female victim may be a "child" under state statute, for example, but the case may be handled like an "adult" case to the extent that the victim can cooperate with the police, with the medical examination, and can testify as to what took place.

Investigation is generally handled by police when the victim is an adult. It may also be handled by police if the victim is under age, but it could be handled by child protective services personnel. The investigation begins with a complaint, and its purpose is to determine, first, whether a crime has been committed. If so, the investigation continues to identify the perpetrator (if his identity is unknown), and gather sufficient evidence to prosecute.

This part of the case usually involves interviews with the victim, witnesses (if any), and the suspect (once there is one). Investigation of a scene can be involved, and physical evidence may have to be collected from the scene for analysis by a forensic laboratory. It can involve arranging for a medical examination, and then transporting any evidence gathered to a forensic science lab.

Medical examination is generally part of the cases. Police typically take the responsibility for arranging the medical examination, and perhaps even transporting the victim to an appropriate facility. Hospital emergency rooms are frequently involved in tending to the needs of sexual assault victims and collecting evidence. In some places, there are clinics or special facilities dedicated to this purpose. The medical examination's primary purpose is to treat any injuries the victim may have sustained, and to tend to health issues. It is common, therefore, for victims to be tested for pregnancy, sexually transmitted diseases, and so forth. The collection of "rape kit" evidence is secondary to the health considerations, but both can be taken care of effectively and simultaneously. One of the most important parameters in whether a victim is taken to a medical facility for examination is the time elapsed since the incident. If the incident is recent, most victims will be seen at a medical facility provided they consent. Once several days have passed, it becomes less and less likely that any evidence will be recovered. In the case of child victims, especially younger ones, reports are frequently removed in time from the incident(s), and there is often little reason to subject the child to a medical examination involving collection of "rape kit" evidence. In some places, child victims may be examined for evidence of abuse of a medical nature, such as injuries, scars, and other signs that would not be expected to be present in the absence of abuse. There are documentation and chain of custody requirements associated with medical examinations, in addition to the actual collection of evidence. In cases where no physical evidence is being collected, the documentation of the medical examination and its findings would comprise the evidence.

Laboratory analysis of physical evidence takes place when rape kits and/or other evidence associated with a case is submitted to a forensic science laboratory. Rape kit evidence is obviously strongly associated with sexual assault cases, but it is important to keep in mind that other physical evidence (such as fingerprints, trace evidence, patterns, etc.) can be collected and analyzed in these cases as well. Rape kit evidence is analyzed for essentially two purposes. First, the demonstration of the presence of seminal fluid on a specimen taken from a victim can corroborate a victim's statement as well as helping to establish the "penetration" requirement under the laws of most jurisdictions. Second, assuming seminal fluid is identified on specimens taken from a victim, genetic typing tests can be performed to help identify the person who was the source. These genetic test results on evidence items are compared with tests on "reference" or "known" specimens from a victim and suspect to determine whether the suspect is included, or can be excluded, as a source of the seminal fluid. Laboratories differ in their policies concerning the examination of evidence in sexual assault cases. In busy jurisdictions, there can be more evidence coming into the laboratory than it has resources to analyze fully. Laboratories may, therefore, have guidelines concerning which cases receive priority. Genetic typing of the evidence items is not informative in a specific case without appropriate reference specimens for comparison, but with the establishment of DNA databases and databanks locally and nationally, laboratories do DNA typing of evidence specimens in unknown-suspect cases in order to search for possible suspects, or associate cases with one another.

Case adjudication taken in a broad sense involves all the legal activities that begin when the case reaches a prosecutor's office.

All the investigative information, findings and reports, the medical examination findings and reports, and the laboratory's results, are a part of the prosecutor's case file. The information is presented to the court to the extent necessary, and shared with defense counsel to the extent required by the jurisdiction's discovery rules. In some cases, the defense may undertake its own investigation activities, and it may seek its own expert witnesses, even to the extent of having its own laboratory testing done.

2 Investigations and Evidence - Prior Studies / Reports

A. Summary of Prior Comprehensive Reports, Studies and Protocols

The most ambitious project undertaken was the cooperative effort between the U.S. DOJ Office for Victims of Crime and the Illinois Attorney General's Office to design a comprehensive, national standard protocol for the investigation of sexual assault cases and the collection of evidence from victims [1]. This project, initiated in 1985, grew out of a recommendation from the President's Task Force on Victims of Crime that was established in 1982. The project was overseen by a national advisory committee that had representatives from law enforcement, medicine, forensic science and victim advocates. The result was a set of comprehensive guidelines for investigators, hospital and medical personnel, and forensic science laboratories that were designed to be, at the same time, general enough for applicability to many different jurisdictions, but detailed enough to provide information that would be useful regardless of differences in local facilities, services and practices. The only major subject not covered by this report is the now-familiar issue of potential HIV (AIDS virus) transmission.

The report covers the following topics (for both adult and child victims): Sensitivity to victim needs, including discussions of disabled, elderly and male victims; Law enforcement response; Treatment in medical facilities, including issues about reporting, consent, and support personnel; Medical examination and evidence collection protocols; Medical examination documentation; Procedures for release of evidence; Post-examination follow up of victims; Sexually transmitted diseases; Recommendations for a standardized sexual assault evidence collection kit; and Recommendations for standardized reporting and documentation forms.

According to the NIJ project manager's close-out report of February, 1991 [2], 14 states were initially chosen as test sites for the project: New Hampshire, Alabama, Arkansas, Kentucky, Michigan, North Dakota, New York, Florida, Indiana, Texas, Puerto Rico, Oklahoma, Nevada and Wisconsin. The project was designed to assist these jurisdictions by soliciting their input on the proposed comprehensive guidelines and protocols, and by lending technical assistance to each jurisdiction's coordinating group. Also included in the design were consultant visits to the jurisdictions to assist with training and implementation. Seven of the states, Michigan, Texas, Kentucky, Arkansas, Alabama, New Hampshire and North Dakota, developed written protocols, and it is clear that other states have done so subsequently. The states of Alabama, Florida and Kentucky, for example, both of which were included in the study sites for the present project, adapted the recommended protocols to their jurisdictions through their Attorney Generals' offices [3-5]. Kentucky developed an additional medical protocol for community agencies and health care providers applicable to adult victims of various types of abuse, including certain types of sexual abuse and assault [6].

A training component was also developed, and utilized by the project staff to help transfer the information developed to selected jurisdictions. In addition to the written material, slides and an accompanying scripts were developed, and some of the written material was made available on word processor-readable diskettes. Two states, New Hampshire and Kentucky, developed video training tapes for evidence collection personnel. New Hampshire's protocol, kit and training tape won an award from the American College of Obstetrics and Gynecology in 1989 [7].

Among other things, this paper summarizing New Hampshire's experience covers the statewide committee's recommendations concerning HIV testing, and the possibility of DNA analysis of sexual assault evidence.

Some of the participating states had undertaken efforts to standardize the collection of sexual assault evidence well before the national study (for example, the Michigan effort was reported in 1978 [8]).

In addition to the comprehensive national project discussed just above, a number of other publications and projects from different jurisdictions have been developed. The Metropolitan Chicago Healthcare Council in collaboration with two other related victim service agencies developed guidelines for treating adult and child victims of sexual assault (and battered women) in primary medical settings [9]. The Chicago Police Department has published a protocol for use by its detective division in the investigation of sexual assault cases [10]. There was a project by the Illinois Local Government Law Enforcement Training Board to develop statewide standards and a training program for police throughout Illinois. Connecticut has developed a statewide protocol for hospitals in connection with their role in treating sexual assault victims and collecting evidence [11]. A booklet for victims of sexual assault has been developed for victims in the Anchorage, Alaska, community [12]. The National Victim Center has compiled a guidebook for the use of communities in developing a coordinated, comprehensive response to sexual assault and its victims [13]. There is also a report in the literature on a model training program for residents in forensic medicine in Louisville KY [14] that includes treatment of and evidence collection from victims of sexual assault. NCCAN has recently updated its user manual series publication on child sexual abuse [15]. This work is a guide for various professionals who encounter and must handle child sexual abuse cases in the course of their professional duties.

More recent additions to the growing body of comprehensive protocols for medical and clinical evaluation and treatment of sexual assault victims and complainants include those from California [16], Arkansas [17], New York [18], and Illinois [19].

A positive, constructive development in the management of adolescent and adult sexual assault cases has been the development of the Sexual Assault Response Team (SART) concept and the accompanying development of the Sexual Assault Nurse Examiner (SANE) within the nursing profession. Some of the programs include services for children as well. Operations of one of the index programs, in Minneapolis, were described in 1992 by Ledray [20]. In a survey published in 1996 [21], there were 86 programs operating nationally. By 1998, there were reported to be 110 programs [22], and the number is growing. The Office for Victims of Crime (OVC) of the U.S. Department of Justice recently funded a project that assembled a comprehensive guidebook to the development, operation and maintenance of a SART-SANE program in communities [22;23]. Part of the SART-SANE concept is attempting to set up and operate facilities for examining sexual assault complainants separate from other typical emergency department activities. Some of the facilities are separate but dedicated examination rooms within an existing emergency department of a clinic or hospital; others are stand-alone. Another part of the concept is developing the sexual assault examiner specialty within emergency nursing, and staffing the SART facility with these specially trained nursing personnel, many of whom have emergency nursing backgrounds. SART-SANE will be discussed in other places in this report, but it seems pretty clear that the programs are working in that better services are provided to victims, evidence collection is better and case adjudications are easier. The Department of Justice and OVC appear to be convinced of the value of these programs [24].

B. Investigations / Investigative Protocols

Some police departments have prepared directives, orders, sections of their procedures manuals, or guidebooks for, or relating to, the investigation of sexual assaults. There are various suggestions and guidelines in other reports as well. The most comprehensive of these among our study-site police departments was done by the Chicago Police Department [10]. The department and its jurisdiction are large, and there is significant division of labor among different units in the overall investigative effort. As a result, the manual covers the roles of dispatchers, patrol officers (first responders), detectives, and crime scene technicians in different types of cases. The procedures described would be readily adaptable by any large police department, and could be modified for smaller departments where one person might perform several different functions in an investigation.

There are, in effect, three different types of sexual assault cases that require investigation: those involving a stranger; those involving someone the victim knows; and those involving minors or children. Each requires a different approach by investigators, and the focus of the investigation will be somewhat different for the different types of cases.

The Chicago manual and other written police procedures stress the importance of conducting thorough, non-judgmental initial and follow-up investigations, and of appreciating the extent to which the victim may be traumatized, and the extent to which it might affect her behavior and responses to the police.

Dispatchers or other 911 operators may be the first points of contact with a victim. They should first determine whether the offense is still in progress, and if the victim is in immediate danger. They should also determine, if possible, whether the offender is still in the vicinity. The name of the victim or caller, the location where police are needed, and some information about the offender (for broadcast on police radios), should be obtained. Dispatchers should try to be a calming influence, reassuring to the victim, and if circumstances permit, stay on the line until police arrive.

Patrol officers, usually the first responders, should focus on getting information about the offender, especially if it was a stranger and he is to be the object of a police search. It is not necessary for first responders to conduct detailed interviews with victims. Police officers should attempt to reassure victims, be sensitive to the trauma they have suffered, and be nonjudgmental. Victims should be notified about the availability of victim-services personnel (every jurisdiction has an agency with people specifically trained and designated to assist sexual-assault victims), and they should be contacted if the victim agrees. Officers should also offer to contact other people (friends, family) for the victim if she wishes. Victims should be taken to an appropriate medical facility for examination (if the incident was recent, probably within about 48 hours), assuming they agree to such an examination. Police should transport the victim, or arrange for her to be transported to the medical facility (and back home), inform her about what to expect, about the state's policy concerning payment for the examination, and about taking a change of clothing. In cases where the offender was a stranger (sometimes called "identification" or "ID" cases), the focus should be on obtaining information about the offender to aid in apprehension. In cases where the victim knows the offender, and he may claim consent as a defense (sometimes called "consent" cases), the focus should be on recognizing and gathering evidence that may indicate force, threat of force, and lack of consent. This latter could include witnesses who saw or heard things, torn clothing, evidence of injury, etc.

Often, a victim tells another person about an assault before the police are contacted. This person is sometimes called the "outcry witness," and he/she should be interviewed by police.

First responders should advise victims of the importance of getting medical attention, because injuries may not be apparent until later. In addition, officers should explain to victims of a recent assault that valuable physical evidence can be inadvertently destroyed by showering, bathing, douching, or using mouthwash or brushing teeth (if oral sex was involved) [1].

The scene of a sexual assault should be protected, and then processed like any other crime scene if important evidence is present [1;10]. Searching for and collecting evidence in these cases is subject to the state's search and seizure laws and rules, and police officers must take care to obtain warrants where necessary.

In larger departments, the follow-up investigation will be conducted by detectives. At this stage, a more detailed interview with the victim is needed, and more time and effort can be spent gathering appropriate witness statements and evidence. Some departmental guidelines suggest recording victim statements on audiotape. It is recommended that detectives specially trained for sexual assault investigations be assigned these cases if possible. The detectives will generally be responsible for all follow-up parts of the investigation, keeping the victim informed of progress in the case, coordinating with the forensic science laboratory if physical evidence has been submitted, and ultimately coordinating with the prosecutor's office.

Chapter V of Reference [13] discusses "victim-centered" response to victims by police investigators. Many of the points made above are covered. In addition, the discussion stresses that investigators should realize that victims may still be afraid, even after police arrive, and that they need reassurance of their safety. Victims need help from investigators in placing the blame on the offender, in regaining a feeling of control, and in being involved as an active participant in the case. Investigators should further insure that a victim has a point of contact with the police during the course of the investigation, and they should insure that victims are kept informed of their progress.

Some sexual assault cases involve victims from special populations or with special needs [1;5;6;10;25;26] that can require nonstandard investigative procedures. Examples include victims who are pregnant, with disabilities, who are older or elderly, and male victims. There may be socio-cultural issues that require attention if a victim comes from an ethnic or cultural background that looks upon sexual assault very differently. These situations require assistance from specially trained investigators or others who understand the problems and can help in dealing with them.

Cases involving minors or children usually require a different investigative approach. Here, the state is generally not obligated to prove a lack of consent because minors or children cannot give consent under law. A case involving an older minor may be investigated more like those involving adult victims, depending on what is reported and when the incident occurred. With younger children, incidents are frequently reported long after they occurred, and usually to someone other than the police (outcry witness). In these types of cases, an interview with the outcry witness may be sufficient for a police first responder, who will then refer the case to detectives and/or other appropriate professionals.

These cases typically require skilled, experienced professionals [1;5;10;13;15;27-33]. Children may be sexually abused by strangers, but it is much more likely to be by a family member or other person whom the child trusts to some degree [1;34]. Some children, especially runaways, are sexually abused by exploitive adults on whom the children are dependent for survival.

Estimates of the incidence and prevalence of child abuse and neglect, the sexual abuse of children and victimology studies, are found in Appendix A. The literature on child abuse, including sexual abuse, has grown very large. A complete review is well beyond the scope of this work, but representative example references are included [15;16;27;34-59].

There are both medical and psychosocial indicators of child sexual abuse. Any of the indicators, however, are subject to interpretation, and there is not complete agreement in this area, although it is probably fair to say that some consensus is emerging [35;40;41]. There is now some agreement on the classification of the various indicia of sexual abuse as "certain," "probable," "possible," "uncertain" and perhaps "unlikely" indicators. Authorities generally agree that very few of these indicators are of any value unless considered in the context of the whole case, its circumstances, and all the available evidence. Pregnancy is absolute proof of sexual contact, and would appear to establish a legal case of sexual abuse in an underage girl, though not every such situation is necessarily an abusive one. Diagnosis of syphilis or gonorrhea in children that cannot be explained perinatally or of HIV in children that cannot be explained perinatally or in some other way are regarded as virtually certain indicators of sexual abuse. Many consider findings of Chlamydia, Trichomonas, Condylomata acuminatum (assuming not perinatally acquired), and herpes 2 as probable indicators that should prompt the physician to report the case. The use of anatomic features or injuries as indices of abuse is subject to interpretation. Physicians can disagree about the conclusions to be drawn from given observations. As noted by Faller [15], these disagreements arise because "... data collection regarding the physical signs of sexual abuse has preceded careful documentation of characteristics of genitalia and anal anatomy of children who have not been sexually abused and of variations among normal children." This situation is rapidly improving, however, as more information about normal children appears in the literature [35;37;38]. It is also very important to recognize that the medical examination is normal or uninformative in a substantial fraction of children probably abused, or where there is independent evidence that abuse likely occurred [37;44]. Besides the medical indicia, there are a number of psychosocial, or behavioral, indicators of sexual abuse, some of which are sexual and others of which are not [15;60].

Specialists trained in conducting interviews with children are essential in investigating these cases. Some jurisdictions have established specialized facilities for these purposes, and some of these facilities have the capability of conducting medical examinations of child victims, where warranted, as well. Since there is often a significant period of time between an abusive incident and reporting, a standard medical examination may not be indicated. Child sexual abuse investigators are also trained in interviewing other members of a victim's family, and suspected abusers. In some jurisdictions, there are limitations on the number of interviews that can be conducted with a child victim. Depositions, and testimony in preliminary hearings and at trials, may be counted as "interviews." Under these conditions, interviews must be planned carefully so as not to exceed the allowed number.

No one would question the importance of child sexual abuse as a societal problem nor the seriousness with which it should be treated in substantiated cases, but a series of widely reported high-profile cases from several different jurisdictions in the last several years suggest that caution is warranted to avoid serious miscarriages of justice [61-73].

Some jurisdictions have "shield" laws, designed to protect the identity of sexual-assault victims during the investigation and prosecution of the case. Police officers need to be aware of these requirements during the investigation.

Some police agencies utilize polygraph testing for suspects in sexual assault cases. In these jurisdictions, victims may be asked to submit to polygraph examination as well. The thinking behind this approach from law enforcement's point of view is apparently that polygraph can be a useful investigative tool in deciding whether to found a complaint. Some authorities, in and out of law enforcement, consider this practice outrageous.

Victims may report sexual assaults to victim-services personnel or to medical personnel in a hospital or clinic. In these circumstances, it is usually up to the victim-services representative or the hospital to notify the police, provided the victim agrees to notify the police. Most victim-services personnel in our study jurisdictions said that they encourage victims to report the incident to police. However, in at least one place, hospital emergency room personnel were instructed that notifying police was a violation of the doctor-patient privilege (this conclusion apparently having been reached by the hospital's legal department).

C. Clinical / Medical Examination

As is true with the investigative aspects of cases, the medical examination protocols for adults differ to some extent from those that may be used with child victims.

1. Adult Clinical / Medical Protocols – History, STD, HIV, Pregnancy Tests

Most adult sexual assault complainants who agree to be seen for a medical examination will be treated in emergency rooms of hospitals, although as noted above, some SART-SANE programs now operate stand-alone facilities. The victim is seen in order to attend to health and medical concerns as well as for the collection of physical evidence. It is generally necessary to obtain informed consent of the patient (victim) to be treated before any examination. It is also generally necessary to obtain her consent to release physical evidence collected for forensic examination to the police for transmittal to the forensic science laboratory. Other consents may have to be obtained in connection with STD or HIV testing (see below). In jurisdictions where sexual assault complainants who are not otherwise seriously injured along are seen in separate stand-alone SART facilities, the focus is on evidence collection by specialize SANE personnel. Any victim with physical injuries should be treated in an emergency room. It is generally recommended that injuries be photographically documented. There have been several studies attempting to correlate the resistance offered by victims with the risk of injury [74-77], and some data from the NCS are given in Appendix B. In the NCS data, victims were more likely to have physical injuries besides the sexual assault itself if the perpetrator was a stranger.

A complete and detailed history should be obtained from the victim, as well as a detailed history of the incident. Medical practitioners have been cautioned, however, to concentrate on obtaining information relevant to health and medical examination concerns, and to avoid "playing detective" in these interviews [9]. The history information can affect the nature of the medical procedures and tests, as well as the collection of physical evidence and interpretation of forensic testing results.

In the past few years, another phenomenon often called "drug-facilitated sexual assault" has surfaced. Here, young women under the influence of certain drugs are raped. The victims may have been given the drugs surreptitiously, or in some cases may have taken them recreationally. The drugs commonly encountered in this context have been flunitrazepam (Rohypnol®), gamma-hydroxybutyrate (GHB), ketamine, and sometimes other benzodiazepines like clonazepam.

They are often given or taken with alcohol, and besides causing stupor and even unconsciousness are also significantly amnesia-inducing, often making it difficult for a victim to recall any of the details of what happened. Drug-facilitated sexual assault is highly associated with the adolescent age group, with the bar scene, and to some extent with so-called "rave" parties. This matter is brought up here because the history in a sexual assault case could include questions about possible drug ingestion. It should be kept in mind that detection of drugs in a complainant's system could be used as evidence of criminal activity, bad character, or as part of a consent defense strategy.

Victims will generally have specimens taken for pregnancy testing, and for STD diagnosis (including HIV infection). Since the testing takes time, medical follow-up of the victim is very important if anything is found. In most reports on the medical management of sexual assault victims [78-89], pregnancy is a relatively rare finding. Many treatment protocols include estrogen prophylactic therapy where indicated, if the patient agrees. STDs are diagnosed in some sexual assault victims [78;79;84;89-92]. It is generally difficult to determine whether the infection was acquired as a result of the sexual assault. Victims whose tests are positive when they present are generally regarded as having a pre-existing infection. Those who are initially negative, but test positive upon follow-up, are at least candidates for having been infected as a result of the sexual assault (although it is rarely possible to exclude infection by way of a consensual partner). One study of over a thousand urban women noted that those who reported having been raped in the preceding 12 months were more likely to be infected with a STD, though rape itself was not an independent risk factor for HIV [93]. Another study of just over 200 complainants in Seattle attempted to distinguish between existing infection and infection that could be inferred to be the result of the assault [94]. In this population, 43% had pre-existing STD, bacterial vaginosis and *Trichomonas vaginalis* being most common. Of the patients followed up, the most common new infection consisted of bacterial vaginosis and *Trichomonas*, with lesser incidences of gonorrhea, and Chlamydia. No new HSV, CMV syphilis or HIV was seen.

There is variation in different locations and centers as to whether follow-up is recommended for sexual assault complainants. Some places attempt in-person follow-up at an associated clinic, while others refer patients to their private doctors or to health departments. Sometimes, such follow-up is not considered medically necessary unless evidence of pregnancy, infection, etc. shows up in the clinical lab tests. Places that do recommend follow-up often report a high level of noncompliance. In one Canadian study, a substantial number of patients were lost to follow-up even after 24 hrs [95].

HIV-infection became a more complicated legal issue in the 1990s, and medical practitioners needed to be informed about currently applicable laws and regulations in the various states. There was and is variation as to whether courts can require an accused to be tested (sometimes on the request of a victim), and whether the results can be disclosed. Discussion of this matter in some detail may be found in Appendix C of "Looking Back Moving Forward" [13], and it was reviewed in 1994 [96]

There are a few reports in the literature on vagino-cervical cytology findings in patients reporting sexual assault. Seltzer et al. [97] noted a slightly higher incidence of abnormal Pap smears in 116 rape victims as compared with 1,698 control female patients at Bellevue Hospital in New York. A similar observation was reported by Costa et al. [98] at Grady Memorial Hospital in Atlanta, comparing 4,220 sexual assault victims with 17,187 routine smears.

The reason for these observations is not obvious, and may have more to do with population sampling variation than with sexual assault. Costa et al. [98] also noted finding sperm in 56% of the smears from sexual assault victims who were examined within three days of the alleged rape. It was further noted that sperm was found in four of sixteen randomly selected "semen-negative" cases (as reported by the forensic science lab).

The principal non-medical reason for the clinical examination of sexual assault victims is the collection of vaginal swabs and smears that can then be examined for objective evidence of recent sexual activity (sperm and/or seminal fluid). Groth and Burgess[99] have noted, however, that there is not always a good correlation between the finding of sperm or semen on vaginal swabs and smears and other evidence of trauma that might suggest sexual assault. They report a significant level of sexual dysfunction during rape assaults (34%) among 170 convicted rapists who were interviewed as part of their study. Hook et al. [100] studied 104 alleged sexual assault cases in New Zealand, and found that there is not always correlation between the victim's perceptions of whether penetration and/or ejaculation occurred and the subsequent laboratory findings. These reports indicate that the failure to identify sperm or seminal fluid on vaginal swabs or smears does not necessarily indicate that an assault did not occur, and further, that sexual-assault victims may not always know for sure whether penetration and/or ejaculation occurred.

2. Genital Trauma or Injury as Indices of Sexual Assault in Adults

There is some literature on the examination of adult sexual assault victims for injury or trauma as indices of sexual assault. Cartwright et al. [101] reviewed 440 cases of alleged sexual assault in Memphis TN. 41% of the victims had some form of non-genital injury, and 16% had some genital injury. Of those with genital injury, sperm was present in 48%. It was concluded that genital injury is not an inevitable consequence of rape, and that absence of genital injury should not be taken to imply consent or the absence of penetration. No special instruments or techniques were used in examining the patients in this study.

Lauber and Souma [102] used the nuclear stain toluidine blue to assist in documenting genital trauma. The theory here was that superficial vulvar-vaginal skin layers do not stain with this dye whereas underlying layers of epithelia, exposed as a result of trauma, would do so. In a 22 patient study group (sexual assault within 48 hrs of the examination) and a 22 patient control group (consensual intercourse within the same period), there was a significantly higher indication of trauma in the study patients. There were differences in both groups that depended on whether the patient was nulliparous or multiparous. And one control patient exhibited an indication of trauma indistinguishable from what was observed in the positive study-group patients.

The toluidine blue technique was used by McCauley et al. [103] on 24 alleged sexual-assault victims and 48 control patients. One victim had a laceration noticeable prior to application of the dye. 13 others had lacerations that were visualized only in the presence of the dye. Five of the 48 control patients also showed evidence of laceration. All of them were multiparous, and gave a history of dry or painful intercourse. Colposcopy was not employed in this study. The authors note that the finding of higher incidence of laceration in alleged rape victims than in controls is applicable to adults (about 19 years old or older). With adolescents, aged 12 to 18, the differences between alleged sexual assault complainants and controls was not significant.

Norvell et al. [104] looked at 18 volunteers using colposcopic examination and Lugol's iodine staining. Subjects were examined after 72 hrs of abstinence, then again within 6 hrs of voluntary intercourse. Positive findings were diagnosed in over 61% of patients after intercourse, and in over 11% after abstinence. Lugol's solution was selected over Gentian violet, toluidine blue and fluorescein in preliminary stain-optimization studies on post-partum patients. These investigators concluded that this technique was not useful in the diagnosis of postcoital genital injury.

In 1991, Slaughter and Brown [105] reported use of colposcopy to observe and photographically document vaginal-cervical injuries in two cases, caused by the insertion of fingers in one case, and of an object in the other, into the victims. The findings at examination were consistent with the victims' accounts of the incidents, and the healing of the observed injuries was documented in follow-up examinations. In 1992, the same workers published the results of their observations on 131 patients seen as the result of sexual assault complaints [106]. Positive colposcopic findings were reported in 87% of the victims. Toluidine blue was not necessary, but could be helpful for photographic documentation. The authors have argued that this technique may be the most reliable method of documenting and characterizing genital injury and evaluating whether the injuries can be linked to sexual assault. The Norvell et al. [104] study, that found a high incidence of genital trauma in control patients using colposcopy, was said to be defective in that they did not localize the observed injury. Slaughter et al. recently reported on the injury / trauma patterns seen colposcopically in 311 sexual assault complainants and 75 control women examined after consensual intercourse [107]. The differences were significant, though not mutually exclusive.

It is worthy of mention that vaginal-cervical toluidine blue staining does not interfere with subsequent DNA typing in the specimens collected [108].

It does not appear that colposcopic examination of adult sexual assault victims is common at the present time in most clinical settings where victims are seen, though some places apparently use the technique extensively. Some of the findings in the limited studies thus far appear to be ambiguous in terms of establishing subtle genital trauma, observable with or without a colposcope, as an unequivocal indicator of sexual assault. Further post-coital studies with control patients are indicated. The data further indicate that there may be significant differences among adolescents, reproductive-age, and post-menopausal women with respect to these findings [109;110]. However, several clinicians have reported on the value of the procedure [111-114], and even adherents indicate that the findings must be interpreted in the light of the overall case findings [107]. A recent case report suggested that the technique enabled an expert to interpret a vaginal injury pattern in a case involving a defendant with a penile ring [115].

3. Child Clinical / Medical Protocols

The investigation of child sexual abuse cases was discussed briefly in § 1C above. Child victims generally do not report sexual abuse directly to the police, and are generally not able to seek intervention by themselves. In many instances, therefore, significant time may have elapsed between the abusive incident(s) and reporting. Under these circumstances, conventional clinical examinations similar to those employed with adult victims are unlikely to yield definitive physical evidence.

Published protocols generally indicate that suspected child sexual abuse or assault victims should undergo a medical examination [1;9;13;17;40;41] [16] [116]. The extent of the examination depends on the circumstances and history.

There are a number of consent and confidentiality matters that must be addressed, some dependent on particular state laws. As noted earlier, many experts consider pregnancy or certain STDs (not acquired perinatally) to be high-probability indicators of abuse in children younger than 12 or 13 years old, although there is not total consensus [13]. Genital trauma is also considered a high-probability indicator, especially in younger children, absent some explanation for it. This type of medical evidence is subject to interpretation, however, and its value has been questioned [109] on the basis that there is little data on "control" children. The presence of semen in a young girl is a very high-probability finding, but is very uncommon. It has been suggested that a modified sexual assault type medical examination be performed on younger children only if an abuse or assault incident occurred within about 72 hrs of the examination [1]. The suggested modifications included drawing a smaller quantity of blood and not collecting hair standards initially. Since blood is no longer necessary as a reference standard (buccal swabs will do as well) and the importance of hair comparisons has decreased significantly, these points may be moot.

An important point from the more recent literature is the comparatively low frequency of definitive findings in girls or even female adolescents, even when some type of sexual abuse is all but certain based on other evidence [35-37]. There may be an emerging consensus that colposcopic examination and documentation of anatomical findings are a significant, although by no means exclusive part of the overall evaluation, but there is still some debate about interpretation of the actual findings in cases [42;44;59;113;114] [57;58].

The medical examination should also document any non-genital injuries, bitemarks, etc., that may be indicative of abuse [117-120].

4. Male victims

Adult male victims of sexual assault are much less common than female victims, and considerably less has been written about adult male victims. In children, most of the data indicate that female victims are more frequent, but the number of male child victims is significant [121] (see Table A-1 in Appendix A). A study of 99 male victims (out of a total of 1,752 adult victims) seen over a two year period at the Memphis Sexual Assault Resource Center has been reported [122]. Eighty of the male victims were jail inmates. In all but one case, the assailants were other males, and there was a relatively high frequency of multiple assailants. Hillman et al. Reported a similar series of five cases [123]. Ernst et al. reported that anoscopy and sometimes colposcopy could be valuable tools in evaluating and documenting injuries in male victims [124].

Some sexual assault evidence-collection kits (§ 2.C.5 below) make some provision for evidence collection from male victims; some jurisdictions have designed separate kits.

5. Evidence Collection

Collection of physical evidence is an essential part of the clinical examination of sexual assault victims. "Physical evidence" includes the evidence from the victim's person that is generally part of a "rape kit" or "sexual assault evidence collection kit," but is not restricted to it. The physical evidence includes documentation of injury or trauma by the clinician, clothing worn by a victim, and physical evidence from scenes, as well as the so-called "rape kit" evidence. Complete evidence-collection protocols are generally not indicated unless the assault occurred within about 72 hrs of the examination.

Collection of physical evidence at scenes is the responsibility of police investigators or evidence technicians. Any type of physical evidence may be important in a sexual assault case. Collection of evidence from a victim's person is the responsibility of the clinician examining the victim. Victim's clothing may also be collected in the clinical setting.

Sexual assault evidence "kits" are designed to organize and simplify collection of evidence from a victim's person. There are many commercial kits available, and many jurisdictions have designed custom kits to fit their evidence-collection protocols. For a long time, almost all kits provided for the collection of a blood specimen, a saliva specimen (usually a dried stain), vaginal, oral and anal swabs and smears, known head and pubic hair standards, and pubic hair combings from a victim. There is no longer any need to collect saliva. A buccal swab can provide a suitable reference specimen for victim DNA, so it is not necessary to collect blood either. Even if blood is preferred to a buccal swab, a finger-stick specimen is more than adequate for DNA. There is also broad consensus among forensic scientists today that microscopical morphologic hair comparison is useful only as an exclusionary tool. Moreover, there has never been good agreement on the number of reference hairs necessary to do a meaningful comparison. Thus, collection of pubic hairs in sexual assault evidence kits may not have much value. There is the possibility that the hairs could be useful for mtDNA typing, but this is nowhere close to becoming a routine analysis in sexual assault cases. Different kits may also provide for the collection of blood and/or semen stains on a victim's body, fingernail clippings or scrapings, nasal mucous specimen, "debris," "genital secretions," etc. Some kits provide containers for victim's clothing items, and some provide a clean sheet of paper for a victim to stand on and undress to catch trace evidence that may fall during this process. The kits also generally provide sealable containers for the items collected, space on the kit itself and the containers for labeling and documentation, detailed instructions for each step and item in the evidence-collection procedure, and evidence tape to seal the kit when it is complete. Some kits contain release and/or consent forms as well. Table 2-1 (at the end of § 2) shows a detailed inventory of a number of sexual assault evidence collection kits.

Although the kits show many similarities, there are also many differences. In some cases, there are inconsistencies within the same kit, especially in the instructions (for example, between what is written on the Instruction Sheet and what is written on the evidence item container). There are differences in the indicated order of evidence collection, and some protocols make little sense. In the kits surveyed in Table 2-1, the clinician is generally required to do a lot of paperwork, and a lot of labeling and marking. Some kits provide for collecting a tube of clotted blood, alone or along with a tube of anticoagulated blood. The reasons for wanting to collect clotted blood for the forensic science laboratory are unclear. There is variation in the number of known (exemplar) hairs requested, and no obvious reason for the variation. In addition, some kits call for pulled hairs, others call for cut hairs, and in some cases there is a choice. Collection of pulled known pubic hairs from sexual assault victims is considered at least traumatic, and possibly unnecessary by some authorities [1], given the likely value of the evidence. Microscopical, morphological hair "matches" may include someone as a potential donor, but cannot be used to identify a hair donor [125].

Some of the victim evidence-collection kits make provisions for the collection of items that many crime laboratories would not want or find useful. In a number of jurisdictions, there has been a concerted effort to coordinate the efforts of all the parties involved in sexual-assault investigation and prosecution (§ 2.F below).

Among other things, these efforts have included designing sexual-assault evidence kits that meet all the requirements and concerns of the jurisdiction. This approach is probably optimal in insuring that evidence is collected properly, and that evidence is only collected that is likely to be useful in solving or prosecuting the case.

Several jurisdictions have designed sexual assault evidence-collection kits for suspects.

Table 2-2 (end of § 2) shows a detailed inventory of several representative examples of such kits.

At present, all biological evidence analysis for the identification of persons is DNA typing. Kits should be designed or redesigned accordingly. There is very little literature on retrospective looks at the evidentiary usefulness of various sexual-assault evidence kit evidence items (excluding swabs and slides which are obviously necessary). At the Metropolitan London forensic science Laboratory, for example, a five year retrospective study of sexual assault case item analyses showed that fingernail scrapings almost never yielded probative evidence [126]. The authors suggested that fingernail scrapings probably should not even be collected unless there was an explicit indication from the case circumstances that they would yield evidence. The study further noted that in controlled studies with volunteers of pubic hair transfers after intercourse, male hairs were recovered from the female 9 out of 20 times, and that there was never a female to male public hair transfer in 20 trials. Another study of pubic hair transfer during intercourse between heterosexual volunteer couples found that transfer to the male were more frequent than transfers to the female (by about two-fold) [127]. There was only one instance of mutual transfer among the 110 trials. Transfers occurred only about 17% of the time in the study, and it involved a small number of volunteer couples. Admittedly these studies are limited in scope, but they do provide a rational, concrete basis for making decisions about evidence collection kit design. Evidence items can always be collected if there is an indication of their usefulness in a specific situation. The question is whether to collect all these items from every complainant.

Recently, there has been an apparent upsurge in what is usually called "drug-facilitated sexual assault." The drugs commonly involved are Rohypnol (flunitrazepam), gamma-hydroxy butyrate (GHB), and ketamine, often along with ethanol. Ecstasy (MDMA, 3,4-methylenedioxymethamphetamine), other benzodiazepines, and even scopolamine are occasionally seen as well [128-131]. The substances are often also called "club drugs," reflecting that they are commonly abused by adolescents and young adults in night clubs and at so-called "rave" parties. Drug-facilitated sexual assault is sexual assault perpetrated upon a victim incapacitated by drug and/or alcohol ingestion. Strictly speaking, it doesn't matter whether the victim took the drugs willingly or was given them clandestinely. The drugs tend to have in common that they are amnestic, and victims are thus often unable to remember any details of sexual incidents. As a result, they cannot typically testify as to what happened. Legislation has been passed in response to the drug-facilitated sexual assault problem, such as the Hillary J. Farias and Samantha Reid Date-Rape Drug Prohibition Act of 2000, signed into law by President Clinton. Among other things, it makes GHB a schedule I controlled substance, and directs the Secretary of DHHS to collect more information about the prevalence of the this problem. As of mid-2001, there is no good epidemiological data on the extent of the drug-facilitated sexual assault problem, though we are actively trying to gather data on it through a NIJ-supported project at the University of Illinois at Chicago.

The most common forensic toxicological specimen for detecting drugs in a living person is urine. Up until now, there has never been a reason to even consider collecting urine from a sexual-assault complainant.

Now, however, urine must be collected if there is any indication or complaint of drugging, and a toxicological analysis is to be requested. Clinicians, SANEs, criminalists and toxicologists are working together to try and reach consensus on how to handle this growing problem [23;132;133]. Drug analysis can be a double-edged sword for complainants. They may not want the drugs found if they took them voluntarily, believing it would weaken their credibility and their case. Some labs look for all drugs of abuse and report what they find. In those cases, complainants may be abusing a different drug from the one involved in rape, and they would not want it to be detected. In any event, forensic toxicology labs are now sometimes involved in sexual assault cases. Another potential toxicological specimen is hair. Drug testing in hair is briefly discussed in § 2.D. below.

D. Laboratory Analysis of Physical Evidence

The majority of physical evidence collected in sexual assault cases is submitted to a forensic science laboratory for analysis. Documentation of a victim's injuries is the responsibility of the medical personnel conducting the clinical examination of a victim. The police might be involved in this documentation, or certain aspects of it, as well. There is one study that indicating that the color of bruises may give an indication as to their age [134]. In a few jurisdictions, medical practitioners may examine the vaginal (and/or oral and anal) smears (slides) for motile sperm [135]. The presence of motile sperm is one of the best indicators of recent sexual activity, and essentially the only finding that allows any conclusion as to the elapsed time since deposition of the semen. Sperm are motile only for a matter of hours after ejaculation. All the other analyses of the biological evidence, rape kit evidence, and other physical evidence, is typically done in the forensic science laboratory.

The key evidence in a sexual assault case is normally thought of as being the semen, blood or possibly hair that was transferred. In many cases, this will be so. But in other cases, other evidence can be important. Examples are transferred trace evidence [136], condoms [126;137;138], condom lubricants [139-141], clothing or clothing damage [142], and other unusual items [143]. There may be cases where the physical evidence findings cannot be reconciled with the rest of the case facts [144].

There are generally two aspects to the laboratory's analysis of biological evidence in sexual assault cases: identification and individualization. In larger laboratories, these activities may be done by separate analysts. All individualization testing today is DNA typing. Preliminary examination of biological evidence and identification testing is sometimes called "forensic biology." It may also be called "forensic biochemistry" though the latter is also used to denote DNA typing sections. "Forensic biology" is an unfortunate term because it does not take into account many other types of biological analyses (pollens and other botanicals, for example). In any case, evidence items are typically searched visually, and with the aid of UV, alternate light or laser illumination, to locate stains. The stains found are documented, and marked or cut out for further analysis. Identification tests are designed to demonstrate the presence of semen and/or other body fluids in or on an evidence item. Unequivocal identification tests for semen (and for blood) are available and have been for many years. Identification tests for saliva, urine and other physiological fluids and traces are universally presumptive.

Laboratories have traditionally had different policies on the prioritization and handling of sexual assault case evidence. Less busy labs had the resources to analyze all of the evidence in every case to the extent deemed necessary by the circumstances.

Busier laboratories had to prioritize the cases, usually analyzing ones that were of interest to a police investigator, prosecutor or that had a court date. Before DNA typing, there was some justification for not analyzing no-suspect cases, because useful information could not be developed until there was a suspect and his genetic types could be used for comparison. With DNA databases and databanks, there is every reason to analyze no-suspect cases. Using DNA profiles from no-suspect cases to help develop suspects is presumably the reason so much public money has been spent building the databanking program. There are still considerable backlogs in many forensic science labs because resource allocation has lagged behind case submission. Another cause of the backlog in databanking and databasing has been changes in the DNA technology. A significant number of specimens were typed using RFLP technology and entered into the databases and databanks in the 1980s and early 1990s. All those specimens had to be re-typed and re-entered when STR technology was adopted. There is currently much attention focused on clearing the backlogs, and in going back to older case rape kits that had not been analyzed when they were originally submitted. A substantial portion of the database backlog is being done by niche labs set up mainly to do contract DNA typing. Some of them are doing casework backlog typing as well.

In the U.S., the FBI has been responsible for coordinating with the forensic-science laboratories in adopting QA and QC guidelines as well as methods and DNA loci. To have databases and databanks available to laboratories everywhere, everyone has to be using the same profiling loci and comparable typing technology. For the moment, thirteen STR loci, the so-called core CODIS loci, have been universally adopted [145]. The CODIS (*Combined DNA Indexing System*), consisting of local (LDIS), state (SDIS) and national (NDIS) components is operational [146]. There are several components to the overall CODIS system. The files containing convicted-offender profiles are generally called "data banks." So-called "forensic" files contain profiles from unsolved cases, and these files may be called "data bases" to distinguish them from the convicted offender files. Forensic files can be used to link cases even if the perpetrator is not identified.

The introduction and development of technologies for DNA typing and data storage on a large scale nationally has some implications. The most obvious is that the whole system was built to help find suspects using DNA profiles in unknown-suspect cases. These cases have to be worked by labs on a timely basis, therefore, if the promise of the system is to be realized.

For practical purposes, a DNA profile match amounts to an identification, although there are still sophisticated statistical genetics arguments about it. For this reason, a DNA profile developed from a semen specimen identifies its donor (if his profile is available for comparison, either because it is databanked, or because he is a suspect). This ability is very powerful in cases involving strangers and in connecting cases through forensic files. It is of far less value in cases where the suspect is known to the victim, where identification is not an issue, and where a "consensual" defense is likely to be proffered.

As noted above, evidence other than semen may be significant in these cases. Indeed, non-biological evidence can sometimes be more helpful in solving or clarifying the case than DNA typing. In recent years, the majority of sexual assault cases involve non-strangers, and may even involve intimate partners (see in Appendix A).

It was noted in §2.C.5 above that an increasing number of "drug-facilitated" sexual assault cases are being seen around the nation. In a laboratory analysis context, this development means that forensic toxicological analysis now has a place in the analysis of specimens collected from sexual assault complainants, most notably urine and sometimes hair.

Methods for the analysis of most of the drugs or their major metabolites in urine are well established. The half-lives of the drugs and/or metabolites in urine are variable, and detection is also a function of the sensitivity of the method. Generally, GC/MS is the method of choice for analysis of drugs or metabolites. LC/MS may be used in some labs. It has some advantages over GC/MS but is less sensitive. GHB is the most difficult drug to detect because of its short half life, the inability to successfully derivatize it for GC/MS, and because human urine contains endogenous GHB [147]. NCI MS detection is far superior to EI in terms of sensitivity [148-152]. Analytical methods for determining drugs and their major metabolites in hair have been developed for forensic testing purposes as well as for compliance monitoring [153;153-160]. To the extent that reliable detection methods are available, hair is a good specimen matrix because it can be obtained nonintrusively, and it can reflect drug ingestion over a fairly long time period, even months sometimes. Problems with drug analysis in hair include difficulty detecting acidic drugs, discriminating between ingested substances and external contamination, and a racial bias with the basic drugs thought to be a function of greater melanin content in the hair of darker-skinned people.

E. Coordination of Efforts

Most of the literature about the investigation of sexual assault cases, clinical and psychological management of victims, and evidence collection protocols [1-7;9;10;13] stresses the importance of coordinating the efforts of police and investigators, victim-services agencies, medical / hospital staff, prosecutors and forensic science laboratories. This kind of coordination was also emphasized in our interviews with various individuals at the study sites. In jurisdictions that have worked toward coordinating the efforts of all the different people and agencies involved in a case, the process is much more consistent, easier for victims, and generally yields more consistent results. Committees or task forces formed for the purpose of coordinating efforts have been involved in designing sexual assault evidence kits, and periodically reviewing their utility.

The different people and agencies involved in a sexual assault investigation have different roles, and the focus created by these roles can result in conflicts, or a failure by one party to fully appreciate another's role. Communication among different parties with coordination as an objective can help alleviate potential problems or conflicts.

From a physical-evidence point of view, it is essential that the different parties agree on an evidence-collection protocol that is generally accepted. This agreement should include the contents (and accompanying instructions) of sexual assault evidence collection kits.

Some jurisdictions have initiated coordinated programs for handling sexual assault victims, forming what are usually called "Sexual Assault Response Teams" (SART). There have also been efforts to train and certify Sexual Assault Nurse Examiners (SANE), who are specially trained in the handling of sexually assaulted patients, and in physical evidence collection. The SANE program is part of a larger initiative to train experienced nurses in forensic evidence appreciation and collection [20-23;161;162]. Forensic nurses have been at the forefront of SART program development, and the SANE and SART concepts are inextricably linked [163]. Over 100 SANE-SART programs now operate in the U.S. Some of them use emergency department or other clinical settings, while some have their own stand-alone examination facilities.

F. Case Foundation and Adjudication

Strictly speaking, the adjudication stage of a case begins when a prosecutor becomes involved. The point at which that occurs varies in different jurisdictions. Some prosecutors are directly involved in deciding whether to support arrest warrants, and the decision is obviously influenced by the case facts and the evidence.

The police are involved at the earliest stages of reported cases, and they make judgments about whether to take cases to the prosecutors. Their decisions are based to some extent on the evidence available, and to some extent on whether the victim chooses to take the case forward.

A study of police and prosecutorial response to sexual assaults in Chicago, using 1979 and 1981 case data, was done by Kerstetter [164]. The study tried to explore the criteria used by police to "found" a case, i.e. to classify it as a criminal case, and carry forward with an investigation, as well as criteria used by prosecutors to file felony charges. In stranger cases, several factors, including a complainant's willingness to prosecute, whether a suspect was in custody, whether a weapon was used, and whether a victim offered resistance, were important in determining whether police "founded" a case. A victim's willingness to prosecute and good identification evidence contributed importantly to prosecutors' decisions to file felony charges. In acquaintance cases, a suspect being in custody, a corroborating witness, and use of a weapon, were important factors both in police founding of cases and in felony filings. In another, related study [165], it was determined that police have substantial influence on a complainant's decision to prosecute. The most likely explanation for this influence turned out to be the need to try and allocate scarce law enforcement resources efficiently.

Bradshaw and Marks [166] looked at 350 child sexual abuse cases in Ector County TX to determine the influence of the child's age, relationship to alleged offender, interval between incident and reporting, presence / absence of medical evidence, and presence / absence of statement by the accused, on subsequent prosecution and conviction. There was a greater chance of prosecution and conviction in cases where there was medical evidence and/or a statement by the offender, and if the interval between the incident and reporting was shorter.

The Bureau of Justice Statistics regularly reports on felony sentences imposed by state courts. In 1992, state courts convicted 893,600 adults of felonies, up 34% from 1988 [167]. Violent crime offenders made up 18% of the total, and rape offenders made up 2.4% of the total. Of those convicted of rape, 68% were sentenced to prison and 19% to jail. 13% were placed on probation. The mean value of prison sentences for conviction of rape was longer than for all violent offenses. For jail sentences, it was the same. In a related study, BJS reported that about half of rape defendants were released pending trial in 1992 [168]. In 1994, on the average, there were approximately 234,000 offenders convicted of rape or sexual assault under the care, custody, or control of corrections agencies. Almost 60% of these sex offenders are under conditional supervision in the community. An estimated 24% of those serving time for rape and 19% of those serving time for sexual assault had been on probation or parole at the time of the offense for which they were in State prison in 1991 [169].

Other BJS studies indicate that about 5% of violent felony filings nationwide are for forcible rape [170]. About half of the rape defendants are released prior to trial, with about half of those having to post bond. It was estimated that over 21,600 felony defendants were convicted of rape in 1992. 80% had pleaded guilty. Over two-thirds of convicted rape defendants were sentenced to prison for terms averaging just under 14 years.

Table 2-1. Contents of Representative Sexual Assault Evidence Collection Kits (Victim)

Collection Kit Item	A	B	C	D	E	F	G	H	I	J
Outside container; general information; labeling										
Foreign material		B2		D3	E3		G2			
Victim outer clothing		B3	C2	D3	E3	F11	G2			
Victim underclothing, underpants	A3	B3	C2	D3	E3	F10	G2			
Debris	A2	B4	C3	D4					I2	
Stains on Skin (Dried secretions)	A4	B4	C8	D4	E8		G4		I4	
Oral swabs	A5	B5	C6	D5	E4	F8	G3	H4	I10	J8
Oral smear	A5	B5	C6	D5		F8	G3	H4	I10	J8
Vaginal (penile) swabs	A6	B6	C12	D8	E6	F2	G3	H4	I10	J8
Vaginal (penile) smears	A6	B6	C12	D8		F2	G3	H4	I10	J8
Vaginal washings						F3				
Rectal swabs	A7	B7	C13	D9	E7	F8	G3	H4	I10	J8
Rectal smear	A7	B7	C13	D9		F8	G3	H4	I10	J8
Pubic hair brushings / combings	A8	B8	C9	D7	E9	F4	G5	H2	I5	J4
Head hair combings				D6	E11		G5			
Genital swabbing		B9	C11							
Saliva specimen	A9	B14	C7	D10	E5	F9		H6	I9	J2
Blood specimen	A11	B13	C15	D11	E14	F7		H5	I11	J3
Reference head hair	A10	B11	C5		E12	F6		H3		J6
Reference pubic hair	A10	B10	C10		E10	F5		H3	I6	J5
Fingernail scrapings or clippings	A12	B12	C4		E13			H7	I8	
Nasal mucous									I12	
Other physical evidence			C14							
Forms and paperwork	A13	B15	C16	D2	E2		G7		I13	
Other	A14			D12		F12		H8		

In Table 2-1, each different kit is designated by a letter. An entry in the cell for that kit means the kit provides a container for collection of the designated item. Notes providing details on each kit for each item it contains appear below in the following pages of the table. Notes on Kit A are designated A1, A2, etc., notes on Kit B are B1, B2, and so forth.

Table 2-1A. Notes on Kit A - Washoe County NV

A1. Washoe County Sheriff's Office, Forensic Science Division, Sexual Assault Evidence Kit - 9.5 x 13 inch Manila envelope

Side 1 labeling: Examination Requested By; Agency; Agency Case No.; Offense(s); Samples Collected From; Date and Time of sample collection; Location of sample collection; Samples collected by; Officer's Check List - envelopes 1 through 10 and B, two spaces for "other"; Chain of Custody flow sheet (name and date)

Side 2 labeling: detailed instructions for each envelope (item); for each envelope (item) there is a checkbox as to whether item was collected, and if not, why not.

All envelopes for individual items are 8.5 x 5 or 6.5 x 4 inches and have a "fold and bend" tab type seal. Each is labeled with a number corresponding to the directions on the outside container (i.e. 1, 2, 3, etc.), and a description of the contents. The "B" envelope for the blood is not designed to be placed back into the larger envelope - see Note A12.

Every envelope, stick-on label, and form in the kit has a common identification number pre-printed on it.

A2. Envelope #1 for any visible "debris" on the body. Instructions are to indicate location of debris on the body diagram. Instructions also say to collect clothing, if indicated by history, and place each item in a separate bag (bags not provided in kit, except for underpants - see Note A3).

A3. Envelope #2 (Manila 9 x 12) for underpants.

A4. Envelope #3 for any moist or dried secretions on skin, collected on sterile gauze or swabs (not provided), including swabbings from central areas of bite marks. Location should be noted on body diagram.

A5. Envelope #4 for oral swabs and smear. A slide, slide case and label are provided for the smear. Instructions ask for 2 swabs, and a small cardboard box is provided to contain the swabs. The box is to be marked as to whether the swabs inside are vaginal, anal or oral. Instructions specify to dry before packaging.

A6. Envelope #5 for vaginal swabs and smears. Two slides, slide cases and labels are provided for the smears. Instructions indicate that one wet mount slide should be made, and examined for motile sperm. Instructions ask for 4 swabs, and two small cardboard boxes are provided to contain the swabs. The box is to be marked as to whether the swabs inside are vaginal, anal or oral. Instructions specify to dry before packaging.

A7. Envelope #6 for rectal swabs and smear. A slide, slide case and label are provided for the smear. Instructions ask for 2 swabs, and a small cardboard box is provided to contain the swabs. The box is to be marked as to whether the swabs inside are vaginal, anal or oral. Instructions specify to dry before packaging.

A8. Envelope #7 for pubic hair brushing. Instructions say to look for dried secretions on the pubic hair, and clip hair that has such secretions. A fine-bristled brush and a paper towel are provided. The brushed hairs and the brush are to be folded up in the paper towel and placed in the envelope.

A9. Envelope #8 for saliva sample. Two 3.5 inch diameter filter papers are provided. Instructions indicate that only the patient should touch the filter paper, that it should be saturated with saliva, dried, and placed back in the envelope.

A10. Envelope #9 for reference head hairs (20, plucked) and envelope #10 for reference pubic hairs (20, plucked)

A11. Envelope B (Manila 10.5 x 7.5) for blood sample. One 5 mL EDTA vacutainer tube provided. Envelope is labeled with essentially the same information as Side 1 of the "kit" envelope (see Note A1), can be sealed, and is designed to be submitted separately from the rest of the kit. Envelope B is also marked "Refrigerate - Liquid Blood".

A12. Two envelopes, one for right and one for left, fingernail scrapings or clippings. Instructions indicate that these specimens should be collected if indicated.

A13. Several forms are included in the kit. One is a application and affidavit for the County to pay for the examination. Another is a combined consent for treatment, evidence collection and release of information (one copy to chart, one to patient, one to police officer). A third is a two page history form containing medical information, detailed information about the assault and the patient's actions between the assault and the examination, information about consensual sex within 72 hours, a space for comments and a record of who completed the form. This form also asks for the results of examining the wet mount for motile sperm. Copies of the history form to chart, kit (for lab) and police officer. There is a male/female body diagram included that shows whole body and genitalia, and is designed to note locations of evidential material, injuries, pain, bite marks, etc. This form stays in the patient's chart. The last form is follow-up instructions for the patient, indicating what tests were done, what medications were given, and how to follow up with additional testing for venereal infections and HIV at the Health Department. One copy of this form goes in the chart, and the other to the patient.

A14. A separate "suspect kit" is available (see in Table 9 and 9K).

Table 2-1B. Notes on Kit B - Alabama

- B1. Alabama Sexual Assault Evidence Collection Kit, manufactured by Sirchie (AL 100) - 10.5 x 7 x 2.5 inch deep cardboard box**
Labeling: Box for completion by medical personnel; box for completion by police; chain of possession flow chart; box for completion by forensic lab. There are detailed step-by-step instructions included in the kit. Individual envelopes for evidential items have the "step" number, and a label for the patient's name, date, time, person who did collection, and check box for whether specimen was collected or not, and if not, why not. Box has an integrity seal.
- B2. Step 2 Foreign material envelope.** Contains a 19 x 30 in clean white paper, designed to catch debris and trace as patient disrobes while standing on it. Instructions tell clinical personnel to place a clean sheet on the floor first, then the clean white paper for patient to stand on. The paper is designed to be re-folded and replaced into the envelope.
- B3. Two large bags (Step 2) for outer clothing and a smaller bag (Step 2) for undergarments.** Instructions note that clean brown or white paper bags may be used for additional items if needed. Bags are to be stapled closed, and labels completed.
- B4. Step 3 Debris collection envelope, also including any secretion stains on the body.** A clean white piece of paper is provided for "debris." Two swabs are provided for collecting secretion stains from body (with sterile saline or distilled water). Instructions suggest using a UV light for searching. Instructions also specify that if bitemarks are noted, the protocol of the investigating law enforcement agency should be followed.
- B5. Step 4 Oral swabs and smear envelope.** A slide and slide case are provided for the smear. Two swabs are provided, with a small cardboard box to contain the swabs. The box is to be marked as to whether the swabs inside are vaginal, anal, oral, or penile. Instructions specify to dry before packaging. Should be collected only if oral-genital contact occurred.
- B6. Step 5 Vaginal (or penile) swabs and smear envelope.** A slide and slide case are provided for the smear. Four swabs are provided (to be used two at a time), with a small cardboard box to contain the swabs. The box is to be marked as to whether the swabs inside are vaginal, anal, oral, or penile. Instructions specify to dry before packaging. Should be collected only if vaginal assault occurred (or from males if penile assault occurred). Envelope to be labeled as to whether it contains vaginal or penile specimens.
- B7. Step 6 Rectal swabs and smear envelope.** A slide and slide case are provided for the smear. Four swabs are provided (to be used two at a time), with a small cardboard box to contain the swabs. The box is to be marked as to whether the swabs inside are vaginal, anal, oral, or penile. Instructions specify to dry before packaging. Should be collected only if anal assault occurred.
- B8. Step 7 Pubic hair combings envelope.** A paper towel and comb are included. Towel to be placed under patient's buttocks during combing to catch loose hairs. Loose hairs and comb to be folded up in paper towel and placed in envelope.
- B9. Step 8 Genital swabbing envelope.** A sterile gauze pad is provided, to be moistened with distilled water, used to swab vulva and inner thighs, then dried and packaged.
- B10. Step 9 Pubic hair cuttings envelope.** A clean piece of white paper is included, to be placed under patient's buttocks during cutting of hairs. Instructions specify 15 to 25 hairs cut as close to the skin as possible.
- B11. Step 10 Head hair cuttings envelope.** A clean piece of white paper is included, to be placed under patient's buttocks during cutting of hairs. Instructions specify 25 to 35 hairs cut as close to the skin as possible, and from different areas of the scalp (center, front, back, left and right sides).
- B12. Step 11 Fingernail scrapings envelope.** Two pieces of clean white paper are included. Instructions say to scrape under all five fingernails of the left hand and allow the material to fall onto the paper. Then fold the paper and label "Left." Repeat for the right hand using the other piece of paper, and label "Right."
- B13. Step 12 Known blood sample envelope.** One EDTA vacutainer tube (approximately 7 mL) provided.
- B14. Step 13 Known saliva sample envelope.** A 11 cm diameter filter paper is included, with a marked 5 cm circle in the center. Instructions indicate that inner circle should not be touched, should be saturated with saliva by the patient, then the filter paper dried and packaged.
- B15. The kit furnishes two "Evidence" tapes for sealing the box when completed, a biohazard sticky label, and three blank circular stick-on labels.** There is a set of instructions for each step of the evidence collection. There is a page on instructions for blood collection into the vacutainer. A "Survivor Support Form" with information about follow-up medical procedures (primarily for venereal diseases and HIV), locations and phone numbers of rape crisis centers, and conditions for reimbursement of expenses and lost wages, etc. A "Sexual Assault Information Form" contains medical and history information and a follow-up information checklist (completing this form is Step 1 in this kit), and copies go to the kit (lab), the medical chart, and the law enforcement agency. There are single copies of three body diagram forms, one whole body female, one whole body male, and one female perineum.

Table 2-1C. Notes on Kit C - Connecticut

C1. Connecticut Sexual Assault Evidence Collection Kit, manufactured by Sirchie (CT 100) - 10.5 x 7 x 3.5 inch deep cardboard box
Labeling: Box for completion by medical personnel; box for completion by police; chain of possession flow chart; box for completion by forensic lab. There are detailed step-by-step instructions included in the kit. Individual envelopes for evidential items have the "step" number, and a label for the patient's name, date, time, person who did collection, and check box for whether specimen was collected or not, and if not, why not. A sealable envelope is attached to the bottom of the box for the lab copy of one page of the sexual assault medical report. The box provides space for a "moist specimen" label (if applicable), a "biohazard" label, and two evidence sealing tapes are included. Space is provided for marking "1 of ___" on the box, where the blank indicates the total number of packages associated with the case. Box has an integrity seal.

C2. Step 1 Clothing bag contains a 19 x 30 in clean white paper, designed to catch debris and trace as patient disrobes while standing on it. Instructions tell clinical personnel to place a clean sheet on the floor first, then the clean white paper for patient to stand on. The paper is designed to be re-folded and replaced into the large clothing bag. Two smaller bags for outer clothing and a smaller bag for undergarments are enclosed. These are designed to go into the larger clothing bag. Instructions note that clean brown or white paper bags may be used for additional items if needed. Bags are to be stapled closed, and labels completed.

C3. Step 2 Debris envelope, for obvious debris such as soil, fibers, hair, grass, etc.

C4. Step 3 Fingernail scrapings and cuttings envelope. Contains two toothpick-type wooden scrapers, a fingernail clipper, and envelopes for cuttings/scrapings from right and left hands. Scrapers are placed in "right" or "left" hand envelopes. These envelopes and clippers are placed in larger envelope.

C5. Step 4 Known head hair pulled envelope. Contains a plastic forceps-like tool designed for pulling hairs, and a pair of scissors (for use if hair cannot be pulled). A smaller envelope is included to contain the hairs. Instructions call for at least 20 hairs, 4 from front, back, right and left sides of head. Tool and scissors are designed to be used again later for known pubic hair collection (see C10).

C6. Step 5 Oral swab and smear envelope. Contains two packages of two sterile swabs each, a slide case with two slides, and a stick-on label "used for smear." Instructions say to use two swabs from one package, make the two smears with these swabs, replace the swabs in their original package and label it with the "used for smear" sticker. Next, two swabs from the other package are used, and replaced in their original package. Slides are swabs to be dried before packaging.

C7. Step 6 Saliva sample envelope. A 11 cm diameter filter paper is included, with a marked 5 cm circle in the center. Instructions indicate that inner circle should not be touched, should be saturated with saliva by the patient, then the filter paper dried and packaged in a smaller inside envelope provided.

C8. Step 7 Dried secretion specimen envelope. A package of two swabs are provided for collecting secretion stains from body (with sterile saline or distilled water). Instructions say that if bitemarks are noted, a forensic odontologist should be contacted. Swabs are to be returned to their original package, dried, and placed in the envelope. If more than one secretion stain is collected, the swab packages should be labeled "7A", "7B", etc. A body diagram on the Step 7 envelope is to be used to indicate the area from which each swab was taken.

C9. Step 8 Pubic hair combings envelope. A paper "envelope" that opens completely to form a sheet of paper, and comb are included. The "envelope" that opens is to be placed under patient's buttocks during combing to catch loose hairs. Loose hairs collected are to be folded up into the paper "envelope," and placed back into the larger envelope with the comb.

C10. Step 9 Pulled pubic hair envelope. A smaller envelope is included, to contain the pulled (or cut) hairs. Instructions specify a minimum of 10 hairs. The forceps-like tool (and scissors) from step 4 may be used, then placed into the large envelope.

C11. Step 10 Genital swabbing envelope. A package of two swabs is provided, to be moistened with distilled water, used to swab vulva and inner thighs, then dried and packaged.

C12. Step 11 Vaginal swab and smear envelope. Contains two packages of two sterile swabs each, a slide case with two slides, and a stick-on label "used for smear." Instructions say to use two swabs from one package, make the two smears with these swabs, replace the swabs in their original package and label it with the "used for smear" sticker. Next, two swabs from the other package are used, and replaced in their original package. Slides are swabs to be dried before packaging.

C13. Step 12 Anal swab and smear envelope. Identical to "vaginal swab and smear" envelope, except for labeling (see C12).

C14. Step 13 Other physical evidence envelope. Contains two smaller envelopes (13A, 13B) and a plastic zip-lok bag, for "other" items, such as condoms, tampons, toilet tissue, glass in the body, etc. Items difficult to air dry may be packaged in the plastic zip-lok bag. If moist items are collected, a "moist specimen" sticker should be placed on the designated area of the outside box, and police instructed to transport the evidence to the lab immediately.

C15. Step 14 Known blood samples. An EDTA vacutainer tube (approx 7 mL) and a clot vacutainer tube (approx 7 mL) are included in a protective, sealable "bubble pack". The sealed bubble pack with the filled tubes is sealed in the envelope, which is then returned to the kit box.

C16. The kit furnishes four "Evidence" tapes for sealing the box when completed, a biohazard sticky label, and a "moist specimen" stick-on label. There is a page on instructions for blood collection into the vacutainer. A six page set of forms is included. Page 1 has medical and history information relevant to the clinical and forensic laboratory records (one copy goes in an envelope attached to the bottom of the kit box). Pages 2, 3 and 4 are body diagrams and medical information concerning findings, treatment, etc. Page 5 is a Sexual Assault Checklist for clinical personnel, covering all their clinical, evidence collection and follow-up information responsibilities. Pages 2 through 5 stay in the medical file. Page 6 is follow-up / discharge instructions for the patient. One copy stays in the medical file, and the other is given to the patient.

Table 2-1D. Notes on Kit D - New Hampshire

D1. New Hampshire Sexual Assault Evidence Collection Kit, manufactured by Tri-Tech, Inc. (RE-ONH) - approximately 10.5 x 7 x 2.5 inch deep cardboard box

Labeling: Box for completion by medical personnel; box for completion by police: chain of possession flow chart. There are detailed step-by-step instructions included in the kit. Individual envelopes for evidential items have the "step" number, and a label for the patient's name, date, time, person who did collection, and check box for whether specimen was collected or not, and if not, why not. Two evidence box sealing tapes are provided. Box has an integrity seal.

D2. Steps 1, 2, 8, 12, 14 and 15 are forms. Step 1 is an Authorization for Collection and Release of Information and Evidence to Law Enforcement Agency. One copy stays in medical records, the other is returned to the kit box. Steps 2 and 8 are on another form. Step 2 is a Sexual Assault Medical Report Form providing for standard information about the patient, medical history and actions taken between the assault and the examination. Step 8 is a Physical Examination form for recording findings, tests, and follow-up check list. One copy of the form stays in medical records, the other is returned to the kit box. Another form lists sexual assault crisis centers in the state, with addresses and phone numbers. Step 12 form is anatomical drawings (male and female) and space to record findings. One copy of the form stays in medical records, the other is returned to the kit box. Step 14 is a Patient Information Form recording tests, medications, and follow-up information. Step 15 is a Pregnancy Prophylaxis Information Sheet providing information about hormonal pregnancy prophylaxis and information about what treatment was or was not administered. One copy of the Step 14 and 14 forms stays in medical records, the other is given to the patient.

D3. Step 3 Foreign material envelope. Contains a 19 x 30 in clean white paper, designed to catch debris and trace as patient disrobes while standing on it. Instructions tell clinical personnel to place a clean sheet on the floor first, then the clean white paper for patient to stand on. The paper is designed to be re-folded and replaced into the envelope. Step 3 also provides two large bags for outer clothing and a smaller bag for undergarments. Instructions note that clean brown or white paper bags may be used for additional items if needed. Bags are to be stapled closed, and labels completed.

D4. Step 4 Debris collection envelope, also including any secretion stains on the body. A clean white piece of paper is provided for "debris." Two swabs are provided for collecting secretion stains from body (with sterile saline or distilled water). Instructions suggest using a UV light for searching. Instructions also specify that if bitemarks are noted, the protocol of the investigating law enforcement agency should be followed.

D5. Step 5 Oral swabs and smear envelope. A slide and slide holder are provided for the smear (slide is pre-labeled but slide holder is not). Two swabs are provided, with a small cardboard box to contain the swabs. Instructions specify to dry before packaging.

D6. Step 6 Head hair combings envelope. Contains a paper towel and a comb. Instructions say to place towel under patients head, use the comb to loosely comb the hair to remove any debris and transferred hairs onto the towel. Towel is refolded to retain combings and comb and replaced in envelope.

D7. Step 7 Pubic hair combings envelope. Contains a paper towel and a comb. Instructions say to place towel under patients buttocks, use the comb to loosely comb the pubic hair to remove any debris and transferred hairs onto the towel. Towel is refolded to retain combings and comb and replaced in envelope.

D8. Step 8 Vaginal (or penile) swabs and smear envelope. A slide and slide holder are provided for the smear (slide has a label for marking "vaginal" or "penile"). Two swabs are provided (to be used two at a time), with a small cardboard box to contain the swabs. Instructions specify to use swabs to make smear, then dry all items before packaging. Specimen should be collected only if examination is within 5 days of the assault.

D9. Step 9 Rectal swabs and smear envelope. A slide and slide holder are provided for the smear (slide has a label "rectal"). Two swabs are provided (to be used two at a time), with a small cardboard box to contain the swabs. Instructions specify to use swabs to make smear, then dry all items before packaging.

D10. Step 10 Known saliva sample envelope. A 11 cm diameter filter paper is included, with a marked 5 cm circle in the center. Instructions indicate that inner circle should not be touched, should be saturated with saliva by the patient, then the filter paper dried and packaged.

D11. Step 11 Known blood sample envelope. A clot vacutainer tube (approx 7 mL) is included in a protective, sealable "bubble pack". The sealed bubble pack with the filled tube is sealed in the envelope, which is then returned to the kit box.

D12. Step 13 in this kit is photographs on victim injuries if indicated.

Table 2-1E. Notes on Kit E - Illinois

E1. Illinois State Police Sexual Assault Evidence Collection Kit - approximately 11.5 x 6.5 x 2.5 inch deep cardboard box

Labeling: Space for patient information, date, names of hospital personnel; name of police officer and department, and date/time of transfer to law enforcement agency. There is a step-by-step checklist inside the box cover. Individual envelopes for evidential items have the "step" number, and a label for the patient's name, date, time, person who did collection, and instructions for completing that step. Instructions on each envelope state that the envelope should be discarded if the indicated evidence was not collected. An evidence box sealing tape is provided. Several stick-on labels showing "contents," "patient name," "physician/nurse," "date," and "time" are included. Box has an integrity seal.

E2. There is a page on instructions for blood collection into the vacutainer. A "Notes to Examining Physician Form" indicates information to place on included forms, where copies go, additional materials needed that are not provided, indicated medical tests for victims over 13 years of age and under 13 years of age, and minimum information that should be in the medical record. Step 1 "Patient Consent/Authorization to Release Evidence to Law Enforcement Agency" Form; this form also has a Step 16 section, for the police officer to indicate what items were transferred, and the names of persons in the chain of custody. One copy stays with medical record, one copy goes to law enforcement agency. Step 2 consists of four two-part forms (one part for medical record, one for the kit). These record patient identifying information, identity and description of assailants (if known), history of the incident, actions taken between incident and examination, medical history, male and female body and genitalia diagrams and space to record findings, and space for signatures of examining personnel. Step 17 "Patient Discharge Materials" Form describes tests done, medications, prophylaxis, and follow-up information for the patient. One copy stays in medical records, one is given to patient.

E3. Step 3 is one larger and one smaller paper bag for patient's clothing. Step 4 Miscellaneous/Debris collection envelope contains a 41 x 39 in piece of clean white paper, designed to catch debris and trace as patient disrobes while standing on it. Instructions tell clinical personnel to place a clean sheet or piece of paper on the floor first, then the clean white paper for patient to stand on. The paper is designed to be re-folded and replaced into the envelope. Step 3 also provides two large bags for outer clothing and a smaller bag for undergarments. Labels on Step 3 "Clothing" envelopes ask whether this clothing is the same as that worn during the assault.

E4. Step 5 is Oral specimens envelope. Contains two packages of two swabs each, and a box for packaging them when finished. Instructions indicate that one of the labels should be completed and placed on the box before returning the box to the envelope. Instructions specify that swabs should be dry before packaging.

E5. Step 6 Saliva specimen envelope. Contains a 4 cm diameter filter-paper disc. Instructions indicate patient should place in mouth, saturate, remove and allow to air dry, then place in envelope. No one else should handle the disc directly.

E6. Step 7 Vaginal/cervical specimens envelope. Contains two packages of two swabs each, and a box for packaging them when finished. Instructions indicate that one of the labels should be completed and placed on the box before returning the box to the envelope. Instructions specify that swabs should be dry before packaging.

Step 7 Penile specimens envelope. Contains two packages of two swabs each, and a box for packaging them when finished. Instructions indicate that one of the labels should be completed and placed on the box before returning the box to the envelope. Instructions specify that swabs should be dry before packaging.

E7. Step 8 Rectal specimens envelope. Contains two packages of two swabs each, and a box for packaging them when finished. Instructions indicate that one of the labels should be completed and placed on the box before returning the box to the envelope. Instructions specify that swabs should be dry before packaging.

E8. Step 9 Miscellaneous stains envelope. Contains one package of two swabs, and a box for packaging them when finished. Instructions indicate that one of the labels should be completed and placed on the box before returning the box to the envelope. Instructions specify that swabs should be dry before packaging. Additional swabs may be used from supply if necessary.

E9. Step 10 Pubic hair combings. Contains a clean white paper and a comb. Instructions say to use the comb to loosely comb the pubic hair to remove any debris and transferred hairs onto the paper. Paper is refolded to retain combings and replaced in envelope with comb.

E10. Step 11 Pubic hair standards envelope. Contains a clean white paper. Purpose of collecting pulled known pubic hairs should be explained to patient, and patient given the option to refuse the procedure. If patient agrees, 25 hairs are to be collected on the paper, the paper refolded, and placed back in the envelope. Instructions specifically indicate that hairs are not to be cut.

E11. Step 12 Head hair combings envelope. Contains a clean white paper and a comb. Instructions say to use the comb to loosely comb the head hair to remove any debris and transferred hairs onto the paper. Paper is refolded to retain combings and replaced in envelope with comb.

E12. Step 13 Head hair standards envelope. Contains a clean white paper. Instructions call for 10 full length hairs from each of the front, back, top and sides of the head (50 hairs in total) to be collected by plucking, placing onto the paper, the paper refolded, and placing back in the envelope. Instructions specifically indicate that hairs are not to be cut.

E13. Step 14 Fingernail specimen envelope. Contains two smaller envelopes, one for "right" and one for "left" hand scrapings, and two wooden "orange sticks" for scraping. Instructions call for these specimens to be collected if indicated by history. Instructions on the outside envelope are ambiguous about where to place these specimens once collected.

E14. Step 15 Blood specimens envelope. Contains a red "peel off" sticky tape, 1 in wide and 20 in long. This kit also contains a styrofoam container in which two vacutainer tubes are packaged (one EDTA, approx. 7 mL, and one clot tube, approx. 7 mL). Instructions indicate that the tubes should be rubber banded and placed in the envelope.

Table 2-1F. Notes on Kit F - Indiana

F1. Indiana State Police Sexual Assault Evidence Collection Kit, manufactured by Lynn Peavey Co. (5795) - approximately 9.25 x 6 x 1.25 inch deep cardboard box

Labeling: Instructions for investigator. Space for case number, date/time, from whom received by law enforcement officer, and law enforcement officer's name. Space for a summary of certain medical observations (any diseases or parasites noted, vaginal bleeding). Investigator is instructed to use this agency's separate "suspect kit" if a suspect is available. There is a step-by-step page of instructions in the box for the examining physician. This form has space for victim's name, date/time, name of physician, and name of a witness to collection. Apparently, this form is intended to go to the law enforcement officer, or to the kit. Various evidential item envelopes are pre-labeled as to the item they should contain. Two evidence box sealing tapes are provided. Box has an integrity seal.

F2. Vaginal / cervical swabs and smears. One package of two swabs, two slides in a slide holder, and a "vaginal & cervical swabs - victim" envelope are provided. Smears are to be made using swabs. Swabs to be used to make smears. Swabs and slides to be air dried before packaging. Slide holder is pre-labeled.

F3. Instructions call for vaginal washing with saline into the provided stoppered (clot-type vacutainer) test tube (approx. 10 mL).

F4. "Pubic hair combings - victim" envelope. Contains a comb. Combings to be placed in envelope.

F5. "Pubic hair standard - victim" envelope. Instructions specify 20 pulled hairs, to be placed in envelope.

F6. "Head hair standard - victim" envelope. Instructions specify collection of 40 to 50 pulled hairs from front, back, sides and top of head, and placing into envelope.

F7. Two vacutainer tubes, one EDTA and one clot, approx. 10 mL provided for blood.

F8. Instructions indicate that oral and/or rectal swabs and slides (smears) should be collected if indicated, following essentially the same procedure as for vaginal swabs and smears, and using swabs and slides from hospital stock.

F9. "Saliva sample - victim" envelope. Contains a 12.5 cm diameter filter paper. Instructions indicate that victim should remove filter paper, wet the area with saliva, the outline the wetted area with a pencil. Filter paper is then air-dried, and placed into envelope that is sealed.

F10. Victim's underpants bag. Small white paper bag provided. Instructions indicate underpants should be placed in a "brown paper bag" and sealed.

F11. Instructions indicate that outer clothing should be collected if indicated, each item placed in separate paper bags (not included), sealed and labeled.

F12. A separate "suspect kit" is available (see in Table 9 and 9L).

Table 2-1G. Notes on Kit G - Chicago

G1. Chicago Police Department Sexual Assault Evidence Collection Kit, manufactured by Sirchie (CPD100) ↓ approximately 9.75 x 6 x 1.5 inch deep cardboard box

Labeling: Space for date of examination, CPD case number, patient name and address, hospital name and address, address where assault occurred, names and signatures of physician and nurse, name and signature of person transferring kit to police officer, and name, signature and badge number of law enforcement officer. "No Wet Items in Kit." There is a step-by-step checklist inside the box cover and a detailed set of instructions in the box for the examining physician. Various evidential item envelopes are pre-labeled as to the item they should contain. Two stick-on labels with space for "Contents; Patient's name; Physician/Nurse; Date; Time" are provided. An evidence box sealing tape is provided. Box has an integrity seal.

G2. Instructions call for patient to stand on a clean sheet or paper while disrobing. Clothing is to be collected if there is evidence of cuts, tears or stains, and if it is the same clothing the patient was wearing at the time of the assault. A small white paper bag is provided for underwear, but containers for other clothing should be taken from stock. Two labels with space for "Contents; Patient's Name; Physician/Nurse; Date/Time" are provided, presumably for use in labeling clothing bags. Any debris, plant material, soil, etc. that is deposited on the sheet or paper during disrobing is to be collected and placed in a "Miscellaneous" envelope (provided).

G3. Kit provides three sets of swabs (two in each package). One set is used for oral, one for rectal and one for vaginal (or penile) swabbing. Small boxes are provided for packaging the swabs, once collected and used to make the smears. The boxes are pre-labeled "Vaginal or Penile (circle one)", "Rectal" and "Oral." There are slides in separately-labeled slide containers (one slide for each of "oral," "vaginal or penile," and "rectal"). A pencil is provided for labeling the frosted end of the slides. Instructions indicate that swabs for penile or rectal swabbing should be slightly moistened with distilled water. Instructions indicate that bitemark areas should be swabbed (using materials from stock). The bitemark should be photographed and a forensic odontologist contacted.

G4. Instructions call for collection of dried fluid stains on patient's body, using swabs and slides from hospital stock.

G5. Two combs are provided, one for head hair combings, the other for public hair combings. Pre-labeled envelopes for each specimen are provided. Written instructions (but not those inside the top of the box) indicate that combing should be done over a clean piece of paper (not provided). Combings and the comb are then placed into the appropriate envelope, which is sealed and labeled.

G6. An orange stick is provided for collecting fingernail scrapings. Instructions indicate that right and left hand scrapings should be separately packaged in "Miscellaneous" envelopes. Two such envelopes are provided, but instructions indicate that one should be used for "debris" packaging (see G2) if applicable.

G7. Besides the detailed instruction sheet, there is an "Emergency Room Personnel - Please Note" sheet. It advises to obtain all the requested information on the box cover, describes the other three forms in the kit, notes materials needed to do the examination other than what is provided, and suggests medical testing that should be done. There is a "Authorization for Release of Information and Evidence to Law Enforcement Agency" form that includes a chain-of-custody section for police personnel at the bottom (one copy to medical record, one copy to law enforcement agency). There is a "Patient Information" form indicating to the patient what was done and follow-up appointments and procedures (one copy to medical record, one copy to patient). There is a "Sexual Assault Forensic Laboratory Report" form indicating history, actions taken by patient between assault and examination, inventory of evidence collected and name/signature of examining physician and nurse (one copy to kit, one copy to medical record).

Table 2-1H. Notes on Kit H - Palm Beach County FL Sheriff's Office

H1. Palm Beach County Sheriff's Office - two paper bags containing evidence collection containers and items. One is for victim specimens (This table, 19H). The second is for known standards from suspect, consensual partner, or other person involved in the case (see Table 20 and 20M). Labeling: Space for date/time and place of examination, PBSO case number, patient name, suspect name, "Recovered By," "Sealed By," and description of contents. There is an Instruction Sheet inside each bag. The victim Rape Kit instructions indicate what is included, and what is not, as well as a step-by-step procedure.

H2. Pubic hair combings envelope. Contains a clean white paper (called an "apron"). Apron is to be placed under patient's buttocks during combing. A comb is provided. Both combings and comb to be sealed in envelope which is then labeled and initialed.

H3. Hair standards are marked "optional" in instructions. If collected, instructions specify 20 plucked pubic hairs placed in a 3.5 x 6 inch envelope (provided), which is then sealed and labeled. For head hair, instructions call for 20 hairs each plucked from top, back, left and right sides of the head, placed in four separate envelopes (provided), which are then sealed and labeled.

H4. Separate envelopes, with sterile swabs, are provided for each of "vaginal," "oral," and "anal." The "vaginal" swab envelope has four pairs of swabs, and instructions indicate that all should be used. The original swab wrappers are to be discarded. Swabs are to be used to prepare at least one smear on a slide (not provided). The slide should be dried, labeled "vag," and placed in the slide container provided. Swabs are then placed in the "vaginal" swabs envelope which is sealed and labeled. A similar procedure is followed for "oral" and "anal" specimens if indicated by history. One pair of swabs each is provided with the "oral" and "anal" envelopes. Two slide containers are provided in the kit, each of which can hold two slides.

H5. Blood specimen from victim is to be drawn into a 10 mL EDTA tube (not provided), the tube then labeled and initialed.

H6. A small envelope containing a clean cotton swatch is provided for collecting a known saliva specimen. Instructions indicate that patient should place the swatch in the mouth and thoroughly saturate it with saliva. The swatch is then placed into the envelope, sealed (but NOT by licking the flap) and labeled. Instructions also indicate that if fellatio is reported in the history, patient should rinse out the mouth thoroughly prior to collection of this specimen.

H7. Fingernails should be scraped over a tissue or Kimwipe, then the scrapings placed into an envelope which is sealed and labeled. No scraping device is provided, and no separate envelope is provided (although several envelopes would be available if head hair standards were not collected). Right and left hands are to be processed separately.

H8. A separate "standards collection kit" is available for suspects or consensual partners (see in Table 9 and 9M).

Table 2-1I. Notes on Kit I - Sirchie Sex Crimes Kit CC100

11. Sirchie Fingerprint Laboratories Sex Crimes Kit - Cat. No. CC100 - approximately 7.5 x 6 x 2 inch deep cardboard box

Labeling: Space for patient name, medical record number, names of examining physician and nurse, date/time, name and phone number of the medical facility, witness name, and checkbox for whether victim is male or female. There is space for use by the law enforcement agency, including case number, date/time of incident, officer's name, and six spaces for chain of possession. There is some space for a lab number, date received, and "examined by." Instructions to the examining physician or nurse, on the box, indicate that there are 11 steps, that directions are printed on the container or envelope, and that it is recommended that all labeling data be recorded on the containers prior to actual collection of evidence. There is also a summary of the eleven steps listed on the box. Various evidential item envelopes are pre-labeled as to the Step number, the item they should contain, and directions. Each has space for recording date/time, patient and "collected by." Two evidence box sealing tapes are provided. Box has an integrity seal.

12. Step 1 Debris collection envelope, for packaging of soil, fibers, hair, grass, etc.

13. Step 2 Genital swabbing envelope. Contains a sterile 2 x 2 inch gauze pad that is to be moistened lightly with distilled water and used to swab the vulva and inner thighs. After use, this gauze is to be placed into another envelope (included in the outer one, and pre-labeled Step 2 Genital Swabbing with space for date and initials). The inner envelope is to be placed back into the outer envelope which is sealed, labeled and returned to the kit.

14. Step 3 Dried secretions envelope. Contains two sterile 2 x 2 inch gauze pads that are to be moistened lightly with distilled water and used to swab any blood or secretion stains on the body. After use, these gauze pads are to be placed into one of two other envelopes (included in the outer one, and pre-labeled "Dried Secretions 3A" and "Dried Secretions 3B" with space for date and initials). The inner envelopes are to be placed back into the outer envelope which is sealed, labeled and returned to the kit. There are body diagrams on the outer envelope to indicate the area from which any stains were swabbed. Bitemark swabbings are included in this step.

15. Step 4 Comb and pubic combings envelope. A paper "envelope" that opens completely to form a sheet of paper, and comb are included. The "envelope" that opens is to be placed under patient's buttocks during combing to catch loose hairs. Loose hairs collected are to be folded up into the paper "envelope," (pre-labeled with date and initials) and placed back into the larger envelope with the comb.

16. Step 5 Pubic hair pulled envelope. Contains a smaller envelope labeled "Pubic hair pulled" with space for date and initials. A minimum of 12 hairs should be collected, placed in the inside envelope, which is labeled. The smaller envelope is then placed into the outside envelope, which is labeled and returned to the kit.

17. Step 6 Head hair pulled envelope. Contains a smaller envelope labeled "Head hair pulled" with space for date and initials. A minimum of 12 hairs should be collected, placed in the inside envelope, which is labeled. The smaller envelope is then placed into the outside envelope, which is labeled and returned to the kit.

18. Step 7 Fingernail scrapings envelope. Contains two toothpick-like wooden scrapers and two smaller pre-labeled envelopes for separately packaging right hand and left hand specimens. A fingernail clipper is included. Scrapings and clippings go in the separate right-hand and left-hand envelopes (pre-labeled with date and initials). These are then sealed, marked and placed into the outer envelope, which is sealed and labeled, and returned to the kit.

19. Step 8 Saliva sample envelope. Contains a smaller envelope labeled "Saliva sample" with space for date and initials. A 11 cm diameter filter paper is included that has a pre-printed line on it with a "place sample above line" marking. Specimen is to be air dried, placed in the smaller envelope which is sealed and marked, then placed into the outside envelope, which is labeled and returned to the kit.

110. Step 9 Oral, anal and vaginal smears and swabs. There are four sets of sterile swabs (two to a set). One set each is used for vaginal, oral and anal swabbings. The fourth is provided as a "blank" control set for the laboratory. Swabs are used to make two slides for each cavity. Slides are provided in pre-labeled slide containers, with space on each for date and initials. Slides and swabs are to be air dried before packaging. Three swab container boxes, for the completed swabs, are supplied. Each has space on the box to mark "vaginal," "oral," or "anal" and patient name, date/time, and "collected by." There is a printed card with instructions for Step 9 Smear and swab specimens. Packaged, labeled evidence is returned to the kit.

111. Step 10 Whole blood sample envelope. Contains a clot type vacutainer tube (about 10 mL) with a label on it for date and initials. Filled vacutainer is placed in the envelope, which is sealed and returned to the kit. There is a note in this kit stating that it previously contained an EDTA tube, but that at the request of "several investigative agencies," the EDTA tube has now been replaced by a clot tube. The Step 10 envelope directions indicate that this step completes evidence collection, and that all specimens should be placed in the kit and the kit sealed up. However, there is an additional step with envelope (see I12).

112. Step 11 Nasal mucous sample envelope. Contains a towelette in a factory-sealed container. Instructions indicate that patient should remove the towelette, and blow her nose into it several times. The towelette is then air dried, and placed in the envelope, which is sealed and labeled, and returned to the kit.

113. There is a card with printed additional instructions. One side indicates how the kit is to be used for a female victim; the other side indicates how the kit should be used for a male victim. Female victim instructions indicate that known standard hairs should be pulled, and from various areas of the head (for the head hair standard). It is noted that one swab packet is furnished as a lab blank control (see I10). Manual pelvic examination should not be performed nor any lubricant introduced until vaginal cavity evidence collection is completed. It is further noted that gagging, swallowing or regurgitation can force seminal material into the nasal passages, and that this is the reason for Step 11. All evidence items except the whole blood are to be air dried before packaging. For male victims, instructions indicate that the Step 2 Genital Swabbing envelope and accompanying gauze pad should be used to swab male genitalia.

Table 2-1J. Notes on Kit J - Sirchie Sex Offense Kit NAC100

J1. Sirchie Fingerprint Laboratories Sex Offense Evidence Collection Kit - Cat. No. NAC100 - approximately 6.75 x 3.5 x 2 inch deep transparent plastic box

Labeling: Space for name of subject, date of birth, date/time of occurrence, date/time of examination, names of examining physician and nurse, law enforcement agency case number, and name of officer receiving kit. Various evidential item envelopes are pre-labeled as to the Step number, the item they should contain, and brief directions. Instructions inside the lid of the box indicate to the examining physician what specimens are to be collected, and in what order. An evidence box sealing tape is provided, indicating that kit should be refrigerated. Box has an integrity seal.

J2. Saliva sample #1. Kit contains a plastic vial that contains a 2 x 2 inch sterile gauze. Instructions indicate that patient should saturate the gauze with saliva, then return the gauze to the kit (presumably in the vial)

J3. Blood for typing #2. Kit contains a vacutainer (about 5 mL) citrate (blue-top) tube for blood. Presumably, the filled tube is returned to the kit.

J4. Pubic combings #3a. Kit contains a pre-labeled envelope and a comb. Recovered loose pubic hairs and the comb are to be sealed in the envelope.

J5. Pubic hair standard #3b. Kit contains a pre-labeled envelope. Instructions indicate that 8 to 10 hairs should be cut as close to the skin as possible, and packaged in the envelope.

J6. Scalp hair standard #3c. Kit contains a pre-labeled envelope. Instructions indicate that several hairs should be cut from top, back, left and right sides of head, as close to the skin as possible.

J7. Kit contains a plastic zip-lok bag "Seminal Fluid Reagent Packet." This bag contains a sterile 2 x 2 inch gauze pad, and an "acid phosphatase tab" sealed in plastic. Instructions call for gauze to be saturated with distilled water and used to swab around the genital area. The gauze should be repackaged in the zip-lok if an acid phosphatase test is not done. If the test is done, the "tab" is removed from its container, and pressed against the wet gauze. The "tab" should give a dark purple color if acid phosphatase is present. Both the gauze pad and the tab are to be repackaged in the zip-lok and returned to the kit.

J8. Kit provides two swabs in a pre-labeled container "4a vaginal swabs," two swabs in a pre-labeled container "4b oral swabs," and two swabs in a pre-labeled container "4c anal swabs." There are two swabs in a pre-labeled container "4d control swabs," to be left in the kit unused. There are two pre-labeled slide containers with two slides each, one for vaginal slides (#5a vaginal slides) and the other for oral and anal slides (#5b,c oral/anal slides). Oral or anal specimens are to be collected if indicated by history. Instructions indicate that swabs should be moistened with water before use. They are used to make smears on slides, then returned to their container. The "vaginal slide" container instructs the examining physician to examine for motile sperm, and note the results on the label, before packaging.

Table 2-2. Contents of Representative Sexual Assault Evidence Collection Kits (Suspects, Others)

Collection Kit Item	K	L	M
Outside container; general information; labeling	K1	L1	M1
Debris	X K8		
Stains on Skin (Dried secretions)	X K5		
Vaginal (penile) swabs	X K5		
Vaginal (penile) smears	X K5		
Pubic hair brushings / combings	X K2	X L2	
Saliva specimen	X K7	X L6	X M3
Blood specimen	X K6	X L5	X M2
Reference head hair	X K4	X L4	X M4
Reference pubic hair	X K3	X L3	X M4
Fingernail scrapings or clippings	X K9		

In Table 2-2 (as in Table 2-1), each different kit is identified by a letter. An "X" indicates that the kit provides a container for collection of the designated item. Detailed notes on each kit appear below in continuation pages of the table. Notes on Kit "K" are designated "K1", "K2", etc. Notes on Kit "L" are "L1", "L2", and so forth. Notes on each kit are on separate continuation pages of the table, designated Tables 2-2K, 2-2L, etc.

Table 2-2K. Notes on Kit K - Washoe County NV Sheriff's Office (Sexual Assault Evidence Kit - Suspect)

K1. Washoe County Sheriff's Office, Reno Police Department, Criminalistics Laboratory, Sexual Assault Evidence Kit - Suspect - 7.5 x 10.5 inch Manila envelope

Labeling: Examination Requested By; Agency; Agency Case No.; Offense(s); Samples Collected From; Date and Time of sample collection; Location of sample collection; Samples collected by; List of specified items, with space for initials. Instructions say to initial next to the item if collected, or cross the item out if not collected. Chain of Custody flow sheet (name to and name from and date). There is a sheet of instructions stapled to the kit.

All envelopes for individual items are 8.5 x 5 or 6.5 x 4 inches and have a "fold and bend" tab type seal. Each is labeled with a number corresponding to the contents.

Every envelope in the kit (and the outside envelope) has a common identification number pre-printed on it.

K2. Pubic hair combing envelope. A fine-bristled brush and a paper towel are provided. Paper towel is to be placed under the buttocks, and the brush used to obtain loose hairs. The brushed hairs and the brush are to be folded up in the paper towel and placed in the envelope. The brushed hairs and the brush are to be folded up in the paper towel and placed in the envelope.

K3. Pubic hairs standard envelope. Instructions specify plucking 20 pubic hairs and packaging in the envelope.

K4. Head hair standard envelope. Instructions specify plucking 20 head hairs from different, representative areas of the head, and packaging in the envelope.

K5. Penile swabs and smear envelope (labeled "Swabs"). One slide in a slide case, two sterile swabs and a box to contain the swabs, are provided. Instructions indicate that the penile swabs should be taken from sexual assault suspects if examined within a matter of hours after the incident. The two swabs are to be lightly moistened with water, then used to make the smear. A small cardboard box is provided to contain the swabs. The box has pre-printed markings: "vaginal", "anal" or "oral." Instructions specify to dry before packaging. Instructions indicate that the swabs can be used to collect bloodstains on the body not associated with an injury. Location of bloodstain on the body should be noted. These items are to be returned to the "Swabs" envelope.

K6. A vacutainer EDTA tube (5 mL) is provided, pre-labeled with the common identification number. Blood is collected, and tube returned to the kit.

K7. Saliva sample envelope. Two 11 cm diameter filter papers are provided. Instructions indicate that the patient should saturate a corner of the filter papers with saliva, and the specimen placed back in the envelope.

K8. "Other trace evidence" envelope. Instructions indicate that weeds, fibers, hairs, or other debris on the body should be collected, and packaged in the envelope.

K9. Fingernail scrapings envelope. Instructions indicate that an applicator stick should be used. Each hand should be done separately. Broken fingernails should be clipped off and collected. These materials are to be placed into the envelope. Instructions indicate that the source of the evidence be noted (which hand, which finger, etc.), but there is only one envelope.

Table 2-2L. Notes on Kit L - Indiana State Police Suspect Evidence Collection Kit

L1. Indiana State Police Suspect Evidence Collection Kit, manufactured by Tri-Tech, Inc. (RS-OIN) - approximately 6.75 x 3.5 x 1.25 inch deep cardboard box

Labeling: Space for case number, suspect's name, date/time, "Collected By," and "Witnesses." There is space for a summary of certain medical observations (any diseases or parasites noted). There is a step-by-step page of instructions in the box for the collector. Various evidential item envelopes are pre-labeled as to the item they should contain. Two evidence box sealing tapes are provided. Box has an integrity seal.

L2. "Pubic hair combings - suspect" envelope. Contains a comb. Combings to be placed in envelope.

L3. "Pubic hair standard - suspect" envelope. Instructions specify 20 pulled hairs, to be placed in envelope.

L4. "Head hair standard - suspect" envelope. Instructions specify collection of 40 to 50 pulled hairs at random, and placing into envelope.

L5. A vacutainer EDTA tube (about 10 mL) is provided. Tube is pre-labeled "Blood sample - Suspect."

L6. "Saliva sample - suspect" envelope. Contains a 11 cm diameter filter paper, pre-marked in the center with a 5 cm diameter circle. Instructions indicate that subject should remove filter paper, and wet the indicated area with saliva. Filter paper is then air-dried, and placed into envelope that is sealed.

Table 2-2M. Notes on Kit M - Palm Beach County FL Sheriff's Office (Standards Collection Kit)

M1. Palm Beach County Sheriff's Office - two paper bags containing evidence collection containers and items. One is for victim specimens (see Table 2-1H above). The second is for known standards from suspect, consensual partner, or other person involved in the case (This table, 20M). Labeling: Space for date/time and place of examination, PBSO case number, patient name, suspect name, "Recovered By," "Sealed By," and description of contents. There is an Instruction Sheet inside each bag. The "standards collection" kit instructions indicate how to collect blood, saliva and hair for comparison purposes.

M2. Plastic zip-lok type bag containing two vacutainer EDTA tubes is included. Instructions indicate blood should be drawn from suspects, victims, anyone bleeding at the scene or consensual sex partners of victims within a 72 hr time frame. Two tubes are to be drawn, and marked with date/time, initials of person drawing, initials of witness, and case number. Blood should be refrigerated until it is submitted to the lab.

M3. A pill box containing two clean white cotton swatches is included. Instructions indicate that saliva specimens should be collected from any party involved in a sexual assault case. Donor should chew the swatches (or a sterile gauze from stock) for 20 sec., then place into a clean envelope. Container is then sealed and labeled.

M4. Five 6.5 x 3 inch envelopes are included in the kit. Instructions indicate that 20 pubic hairs should be plucked, and placed into an envelope, which is then sealed and labeled. Procedures is repeated for head hairs from right and left sides, top and back of head (80 hairs total).

3 The Present Study

A. Introduction

The background, scope and methods of this project were described in §1.B. For the reasons indicated, the data were collected mainly in 1992. Because of the delays, some of the information gathered is not relevant to today's environment, especially that having to do with genetic typing of sexual-assault evidence. Today, all genetic typing is DNA typing, and the databasing and databanking of DNA profiles from convicted offenders and criminal cases is well developed. Another recent phenomenon is the use of "date-rape" drugs, or drugs (other than alcohol) being used to facilitate sexual assault. We have added some discussion of these developments, and take them into consideration in the recommendations. A significant part of the police and prosecutor perception data is still useful. It is important to remember that society's response to sexual assault is a complex mixture of law enforcement, community support, medical care, forensic science services, and sometimes prosecution of a suspected offender.

Besides reviewing the existing literature around sexual assault and sexual abuse, we mainly gathered information from police and prosecutors and their agencies concerning sexual assault evidence and laboratory practices and services. The details of the methods used were discussed above.

B. Study Locations and Their Characteristics

Study sites were selected with a forensic science laboratory as the focal point. In three of the sites, Alaska, Connecticut and Maine, the laboratories serve the entire state. In these locations, data on the study site location is given for the states. In two sites, Birmingham AL and Washoe County NV, the laboratories serve a number of counties in the region, and study site data is given for the service areas of these laboratories. In Illinois, we focused on Chicago and Peoria County. The Palm Beach County Sheriff's Department laboratory serves Palm Beach County.

The populations, according to the 1990 Census of U.S. Population, are shown in Table 3-1, and some relevant characteristics of each of the sites are given in Table 3-2.

At each site, an effort was made to survey representative agencies and offices, such as prosecutors and police. Usually, a prosecutor's office receives cases from a number of different police agencies, and police agencies were selected on the basis of belonging to a prosecutorial jurisdiction that was also surveyed. To the extent possible, agencies serving urban, suburban and rural populations were included. In Connecticut, for example, we surveyed three "judicial districts." Each "judicial district" has one superior court, one prosecutor's office, and one public defender's office, serving that district. A number of police departments send cases to each judicial district. In the case of Alaska, Connecticut and Maine, we included the state police in our law enforcement survey. And in the case of Palm Beach County FL and Washoe County NV, the Sheriff's Department was included in the law enforcement survey. Some of the data collected has been combined in various, logical ways to make the number of responses greater, and thus to have more significance. The total number of responses to questions was not always the same, even within the same questionnaire, because of differences among respondents. The details of the data reduction and handling methods used are given below, along with the data itself.

C. Data from and Perceptions of Police, Prosecutors, and Defense

Data were collected at the study sites primarily by way of questionnaires. Additional information was gathered from interviews with police, prosecutors, laboratory personnel, and in some instances, victim services agency and medical facility representatives. The information is broadly divisible into two categories: factual, including numerical; and perceptual information. We tried to gather "perceptual" information by asking respondents to indicate what action(s) they would take under various different case circumstances, or to indicate on some relative scale what value they would assign to various physical evidence or forensic findings under various different case circumstances. This approach was used to try and take into account obvious differences in case circumstances that occur all the time, and that would likely affect the judgment of an investigator, prosecutor or defense attorney. It is recognized that there are limitations to the approach and to the data, because it is not practical to try to cover every difference that occurs in case circumstances, nor every nuance that could affect someone's judgment even in apparently comparable cases.

In many instances, the number of respondents from a particular office or department was small. That data was combined for the state or jurisdiction (study site) by weighting results according to the number of respondents. Further, responses to questions designed to elicit one of a range of answers (like "essential" to "unimportant") were reduced and combined using numerical values for easier data analysis and comparison. The data-analysis methods we used are indicated, where applicable, in the discussion below.

1. Study Site and Study-Site Respondent Characteristics

Demographic characteristics of the study site locations were discussed above, and some of the 1990 census data is shown in Table 3-1. The 1990 census data is more relevant here because the data for this study were collected well before the 2000 census.

Table 3-2 shows the numbers of sexual assault cases from the records of study site police departments for six of the seven study site jurisdictions. Data was not obtained from Nevada. The numbers from state police and county sheriff's agencies represent cases that could have come from anywhere in the agency's jurisdiction. In Connecticut, for example, the surveyed state police district covers roughly two of the state's eight counties, and about 30% of its population. As a practical matter, however, the C.S.P. cases likely represent those from the more rural areas, because cases occurring in the metropolitan areas of the district (like Bridgeport, Waterbury, Danbury, etc.) would be reported to the city police departments. It may be noted that for the years in question, Alaska and Nevada, and especially the Reno and Anchorage metropolitan statistical areas, had incidences of reported sexual assaults significantly higher than the national average. Rates in the Birmingham MSA were higher than the national average, and higher than for Alabama as a whole.

Table 3-2 shows the number of cases handled by prosecutor's offices in the study sites for which data was obtained. The table also indicates the number of prosecutors in these offices. The number of cases reaching prosecutor's offices is lower than the number coming to the attention of the police in a jurisdiction. Although this fact is generally well known, it points to the issue that some fraction of the cases that come to the attention of the police are closed without referral to prosecutors.

Table 3-2 also provides detailed information about the number and location of individual police respondents and individual prosecutor respondents.

It is noted that many of the prosecutors had considerable experience in their positions, and that on the whole, they had, as a group, handled significant numbers of sexual assault cases.

Defense attorney response to our survey was very low. Most of the data is based on responses from 8 defense attorneys in AK, CT, IL, ME and NV. The greatest number of responses was from the Cook County IL public defender's office. All these jurisdictions have a public defender system, except Maine, which has assigned counsel. The defense respondents had, on average, 12.4 years of experience (high 41, low 5). Two were private attorneys; the rest were public defenders. The number of attorneys in the respondent's office varied from one to 450, and the number of sexual assault cases handled over the three-year period 1989-1991 varied from 2 to 56. Although the responses from the defense attorneys have been collated and presented, they cannot be considered characteristic, even for the particular jurisdictions, because of the small number of responses.

2. Case Characteristics

Police agencies were asked to characterize their sexual assault cases in terms of the ages of victims and offenders, and in terms of relationship between victims and offenders (if any). Table 3-3 shows the age relationships, according to whether either party (victim or offender) was an adult or a minor. The definition of a "minor" is a matter of state law. In most of the responding states and jurisdictions, the majority of the cases over the three-year period involved adult victims and adult offenders. Alaska departments reported a slightly higher average number of cases involving a minor victim and an adult offender than ones involving two adults. All the jurisdictions reported a small, but significant, fraction of cases where both parties were minors. There were very few cases involving adult victims but offenders who were minors.

Table 3-4 indicates the relationships of the victims and offenders within three of the four categories shown in Table 3-3. The number of adult victim, minor offender cases was too small to be meaningfully subdivided into additional categories. Among cases involving two adults, the fraction involving strangers exceeded other categories in Alabama and Florida. Cases involving acquaintances were highest in the other jurisdictions, though still significant in Alabama and Florida. Connecticut's adult cases disproportionately involved acquaintances as against strangers, compared with the other sites. Florida reported the greatest proportion of adult cases involving married people. Both Florida and Maine reported significant percentages of adult cases involving related individuals. Among cases involving minor victims and adult offenders, Connecticut has the greatest proportion of "acquaintance" cases vs. other categories. All the jurisdictions except Connecticut reported the greatest proportion of these cases as involving related individuals. Among cases involving two minors, the greatest proportion involved acquaintances, although there was a significant fraction that involved related people in three of the locations. Overall victim - offender relationships are shown in Table 3-5 for five study locations, and compared with national data, according to the NCS. The tendency toward cases involving non-strangers is evident in these data.

Table 3-6 shows the location of the reported assault for the three-year period for the reporting jurisdictions that were studied. All indicated that the victim's home or the perpetrator's home were the most frequent. Alaska departments reported a significant fraction of assaults in the perpetrator's vehicle, and Alabama departments reported a significant fraction occurring outdoors. The data are roughly in accord with national survey data (Table 3-7) although the categories are not quite the same.

Table 3-8 indicates the fraction of cases that involved alcohol, drugs of abuse or both, and it was high in every reporting department. The question included alcohol and/or drugs of abuse use by either the victim or the offender, and did not distinguish between use by one or the other. These findings are generally in accord with a report on the frequency of alcohol use by offenders and/or victims in acquaintance rapes on college campuses [171].

Table 3-9 indicates the proportion of cases in the reporting departments in which a suspect is quickly developed, and in which an arrest is made. In most reporting jurisdictions, arrests are made in a lower proportion of cases than ones in which suspects are developed/identified quickly. In Connecticut, the difference was small. For the cases being reported, this data indicates that a fraction of the cases investigated by police do not result in an arrest, even when a suspect has been developed. The cases where no arrest is made could result from a lack of probable cause, withdrawal of the complaint, or failure by the police to find the case after investigation.

3. Case Investigation / Evidence Collection and Handling

The elapsed time between a sexual assault incident and its being reported to police can have a significant effect on the physical evidence findings, particularly the rape-kit evidence. The chances of recovering sufficient semen on a vaginal swab for informative semen identification and DNA tests decreases with time following a sexual assault incident.

Police department respondents in the survey were queried as to the time interval between sexual assault incidents and reporting. Choices were: immediately; within a few hours; within a day; within two days; and more than two days. Arguably, cases reported immediately, or within a few hours would be expected to yield sufficient semen on the vaginal swab (in a positive case) for identification and DNA typing, provided the semen donor was not azoospermic. Alabama departments reported the greatest percentage of cases in the "immediately" and "within a few hours" categories. At least 80% of the cases in Alabama, Alaska and Palm Beach County FL were reported within two days. Connecticut had a relatively high percentage of cases with intervals of "more than two days." Most of Maine's cases were reported either immediately, or more than two days later, with only a small number in between.

To the extent that a case involves ejaculation by the offender (and a condom was not used), and that identifying the offender is an issue in the case (i.e., the suspect is a stranger, or denies sexual contact with the victim), it would be expected that the incidents reported more quickly would stand a greater chance of yielding adequate quantities of seminal fluid for analysis. Obviously, cleaning-up actions taken by the victim between an incident and reporting can also affect the quantity of seminal fluid recovered during the medical examination. And in the case of an azoospermic donor, even relatively large quantities of recovered semen can be insufficient for unequivocal DNA typing results because of the small quantity of cells.

The availability of panties or other substrata on which post-coital vaginal drainage has occurred can also "compensate" for reporting delays in terms of available evidence to analyze. Information on the time interval between a sexual-assault incident and reporting (and examination) can be important for the laboratory, because examiners may use this information to make a judgment about whether a vaginal swab or panties, for example, comprise the "best evidence" in the case.

As a rule, sexual assault complainants are taken to a hospital or other medical facility for a medical examination. In the course of that examination, medical treatment is provided and rape-kit evidence is taken, sometimes along with complainant's clothing.

In our survey, police were asked whether complainants were taken to a medical facility "Always" or "No or Sometimes," and if "Sometimes" what percent of the time. Respondents reported that complainants were "always" taken to a medical facility from 50% (Maine) to over 80% (Connecticut) of the time. Those indicating "Sometimes" took complainants from about 50% to over 80% of the time except in Maine, where it was under 10% on the average. Police respondents who reported that they did not "always" take complainants to a medical facility were asked to specify their criteria for doing so or not doing so. These narrative responses included, as criteria, the following:

- (1) Elapsed time since the incident. A number of respondents indicated that 72 hours was used as a "cut off", and that they would not take complainants to medical facilities if more than 72 hours had elapsed since the incident occurred.
- (2) Complainant's cooperation. Respondents indicated that all complainants were encouraged to cooperate in the investigation by consenting to a medical examination, but that consent was not always obtained.
- (3) Types of acts or contact reported. Respondents indicated that complainants who reported no penetration or similar act that would result in any findings upon medical examination would not be taken to medical facilities. They also said that any complainant who was injured in any way would be taken to a medical facility.
- (4) Age of victim. Respondents indicated that younger complainants, especially those reporting to be sexually inactive or inexperienced, would always be encouraged to consent to a medical examination.

The clothing a complainant was wearing at the time of a sexual assault incident is often collected as evidence, if it is available. Almost all the police respondents indicated that collection of the clothing is a routine part of their investigations.

Study site prosecutor's offices were asked about the percentage of their cases in which a medical examination had been conducted on the complainant, a rape kit taken, and the complainant's clothing collected, if available. In two of the four states for which data was obtained, Alaska (Fairbanks prosecutor's office) and Palm Beach County FL, medical examination was done and rape kit and clothing were collected in every case for the years covered. In the other two states, the Milford-Ansonia judicial district office in CT and the Alabama offices, there were cases with no medical examination, no rape kit, and where complainant's clothing had not been collected.

Police respondents were asked how rape kits and victim's clothing, when collected, were stored. Evidence handling personnel are frequently advised that storing biological evidence in the cold helps to preserve its characteristics and prevent degradation. A tube of whole anticoagulated blood may be collected as part of a rape kit. Liquid blood is far better preserved at colder temperatures. Accordingly, police are often advised to store rape kits at refrigerator temperature if possible. The survey results indicated that almost 70% of respondents overall store rape kits in refrigerators. In a few cases, they were stored in a freezer. The remainder of respondents indicated room temperature storage. A small number of respondents said that victim's clothing was stored frozen. About 10% overall store the clothing in refrigerators, and the remainder do so at room temperature. The longer it takes to get biological evidence to the laboratory, the more important the storage conditions become. Close to 80% of police respondents overall indicated that the rape kits get to the laboratory "within a day" or "within a few days." It appears that police evidence-handling personnel appreciate the relationship between storage conditions and the time it takes to get evidence to the laboratory.

Palm Beach County FL respondents, for example, reported that all rape kits are submitted within a few days, and most within a day. It is reasonable, therefore, that they also report a relatively high percentage of kits being stored at RT. Alaska respondents reported a relatively high percentage of storing rape kits at refrigerator temperature, and it takes longer to get the kits submitted to the lab in their case (because of the distances and transportation problems involved).

With rape kits, the evidence that is most vulnerable to degradation is the whole blood specimen and the swabs. Whole blood specimens should be refrigerated if possible. However, they are not materially changed (for purposes of the analyses done in forensic science laboratories) by storage at ordinary room temperatures for a day or so. Some laboratories have directed that whole blood not be collected as part of the rape kit. This decision can be the result of a lack of personnel and resources to process these specimens quickly, or of a recognition that it is not possible for the investigators to get the specimens to the laboratory quickly (because of distances, logistics, etc.). If there is no whole blood in the rape kit, storage conditions are less significant in terms of evidence preservation. It is important that the swabs be thoroughly dry before packaging in the rape kit. If they are dry, storage at room temperatures for reasonable periods of time should not be a major problem. Biological evidence that is dry and stored at RT is probably more stable than the same evidence not thoroughly dry and stored in a refrigerator. If facilities are available, however, kits are better stored cold, particularly if they have to be stored for lengthy periods of time. The considerations discussed concerning storage of swabs are the same for clothing. Generally, it was a bad idea to freeze whole blood specimens collected for conventional blood typing, because freezing breaks the red cells. Now, with DNA the only kind of genetic analysis being done, it doesn't really matter. It is also becoming more common to collect a bloodstain (on a blot card or on an FTA card) instead of whole blood from victims and suspects. Buccal swabs may also be collected as reference specimens. Either of these specimens need only be air dried thoroughly before packaging. They would be stable for quite some time at RT if thoroughly dry, but could also be stored in a refrigerator or freezer.

There are case circumstances where rape kits may be taken from complainants, but not submitted to the laboratory. The same circumstances could apply to evidence from the scene, assuming that the scene had potential evidence present and that it was seized. These circumstances could include cases in which a complainant withdraws the complaint or indicates an unwillingness to proceed with the case, or cases in which the issue is consent rather than perpetrator identification. Between 80 and 90 percent of survey respondents overall indicated that rape kit and crime scene evidence, if collected, is submitted to the laboratory. Those answering that they did not routinely or always submit this evidence to the laboratory were asked for their criteria for doing so. Three major criteria were mentioned. First, some investigators did not submit the kit and clothing evidence unless there is a suspect in the case. Second, some indicated that in "consent" cases, the kit might not be submitted because the only issue in the case was consent, not identity of the offender. Third, some investigators indicated that these items were submitted upon the request of the prosecutor.

Another issue that can arise in sexual assault investigations is recent sexual activity by the complainant with a consensual partner. By "recent" is generally meant about three days. The obvious reason that sexual activity with a consensual partner is an issue is that the laboratory may discover semen from the consensual partner in the specimens, which may be mixed with the semen of the offender.

It is even possible that the semen of the offender could be absent (if he did not ejaculate or used a condom), and the lab might find only the semen of the consensual partner. Under these last circumstances, DNA typing would "exclude" the suspect, if a complainant did not disclose activity with the consensual partner, i.e., if it were assumed that any semen found had to come from the offender.

Survey respondents were asked whether it was routine to try and obtain exemplar (reference) specimens from suspects (assuming there is a suspect), as well as from consensual partners if there was one. The percentage of police respondents in study jurisdictions overall who said they routinely try to obtain known specimens from suspects (when they have a suspect) varied from 40 to 100. The known specimens are required for the laboratory to make DNA comparisons of evidential semen (on vaginal or other swabs, or on clothing) with suspects. Many laboratories did not previously do any genetic-marker testing of evidence specimens unless they had suspect knowns with which to compare the results. Now, with DNA databanks and databases available for searches, there is no reason not to process these cases. There are legal (search and seizure) issues surrounding the taking of blood and other exemplar specimens from suspects. A search warrant or court order is generally required, and defense counsel can oppose the taking of these specimens. The legal issues are somewhat different depending on whether the suspect has been arrested or not. Some police officers might wait until a suspect has been arrested before they begin to request known specimens. Others may wait until there is a request from the prosecutor. Still others may not request these specimens in what appear to be "consent" cases. Half the surveyed defense attorneys reported that the state routinely requested exemplars from the defendants in their cases. Several said that they routinely opposed these requests, but most were unsuccessful in this opposition.

The great majority of police respondents (91% overall, with 83% the lowest) indicated that they try to determine whether a complainant has had sexual relations with a consensual partner within about three days of the incident. About 70% of police respondents overall indicated that they routinely attempted to obtain exemplar specimens from the consensual partner, if there was one, this response varying from around half (Alaska, Illinois) to 100% (Nevada). Consensual partners probably cannot be legally compelled to provide known specimens; they have to be provided voluntarily. About half of the defense attorneys surveyed said that the state routinely tried to get consensual partner exemplars in their cases where there was a consensual partner. We asked defense attorneys whether they made efforts to get these specimens, and get them typed, where the state had not done so. A quarter of them said "yes", and another quarter "no." The remainder said "sometimes," that it depended on the fact pattern of the case.

Police respondents were queried about their experience concerning the laboratory's response to submitted cases. The choices were:

- Work every case as soon as possible
- Do identification tests (identify semen) only, if there is no suspect
- Do any work on the case only if there is a suspect
- Do any work on the case only if requested

The data represent the perceptions of a small sample of police who responded. The sample is not necessarily a good statistical representation of police in the jurisdiction, and the results need to be considered with these caveats in mind. It does nevertheless suggest some differences in perception on the part of the police respondents, and likely reflects respondents' experience with the lab. Each lab has a certain policy about working submitted cases, and we discerned that policy from the laboratories.

Some of the police respondents' perceptions appear to be at variance with the laboratories' stated policies.

In Connecticut and Alabama, for example, between 60 and 70 percent of respondents indicated that the laboratory works submitted cases "as soon as possible," as opposed to "work only if there is a suspect," "do identification testing only if there is no suspect," or "work only if requested". In Connecticut, the general policy was to do identification testing only, if there is no suspect, and to do further testing if a suspect is developed and exemplar specimens are available. In Alabama, the general policy was to work the cases only if there is a suspect. Overall, about 20% of police respondents said that the lab worked submitted cases "only if requested" to do so, but only one laboratory (of eight; two were in Illinois), the Chicago Police Department's lab, stated that it was their general policy and practice to work cases upon request where there was a suspect, and suspect standards were available. Generally, Chicago police respondents were familiar with this policy, and responded accordingly. The Illinois State Police forensic laboratory system indicated that they generally did identification testing, but went on to do genetic testing only if there is a suspect and exemplars are available. Most police officer respondents in downstate Illinois were familiar with this practice, although a few thought that the laboratory did not work the case at all unless there was a suspect.

In sexual assault cases, there tends to be a focus on blood, semen and rape-kit evidence, as well as on evidence that can be obtained from the medical examination (such as injuries). However, other physical evidence can be equally or more important, depending on the case, the circumstances and the scene. Police respondents in our survey were asked to report the percentage of cases (over a three-year period) in which various types of physical evidence were encountered. The physical-evidence categories and responses are shown in Table 3-10. Overall, the responses from different jurisdictions tended to fall into a range (around \pm 10-15%) for a particular category of evidence. Clothing other than the victim's, trace evidence (such as hair, fibers, or soil), bloodstains and semen stains tended to be encountered most frequently overall. Alaska police reported a higher percentage of fingerprints, trace and bloodstains than was seen overall. Alabama police reported higher percentages of documents, weapons and controlled substances. To some extent, these data probably reflect differences in the general practice of different jurisdictions and of individual investigators in terms of what they look for in these cases.

Prosecutors' offices were also asked to report information about the various types of physical evidence in cases reaching them during the same three-year period (Table 3-11). There is a general correlation of the frequency of different types of evidence with the data obtained from police, particularly where the police and prosecutor's office responses were from the identical jurisdictions (e.g. Florida, Alabama). The prosecutor's office data show a different frequency of the various types of physical evidence than police data, reflecting to some extent the difference between all the cases (that come to the attention of the police) and those that reach the prosecutors. The Connecticut prosecutor's office data reflects one judicial district's experience, and represents a narrower geographic range than the police respondent data. Weapons and controlled substances, for example, are much more frequently seen than in the broader police data for the state. In Table 3-12 are compared the overall data for police and prosecutor's offices. There is reasonable correlation. The differences in weapons and controlled substances are a reflection of the fact that the prosecutor's office data is more limited, and that the reporting Connecticut judicial district office experienced relatively high incidences of these items.

4. Value of Physical Evidence - Police

Police respondents were asked to state five things that they considered most important in solving and properly adjudicating sexual assault cases. The data are shown in Table 3-13. The items were listed, then ranked according to the number of respondents who stated them. They are arranged in the table from the most frequently listed to the least frequently listed overall. Numbers are given for the ten highest responses. Other factors that were mentioned, but were not among the ten most frequent, are shown as well. Physical evidence that could link a suspect to the victim or crime was most prominently mentioned. Other factors frequently reported were statements by and credibility of both victims and suspects, as well as witnesses. Crime scene processing was among the top five factors. It is possible that respondents were unconsciously biased toward reporting physical evidence linkages as an important factor because the survey instrument had to do with physical evidence in sexual assault cases. The prominence of crime scene processing as a factor reflects a bias of Connecticut respondents.

Police respondents were asked to rank the value of both identification tests and genetic-marker tests on rape-kit and victim clothing evidence under four different case circumstances. The "value" ranged from 4 to 1 as follows:

- very valuable, essential to the case
- valuable as corroborative evidence
- neutral, physical evidence could be used but was not necessary to the case
- no value, not needed for solving or prosecuting the case

The data are shown in Table 3-14. Also shown in the table are the four "scenarios" or case circumstances that were provided:

- A every case, regardless
- B victim reports incident promptly, and one might expect to find seminal fluid on the vaginal swab or victim's clothing
- C consensual case where identity of the suspect is not an issue, and contact is not necessarily denied
- D case in which the suspect denies contact with the victim

Overall, both identification (presence of semen) and genetic-marker testing to include or exclude suspects were ranked between 3 and 4 for every scenario except consensual cases, where both types of testing were ranked between "valuable as corroborative evidence" and "neutral." Both types of testing were ranked highest in cases where contact was denied. These results make sense, and are in accord with expectation. It should be kept in mind that this survey was done before DNA typing was readily available in most public laboratories. But even with the availability of DNA typing, the responses might not be that different.

Police respondents were specifically told to assume, in answering this set of questions, that the suspect had not made or given any incriminating statements. One might expect that an incriminating statement by a suspect would lessen the perceived value of the physical evidence in the minds of investigators. Indeed, there is evidence from prior research that physical evidence was seen as less significant in criminal cases if a suspect had made an incriminating statement that was considered admissible [172;173]. We therefore tried to control for this factor by specifically stating to police respondents to answer the questions assuming that there was no incriminating statement, then asking another question to determine what effect such a statement would have on their responses. The majority of police respondents indicated that an incriminating statement by a suspect would not change the value of the physical evidence (about 85% overall).

This result was interesting, because we actually expected the majority of respondents to indicate that an incriminating statement, presumably admissible, would change their perception of the value of the physical evidence. Those who indicated that an incriminating statement by a suspect would change their perception of the value of physical evidence were asked whether it would be more or less valuable. We expected that respondents would regard the physical evidence as less valuable if an incriminating statement had been made, but overall, about half said more and about half said less.

5. Value of Physical Evidence - Prosecutors, Defense

Prosecutors were asked to rank the value of various types of physical evidence in sexual assault cases under four different case-type scenarios. Each type of evidence had four possible values:

- 4 essential (case cannot proceed and would likely be dismissed without it)
- 3 very important (would be difficult to convict at trial without it)
- 2 important (important as corroboration, and case might or might not have a different outcome without it)
- 1 not important (case would have same outcome with or without it)

The case-type scenarios were:

- A victim can identify suspect, and would be a good witness
- B victim can identify suspect, but would not be a good witness
- C victim cannot identify suspect, but would be a good witness
- D victim cannot identify suspect, and would not be a good witness

The values were multiplied by the number of respondents who chose it, and the products summed within each jurisdiction or overall. The data are shown in Table 3-15. For reference, minimum and maximum possible values for each jurisdiction (and overall) are given in a footnote, i.e., the values that would have been obtained if every respondent had chosen 4 (max) or if every respondent had chosen 1 (min). The "percent of maximal value" is shown in parentheses next to each table-entry value for easier comparison.

Generally, the perceived importance of physical evidence increased from a scenario in which a victim could make an identification to one in which she could not, and from one in which she would be a good witness to one in which she would not. These findings were in accord with expectation. Under every scenario except A, medical evidence that supported a victim's account was significantly more important than medical evidence that did not. In A, the results were very close to the same. Under all scenarios, genetic typing that "strongly" included a suspect was more important than genetic typing that simply "included" a suspect. Genetic typing that simply "included" a suspect was not much more important than "identification of semen only" in the different scenarios. This finding is no longer relevant because today, almost any genetic profiling that included a suspect would be considered an individualization for practical purposes. In almost every scenario, the "other physical evidence" was considered more valuable if it did not support the victim's account, regardless of whether the rape kit and clothing evidence supported her account or not. The exception was C, in the case where the rape kit and clothing evidence did not support the victim's account. Here, the "other" evidence was considered more valuable if it supported the victim's account. Looking across any line in the table, there was some variation in response from one jurisdiction to another, relative to the overall response.

Defense attorneys were asked the same questions as the prosecutors. Since there were relatively few responses from defense attorneys, we did not tabulate separate results from the various locations, and these data cannot be seen as representative. The overall defense attorney results were tabulated and are compared in Table 3-16, in the same manner as described above, with overall prosecutor response. Under scenarios A and B, where a victim could identify the suspect, defense attorneys rated medical evidence that does not support a victim's account higher than medical evidence which does support it - the opposite of prosecutors' ratings in B but in the same direction in A. For rape kit and victim clothing evidence, defense respondents rated "genetic typing that includes suspect" higher than "identification of semen only" or "genetic typing that strongly includes suspect" in scenarios A and B. Prosecutors rated "genetic typing that strongly includes suspect" the highest. With "other physical evidence" defense attorneys rated "support victim account" higher than "does not support victim account" regardless of whether the rape kit and clothing evidence supported or did not support the victim's account - the opposite of prosecutors' ratings. Defense generally rated the value of physical evidence higher in scenario C than in scenario A, but this trend is not seen in comparing B with D. Differences in defense response to scenarios C and D are small except with "other physical evidence where the rape kit and clothing evidence do not support the victim's account." Defense respondents also rated "genetic typing that includes the suspect" higher or the same as "genetic typing that strongly includes the suspect" under every scenario, a result that was not expected.

Generally, the "percent of maximal" values in the table can be used to get a rough measure of the degree of importance prosecutors and defense attach to physical evidence under the various scenarios. Numbers between 50 and 75 represent a level of importance between "very important" (would be difficult to convict at trial without it) and "important" (important as corroboration, and case might or might not have a different outcome without it), while numbers between 76 and 100 represent a level of importance between "very important" and "essential."

It is again noted that these scenarios were conceptualized and the questions formulated before routine DNA typing was available.

As another gauge of the relative value of different types of physical, and other, evidence, prosecutors were asked to rate the importance of 13 types of evidence from 1 (most important) to 13 (least important) under two scenarios. The scenarios were A, the victim can positively identify the defendant, and B, the victim cannot positively identify him. These results are given in Table 3-17. We multiplied the "value" given the item (from 1 to 13) by the number of respondents assigning it, then averaged the results within jurisdictions and overall. The **lower** the value of an evidence item in these responses, the **more important** the prosecutors considered it to be. Some respondents rated more than one evidence type equally (such as two different things being marked "4" or "6", etc.). As a result, there are not always 13 separate numbers in the rankings. The data are arranged in Table 3-17 according to overall rank, from most to least important, but the individual jurisdiction rankings are shown under each one as well. Generally, prosecutors tended to rate the same items with approximately the same value under the same scenario, but there were some differences. Comparing the overall rank of an item with its rank in a jurisdiction gives an easy comparison between that jurisdiction's response and the overall response.

Under scenario A (victim can identify defendant), prosecutors rated eyewitness testimony (victim and other) high, along with medical evidence indicating that force was used, DNA typing that includes the defendant, and conventional genetic typing that includes the defendant.

We expected genetic typing that includes the defendant to be ranked lower in A than in B. Generally, though, physical evidence that tends to associate the defendant to the victim or scene (blood transfers, fingerprints, etc.) is ranked higher under B than A, as expected. The victim's ability to identify the defendant is ranked significantly higher in A than the victim's inability to identify the defendant under B. Identification of semen on a vaginal swab or victim's clothing was ranked relatively low compared with genetic typing that includes a defendant, and identification of semen on a suspect's clothing was considered the least important of all the items under either scenario. The finding of hairs consistent with the defendant on the victim or at the scene was likewise ranked low under either scenario, suggesting that the prosecutors recognized that inclusionary hair comparisons are typically not persuasive.

6. DNA Evidence

The police, prosecutor and defense survey respondents were asked separate questions about DNA typing evidence in sexual assaults.

The majority of respondents (95.4% of police, n = 110; 98% of prosecutors, n = 43; 63% of defense, n = 8) thought that DNA typing is more informative (yields greater individualization) than traditional blood grouping, isoenzyme and serum protein genetic-marker testing. Today, this is moot. There is widespread agreement on the point, and traditional genetic-marker testing is gone.

We asked police respondents about the criteria they use in deciding whether to request DNA typing in their sexual assault cases. Their responses may be summarized as follows:

- 1 Needed in every case
- 2 Needed when suspect denies contact or is a stranger
- 3 Requested when there is reason to believe they have the right suspect
- 4 Requested when there is a consensual partner, and it is important to "unravel" the mixture of seminal fluid
- 5 Requested if there is sufficient specimen for testing
- 6 Requested in cases where a suspect has been developed
- 7 Requested if there is a lack of other credible evidence
- 8 Decision is left to the prosecutor, or the laboratory in consultation with the prosecutor
- 9 Depends on the "severity" of the offense (brutality, injuries, etc.)
- 10 Depends on the cost of the testing in proportion to the other evidence available in the case
- 11 Should be done in every case; juries expect it

Although the climate has definitely changed in favor of DNA typing in every case since the survey was done, the question may still have some relevance to the extent that many laboratories do not have the resources to provide DNA typing in every case, and must still make choices.

All respondents were asked whether they favored state laws mandating databases containing DNA profiles of convicted sex offenders. Of 110 police respondents, 92.7% answered affirmatively, as did 88% of 42 prosecutors. Only 3 of 7 defense attorneys favored such a statute. This information is moot today, since all fifty states have passed databasing / databanking statutes.

7. Physical Evidence and Expert Testimony at the Adjudicative Stage

Four of the prosecutor's jurisdictions provided some limited information about case outcomes over the 1989-1991 period.

Ten percent or fewer of the cases were dismissed, and none were dismissed in Fairbanks AK. The majority of cases were settled by plea, rather than by trial, except in Birmingham where there were more trials.

Some questions on the prosecutor and defense survey were designed to try and test the effect or value of physical evidence results on their decision making.

Table 3-18 summarizes results from the prosecutors. 62% said they were involved in deciding whether there was probable cause to support an arrest warrant. Of those who were involved, 91% said physical evidence testing results were an important factor in instances where the complainant could not make a good identification of the perpetrator. Only 8% said they would support an arrest warrant affidavit where the physical evidence results were negative or uninformative. But in cases where the complainant could make a good identification, 75% of the prosecutors said they would support an arrest warrant, even if the physical evidence analysis results were negative or uninformative.

We asked prosecutors whether they would dismiss a case, or go forward with it, under four general scenarios when the physical evidence results excluded or strongly tended to exclude the defendant. The scenarios had to do with whether the complainant could reliably identify the defendant, and whether she would be a good witness. They are fully described Table 3-18. The better the ability of the complainant to identify the defendant, and the better she would be as a witness, the more likely the prosecutors were to indicate that they would go forward with a case. Many prosecutors who indicated that they would proceed explained that these decisions are not made lightly, and that each case has to be considered on its individual merits. We recognized in devising the questions that it was not possible to take every nuance of a case into account in constructing these "scenarios."

We asked defense attorneys essentially the same questions, except that it was framed as "what, in your experience, would prosecutors typically do." The limited number of defense respondents indicated a greater tendency on the part of prosecutors to proceed with a case where there were physical evidence results that "excluded or tended strongly to exclude" than did the greater number of prosecutor respondents.

It is important to re-emphasize in the context of these responses that the questions did not and could not take into account every possible case circumstance that would influence a prosecutor's decision. An exclusionary genetic-typing result could readily be explained, for example, if there had been a previous consensual partner, and if the perpetrator of the sexual assault failed to ejaculate, did so outside the victim's body and the semen was for some reason not recovered, or if a condom was used and not recovered, and the victim was somehow unaware of it.

With respect to DNA typing, we asked prosecutors whether they would tend to request DNA typing in a case which was otherwise strong for the state. About 30% said they would. We further asked prosecutors if, under these circumstances the defense requested DNA typing, whether they would agree, or oppose the request. The great majority (98%) said they would agree, with the idea that the results might strengthen the case even further. Defense attorneys were asked a similar question. The majority (75%) of defense attorneys said they would ask for DNA testing in a case that was strongly favorable to the state. We further asked them whether, if the state now wanted DNA typing, they would oppose it or agree. 75% said they would oppose it. We asked defense attorneys about engaging the services of an independent expert under two case scenarios, and with a variety of physical-evidence results.

The two case scenarios included one in which the victim could make a definitive eyewitness identification of the defendant, and one in which she could not. The physical-evidence results under each scenario varied according to the extent to which it tended to definitively include the accused. In general, the more definitive the physical-evidence results were, and the more strongly they implicated the defendant, the more likely it was for the defense to engage its own expert. Most of the defense respondents said that the state's laboratory would perform testing at their request, and two-thirds reported that they had taken advantage of these services at some point. All reported that they had access to independent experts.

Finally, both prosecutors and defense respondents were asked about the value of expert testimony at trial in sexual assault cases by medical doctors (medical evidence) and by criminalists (forensic science laboratory findings). The choices were:

- 3 Very valuable (strengthens the case even if the physical evidence is not particularly favorable)
- 2 Valuable (most important when the physical evidence favors the state's case)
- 1 Not important (cases would have the same outcome with or without the testimony)

Each value was multiplied by the number of respondents choosing it, and all the values summed for a particular jurisdiction and overall. Minima and maxima could be determined by the total number of respondents in any jurisdiction and overall. The data are shown in Table 3-19.

Generally, all the respondents ranked expert testimony between the 2 and 3 values. The defense respondent number was small, and thus only the overall results were determined. Overall, prosecutors ranked the testimony of medical doctors a little higher than the testimony of criminalists. Defense ranked them about the same.

Table 3-1. Population of Study Site Locations (1990 Census)

State / Subdivision	Total	White	African American	Hispanic Origin	Native American	Asian, Pacific Islander
Alabama	4,040,587	2,975,797	1,020,705	24,629	16,506	21,797
Jefferson County *	651,525	418,317	228,521	2,745	889	3,222
ADFS Birmingham Service Area **	1,553,521	1,126,021	415,982	7,688	2,745	6,864
Alaska	550,043	415,492	22,451	17,083	85,698	19,728
Connecticut	3,287,116	2,859,353	274,269	213,116	50,698	6,654
Fairfield County	827,645	700,350	81,519	70,818	17,332	1,226
Litchfield County	174,092	170,361	1,631	1,907	1,411	327
New Haven County	804,219	687,491	82,011	51,003	10,484	1,536
Palm Beach County FL	563,518	732,231	107,705	66,613	1,211	9,020
Illinois	11,430,602	8,952,978	1,694,273	904,446	21,836	285,311
Cook County ***	5,105,067	3,204,947	1,317,147	694,194	10,289	188,565
Chicago	2,783,726	1,263,524	1,087,711	545,852	7,064	104,118
Peoria County	182,827	154,298	24,892	2,596	312	2,225
Maine	1,227,928	1,208,360	5,138	6,829	5,998	6,683
Nevada	1,201,833	1,012,695	78,771	124,419	19,637	38,127
Washoe County	254,667	225,095	5,680	22,959	4,921	9,824
Reno Sparks SMSA ****	231,651	203,783	5,602	21,964	3,806	9,590
WCSD Service Area *****	688,250	610,245	13,554	63,323	16,969	21,658

* Includes City of Birmingham

** 22 counties

*** includes City of Chicago

**** Standard metropolitan statistical area

***** 14 counties and Carson City

Table 3-2. Characteristics of Study Site Locations and Police, Prosecutor and Case Data

	Alabama		Alaska			Connecticut				Palm Beach County FL	Illinois		Maine				Washoe County Nevada
Forensic Lab Service Area	Birmingham; surrounding counties		state			state				county	*		state				Washoe; surrounding counties
Hospitals, Clinics treating sexual assault complainants	34		25			45				9			45				10
Police Dept Cases	Bhm	Hwd	Anc	AST	NSB	NHv	Org	Tor	CSP		Chi	Peo	Brw	Bgr	Els	MSP	
1989	308	25	176	90	23		4	18	37	625	3,734	100	3	18	5	30	
1990	310	28	257	96	28		2	5	28	1,005	3,665	125	3	17	5	30	
1991	440	30	323	133	26	425	10	18	28	865	3,224	140	4	14	5	8	
Prosecutor Office Cases	Bhm	Bsm	Adult #		Minor #												
1989	200	113	13		49		50 **				625						
1990	250	143	28		41		75				1,005						
1991	300	170	40		30		150				865						
Number of prosecutors	25	12	12 #			6 **				85							
Number / Location Individual Police Respondents	Bhm 8 Tdga 3 Homewood 3 Hoover 2		AST (4 locations) 7 NSB 3 Bethel 2 Fairbanks 2			CSP 9 Milford 7 New Haven 5 Torrington 5 Washington 1 Orange 4				Sheriff's Dept 11	Chicago 13 Peoria 6 Chmp 2 Blm 1		MSP 9 Brw 1 Bgr 1 Chil 1			Sheriff's Dept 2 Spks 2 Reno 1	
Number / Location Individual Prosecutor Respondents	Bhm 6 Bessemer 10		Fairbanks 1 Juneau 1 Palmer 1			New Haven 7 Milford-Ansonia 2				3	Cook Co 12 Peoria 4						2
Avg No Yrs Prosecutor	8.2		10.5			12.3				10.8	9.1						5
Avg No Sexl Aslt Cases	40.8		175			85				24	73						

* Chicago Police Department laboratory serves City of Chicago; 7 Illinois State Police Forensic Science labs serve downstate Illinois (Morton is closest lab to Peoria)

Fairbanks; numbers are victims; responding office prosecutes only adult cases

** Milford Ansonia Judicial District

Abbreviations: Bhm, Birmingham; Bsm, Bessemer; Hwd, Homewood; Tdga, Talladega; Hvr, Hoover; Anc, Anchorage; AST, Alaska State Troopers; NSB, North Slope Borough (Barrow); Mfd, Milford; NHv, New Haven; Org, Orange; Tor, Torrington; CSP, Connecticut State Police, Western District; PBCo, Palm Beach County; Chi, Chicago; Peo, Peoria; Chmp, Champaigne; Blm, Bloomington; Brw, Brewer; Bgr, Bangor; Els, Ellsworth; MSP, Maine State Police; Chil, Chillecothe; Spks, Sparks;

blank cells, data not provided

Table 3-3. Victim - Offender Ages, 1989-1991 Average, Study Site Police Departments

Ages	AL	AK	CT	FL	ME
Both Adults	72.3	43.8	62.9	49	48.9
Victim M - Offender A	17.7	50.1	30.7	35.7	35.5
Victim A - Offender M	0.83	0	0	0.23	0.6
Both Minors	9.67	8.87	6.53	15	16.3

Percent; weighted averages of responding police agencies A=adult M=minor

Table 3-4. Victim - Offender Relationship / Age, 1989-1991 Average, Study Site Police Departments

Relationship	AL	AK	CT	FL	ME
<i>Both Adults</i>					
Stranger	61.3	33.8	11.4	43.7	29.3
Acquaintance	29.7	53.7	77.6	33.7	47.5
Live-In	2.33	3.5	6.2	5.23	4.7
Married	0.57	1.87	2.83	15	2.93
Related	4	9	1.9	17.3	15.6
<i>Minor Victim Adult Offender</i>					
Stranger	15.5	1	0.9	12	17
Acquaintance	33.5	15	79.2	13.7	33
Live-In	0	33.3	2.8	26.3	4.7
Married	0	0	4.77	0.33	0
Related	51	50.7	12.3	49	45.3
<i>Both Minors</i>					
Stranger	20.7	2	0.6	4	0
Acquaintance	47.7	91	63.1	49.7	55
Live-In	0	6	3.3	15.3	0
Related	31.7	1	3	31	45

Weighted Average (% of Cases) of Responding Departments

(A) Both Adults; (B) Minor Victim, Adult Offender; (C) Both Minors

Table 3-5. Victim - Offender Relationships (%)

Jurisdiction*	Stranger	Non-Stranger
Alabama	32.5	67.5
Alaska	12.3	87.7
Connecticut	4.3	95.7
Florida	19.9	80.1
Maine	15.4	84.6
1979-1987 U.S. **	46	54
1991 U.S. **	44.2	55.8
1994 U.S. **	22.8	77.2

* 1989 - 1991 Study Site Police Departments

** BJS NCVS

Table 3-6. Location of Assault, 1989-1991 Average, Study Site Police Departments

Place	AL	AK	CT	FL	ME
Victim's Home	44.2	25.3	33.2	35.3	41.7
Perpetrator's Home	8.2	26.3	36.6	19.3	29.3
Victim's Vehicle	5.3	3	13.3	3	2.1
Perpetrator's Vehicle	1.7	25.3	5.4	13.7	4.6
Office / School	1.5	2	4.4	4.3	
Other Building	8.8	5.7	4.8	4	2.1
Outdoors	28	9	2.3	15.3	11.5
Other	2.3	5.7		5	8.9

Weighted Average (% of Cases) of Responding Departments
CT data for 1991

Table 3-7 Rape (% of Cases) by Place of Occurrence - 1979-87 and 1991-92

Location	1979 - 1987	1991	1992
At/In Own Home	41	26.8	16.3
Near Own Home	8	3.2	7.9
At/Near Friend's Home	15	20.4	14.4
On the Street	20	17.2	30.4
Commercial Building	10	7.3	8
Other Place	6	25.1	23

1979-1987 Data from Caroline Wolf Harlow,
Female Victims of Violent Crime, Jan. 1991, NCJ-126826
1991 and 1992: NCS data

Table 3-8. Alcohol and/or Drug Involvement, 1989-1991 Average,
Study Site Police Departments

Alcohol / Drug or Both	AL	AK	CT	FL	ME
Alcohol	60	69	48	25	35
Drugs	20	14	38	12	4
Alcohol and Drugs	20	18	10	6	na

Weighted Average of Responding Departments (Estimated % of Cases)
CT data for 1991

Table 3-9. Development of Suspect and Arrest, 1989-1991 Average,
Study Site Police Departments

	AL	AK	CT	FL	ME
Identify a Suspect Quickly	71	43	77	61	57
Make an Arrest	25	22	74	26	45

Weighted Average of Responding Departments (Estimated % of Cases)
CT data includes New Haven only for 1991

Table 3-10. Physical Evidence in Cases, 1989-1991 Weighted Average,
Study Site Police Respondents

	AL	AK	CT	FL	IL	ME	NV	Overall
Fingerprints	7	31.3	6.6	4.3	11.5	6.9	6.4	9.5
Tire Impressions	0.5	3.5	3.5	0.4	0.8	5.8	8.7	4
Footwear, footprints	3	3.6	0.6	1.5	6.1	8.2	3.8	4.2
Documents	28	2.4	3.3	3.1	12	2.3	5	4.5
Firearms	14.3	2.5	0.8	1.9	5.2	4.6	2.1	3.1
Knives; sharp instruments	13	5.2	2.5	1.7	15.8	7.3	2	6.1
Other weapons	9	2.7	1.1	3.7	10.7	5	2.2	4.3
Controlled substances	38	7.5	1.8	1	6.5	11.5	13.9	8.1
Clothing not victim's	47	29.1	20.4	15.1	7.7	25.9	1.9	22.3
Trace evidence	38	56	22.8	9.9	14.9	52.3	31.3	31.1
Bloodstains	35	36.7	13.7	10.3	18.6	17.7	4.2	16.9
Semen stains	37	48.5	21.5	16.1	26.1	28.5	41.1	28.1
Other biological stains	20	16.8	9	11.4	9.2	10	5.3	10.9

Weighted According to Number of Respondents
"Overall" is Arithmetic Average of the Weighted Averages

Table 3-11. Physical Evidence in Cases, 1989-1991 Average, Study Site Prosecutor's Offices

	AL	CT*	FL	Overall
Fingerprints	7	3.3	2	4.1
Tire Impressions	0.5	3.3	1	1.6
Footwear, footprints	3	6.7	1	3.6
Documents	28	23.3	1	17.4
Firearms	14.3	35	1	16.8
Knives; sharp inst	13	23.3	3	13.1
Other weapons	9	23.3	1	11.1
Controlled substances	38	56.7	1	31.9
Clothing not victim's	47	20	5	24
Trace evidence	38	26.7	10	24.9
Bloodstains	35	26.7	10	23.9
Semen stains	37	36.7	10	27.9
Other biological stain	20	33.3	1	18.1

Weighted Average (where applicable) of Responding Offices;
Overall is Average of Site Values
* Milford-Ansonia Judicial District

Table 3-12. Physical Evidence in Cases, 1989-1991 Average, Prosecutor - Police Comparison

	Prosecutor	Police
Fingerprints	4.1	9.5
Tire Impressions	1.6	4
Footwear, footprints	3.6	4.2
Documents	17.4	4.5
Firearms	16.8	3.1
Knives; sharp instruments	13.1	6.1
Other weapons	11.1	4.3
Controlled substances	31.9	8.1
Clothing not victim's	24	22.3
Trace evidence	24.9	31.1
Bloodstains	23.9	16.9
Semen stains	27.9	28.1
Other biological stain	18.1	10.9

"Prosecutor" and "Police" Values are "Overall" from Tables 3-10 and 3-11

Table 3-13. Most Important Factors in Sexual Assault Investigations, Police Respondents

Ten Highest Responses Overall * (Most to Least Frequent)	AL	AK	CT	FL	IL	ME	NV
Physical evidence linking suspect to victim / crime	15	13	23	8	11	9	3
Victim statement, interview, credibility, cooperation	5	6	18	12	7	4	7
Suspect statement, confession, credibility	6	10	5	1	6	8	1
Crime scene processing, scene photographs	2	9	10	4	2	5	1
Witness statements	9	4	2	2	1		
Timeliness of report	1	5	6	1	2	1	1
Victim identification of suspect	2	1	6	1		2	1
Rape kit evidence	1	2	5			1	
Medical examination	5	1		3			
Prompt laboratory analysis, results, comparison	2		8	1	1	2	2
Victim services			2	1			
Cooperation of prosecutor		1	1	1			2
Mentioned 1 to 3 times but not in highest ten							
Preservation of evidence Photographs of victim's injuries Background of victim Constancy of accusation Good description of, promptly locating suspect Background of suspect Witness credibility Thoroughness of investigation Interviewing technique Victim offender relationship Timeliness of medical examination Training, experience of medical facility personnel Physical force used Police - medical facility cooperation Victim's and suspect's rights respected Lack of interference by victim services personnel Case presentation							

* Weighted averages of all responses are organized from most frequent to least frequent. There are more than ten items listed because in some cases, items had the same overall values. Blanks in the table indicate that the item was not in the top ten mentioned by police from that state.

Table 3-14. Perceived Value of Physical Evidence Under Various Case Circumstances
 Study Site Police Respondents (see text for explanation of values)

	AL	AK	CT	FL	IL	ME	NV	Overall
A* Identification	3.6	3.4	3.3	3.3	3	3.5	3.4	3.4
B* Identification	3.8	3.5	3.7	3.8	3.3	3.5	3.6	3.6
C* Identification	3.1	2.6	2.7	2.6	2.6	2.3	3.2	2.7
D* Identification	3.8	4	3.9	4	3.4	3.3	3.8	3.7
A* Genetic Marker	3.7	3.5	3.7	3.4	3.3	3	3.6	3.4
B* Genetic Marker	3.7	3.8	3.8	3.9	3.5	3.6	3.4	3.7
C* Genetic Marker	3.1	2.8	2.8	2.7	2.7	2.5	3	2.8
D* Genetic Marker	3.9	4	3.8	4	3.3	3.5	3.8	3.7

* A Every case; B Victim reports incident promptly; C Consensual case;
 D Suspect denies contact

Table 3-15. Perceived Importance of Physical Evidence in Sexual Assault Cases under Simplified Fact Pattern Scenarios
Individual Prosecutor Respondents

Summation of Number of Responses Times Weight* Within State or Overall (Percent of Maximal Value**)

	AL	AK	CT	FL	IL	NV	Overall
A. Victim can identify offender; would be a good witness							
1. Medical Evidence							
Support victim account	23(58)	6(50)	17(53)	7(58)	35(58)	4(50)	92(56)
Not support victim account	28(70)	7(58)	19(59)	5(42)	33(55)	4(50)	96(59)
2. Rape kit / victim clothing							
Semen identification only	23(58)	7(58)	18(56)	6(50)	29(48)	4 (50)	87(53)
Genetic typing includes suspect	24(60)	6(50)	18(56)	7(58)	30(50)	4 (50)	89(54)
Genetic typing strongly includes suspect	25(63)	7(58)	18(56)	6(50)	38(63)	4 (50)	98(60)
3. Other physical evidence, where rape kit / clothing support victim account							
Support victim account	22(55)	7(58)	14(44)	7(58)	30(50)	4(50)	84(51)
Not support victim account	22(55)	7(58)	16(50)	6(50)	38(63)	4(50)	93(57)
4. Other physical evidence, where rape kit / clothing do not support victim account							
Support victim account	29(68)	7(58)	15(47)	6(50)	39(65)	5(63)	99(60)
Not support victim account	26(65)	8(67)	21(66)	8(67)	43(72)	4(50)	110(67)
B. Victim can identify offender; would not be a good witness							
1. Medical Evidence							
Support victim account	30(75)	8(67)	26(81)	9(75)	50(83)	5(63)	128(78)
Not support victim account	25 (63)	7(58)	20(63)	9(75)	40(67)	7(88)	108(66)
2. Rape kit / victim clothing							
Semen identification only	24 (60)	8(67)	21(66)	9(75)	34(57)	4(50)	100(61)
Genetic typing includes suspect	26 (65)	8(67)	17(53)	9(75)	45(75)	6(75)	111(68)
Genetic typing strongly includes suspect	29 (73)	8(67)	25(78)	9(75)	50(83)	5(63)	126(77)
3. Other physical evidence, where rape kit / clothing support victim account							
Support victim account	24 (60)	8(67)	19(59)	8(67)	39(65)	5(63)	103(63)
Not support victim account	20 (50)	8(67)	25(78)	9(75)	46(77)	5(63)	113(69)
4. Other physical evidence, where rape kit / clothing do not support victim account							
Support victim account	25 (63)	9(75)	17(53)	8(67)	44(73)	5(63)	108(66)
Not support victim account	32 (80)	8(67)	24(75)	9(75)	51(85)	5(63)	129(79)

Table 3-15. Continued

	AL	AK	CT	FL	IL	NV	Overall
C. Victim cannot identify offender; would be a good witness							
1. Medical Evidence							
Support victim account	32 (80)	11(92)	28(88)	10(83)	54(90)	6(75)	141(86)
Not support victim account	28 (70)	7(58)	17(53)	9(75)	30(50)	8(100)	99(60)
2. Rape kit / victim clothing							
Semen identification only	25 (63)	9(75)	20(63)	9(75)	33(55)	5(63)	101(62)
Genetic typing includes suspect	27 (68)	10(83)	18(56)	9(75)	36(60)	6(75)	106(65)
Genetic typing strongly includes suspect	35 (88)	10(83)	28(88)	10(83)	56(93)	6(75)	145(88)
3. Other physical evidence, where rape kit / clothing support victim account							
Support victim account	27 (68)	9(75)	16(50)	9(75)	39(65)	5(63)	105(64)
Not support victim account	34 (85)	11(92)	26(81)	10(83)	52(87)	7(88)	140(85)
4. Other physical evidence, where rape kit / clothing do not support victim account							
Support victim account	29(73)	9(75)	16(50)	9(75)	38(63)	6(75)	119(73)
Not support victim account	36(90)	11(92)	28(88)	9(75)	52(87)	7(88)	106(65)
D. Victim cannot identify offender; would not be a good witness							
1. Medical Evidence							
Support victim account	35(88)	12(100)	26(81)	10(83)	57(95)	8(100)	148(90)
Not support victim account	26(65)	8(67)	17(53)	10(83)	33(55)	8(100)	102(62)
2. Rape kit / victim clothing							
Semen identification only	29(73)	9(75)	19(59)	10(83)	32(53)	6(75)	105(64)
Genetic typing includes suspect	30(75)	9(75)	17(53)	10(83)	39(65)	6(75)	111(68)
Genetic typing strongly includes suspect	37(75)	12(100)	26(81)	10(83)	56(93)	8(100)	149(91)
3. Other physical evidence, where rape kit / clothing support victim account							
Support victim account	31(78)	9(75)	19(59)	10(83)	43(72)	6(75)	118(72)
Not support victim account	36(90)	11(92)	26(81)	10(83)	58(97)	8(100)	149(91)
4. Other physical evidence, where rape kit / clothing do not support victim account							
Support victim account	33(83)	10(83)	17(53)	10(83)	36(60)	6(75)	112(68)
Not support victim account	36(90)	11(92)	31(97)	10(83)	55(92)	8(100)	151(92)

* Weight: Essential, 4; Very Important, 3; Important, 2; Not Important, 1

** Minimum, Maximum Possible Values for each state / overall: AL 10,40; AK 3,12; CT 8,32; FL 3,12; IL 15,60; NV 4,8; and Overall 41,164

Table 3-16. Perceived Importance of Physical Evidence in Sexual Assault Cases - Prosecutor and Defense Respondents – Overall

Summation of Number of Responses Times Weight (Percent of Maximum)*

	Prosecutors	Defense
A. Victim can identify offender; would be a good witness		
1. Medical Evidence		
Support victim account	92(56)	16(50)
Not support victim account	96(59)	22(69)
2. Rape kit / victim clothing		
Semen identification only	87(53)	15(47)
Genetic typing includes suspect	89(54)	22(69)
Genetic typing strongly includes suspect	98(60)	17(53)
3. Other physical evidence, where rape kit / clothing support victim account		
Support victim account	84(51)	24(75)
Not support victim account	93(57)	14(44)
4. Other physical evidence, where rape kit / clothing do not support victim account		
Support victim account	99(60)	26(81)
Not support victim account	110(67)	17(53)
B. Victim can identify offender; would not be a good witness		
1. Medical Evidence		
Support victim account	128(78)	25(78)
Not support victim account	108(66)	28(88)
2. Rape kit / victim clothing		
Semen identification only	100(61)	17(53)
Genetic typing includes suspect	111(68)	26(81)
Genetic typing strongly includes suspect	126(77)	22(69)
3. Other physical evidence, where rape kit / clothing support victim account		
Support victim account	103(63)	27(84)
Not support victim account	113(69)	23(72)
4. Other physical evidence, where rape kit / clothing do not support victim account		
Support victim account	108(66)	29(91)
Not support victim account	129(79)	22(69)

Table 3-16 Continued

	Prosecutors	Defense
C. Victim cannot identify offender; would be a good witness		
1. Medical Evidence		
Support victim account	141(86)	26(81)
Not support victim account	99(60)	25(78)
2. Rape kit / victim clothing		
Semen identification only	101(62)	23(72)
Genetic typing includes suspect	106(65)	27(84)
Genetic typing strongly includes suspect	145(88)	23(72)
3. Other physical evidence, where rape kit / clothing support victim account		
Support victim account	105(64)	28(88)
Not support victim account	140(85)	25(78)
4. Other physical evidence, where rape kit / clothing do not support victim account		
Support victim account	119(73)	25(78)
Not support victim account	106(65)	23(72)
D. Victim cannot identify offender; would not be a good witness		
1. Medical Evidence		
Support victim account	148(90)	27(84)
Not support victim account	102(62)	24(75)
2. Rape kit / victim clothing		
Semen identification only	105(64)	23(72)
Genetic typing includes suspect	111(68)	26(81)
Genetic typing strongly includes suspect	149(91)	26(81)
3. Other physical evidence, where rape kit / clothing support victim account		
Support victim account	118(72)	24(75)
Not support victim account	149(91)	25(78)
4. Other physical evidence, where rape kit / clothing do not support victim account		
Support victim account	112(68)	26(81)
Not support victim account	151(92)	27(84)

* Weight: Essential, 4; Very Important, 3; Important, 2; Not Important, 1
 Minimum, Maximum Possible Values: Prosecutors 41,164; Defense 8,32

Table 3-17. Relative Value of Different Evidence in Sexual Assault Cases, Individual Prosecutor Respondents
Average Relative Value (Number x Weight)* - Shown in Order of Overall Rank

Types of Sexual Assault Evidence under two simplified fact pattern assumptions	Alabama		Alaska		Connecticut		Florida		Illinois		Nevada		Overall	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank
A. Victim knows and/or can positively identify defendant														
Medical evidence showing force was used	3.4	2	3.0	1	3.9	3	5.0	3	3.5	1	2.5	1	3.6	1
DNA typing that includes defendant	3.0	1	3.3	2	3.1	1	2.3	1	5.2	5	5.5	4	3.9	2
Victim ability to identify defendant positively	3.0	1	3.7	3	3.9	3	6.0	4	4.4	2	3.5	2	4.0	3
Another eyewitness can identify defendant	4.4	3	4.3	4	3.7	2	4.0	2	5.0	4	8.5	7	4.6	4
Conventional genetic typing includes defendant	5.4	4	4.7	5	4.3	4	2.3	1	5.3	6	5.5	4	4.9	5
Bloodstains consistent with victim type on defendant's clothing or vice versa	6.8	6	5.0	6	3.9	3	4.0	2	5.2	5	6.5	6	5.3	6
Victim's clothing damaged, indicating force used	7.0	7	5.7	7	5.2	5	6.0	4	5.1	3	6.5	6	5.7	7
Defendant's fingerprints found at scene	6.2	5	6.3	8	5.3	6	6.3	5	6.6	7	9.0	8	6.3	8
Semen identified on vaginal swab from rape kit	7.4	9	6.3	8	7.6	7	7.0	6	7.6	8	5.0	3	7.3	9
Semen identified on victim's clothing	7.2	8	7.7	9	8.1	8	7.0	6	8.4	9	6.0	5	7.8	10
Fibers at scene or on victim consistent	9.3	10	7.7	9	8.6	9	7.3	7	9.1	10	12.5	10	9.0	11
Hair at scene or on victim consistent with defendant	9.4	11	8.0	10	9.0	11	8.0	8	10.0	12	11.5	9	9.4	12
Semen identified on defendant's clothing	9.5	12	13.0	11	8.9	10	8.7	9	9.9	11	8.5	7	9.7	13
B. Victim does not know and cannot positively identify defendant														
DNA typing that includes defendant	1.4	1	2.0	2	2.4	1	1.0	1	3.6	2	6.0	4	2.7	1
Another eyewitness can identify defendant	3.8	3	1.5	1	2.7	2	3.7	4	3.4	1	7.5	6	3.4	2
Defendant's fingerprints found at scene	3.5	2	4.5	5	2.8	3	3.3	3	3.8	3	9.0	7	3.8	3
Conventional genetic typing includes defendant	4.9	4	7.5	9	3.4	4	1.7	2	4.1	4	6.5	5	4.3	4
Bloodstains consistent with victim type on defendant's clothing or vice versa	5.2	5	5.5	7	3.6	5	6.7	9	5.5	5	6.5	5	5.2	5
Medical evidence showing force was used	5.9	6	3.5	4	5.6	6	5.0	6	7.2	7	3.0	2	6.0	6
Victim inability to identify defendant	7.5	10	3.0	3	6.7	8	11.7	11	7.3	8	1.0	1	6.9	7
Fibers at scene or on victim consistent with defendant's clothing	9.2	12	5.0	6	6.7	8	5.7	7	6.8	6	12.0	10	7.4	8
Semen identified on vaginal swab from rape kit	6.8	7	7.0	8	8.4	10	6.7	9	7.8	9	5.5	3	7.5	9
Victim's clothing damaged, indicating force used	6.9	8	5.5	7	6.9	9	7.0	10	8.9	11	6.5	5	7.5	9
Hair at scene or on victim consistent with defendant	7.7	11	3.5	4	6.4	7	4.7	5	8.9	11	11.0	9	7.5	9
Semen identified on victim's clothing	7.3	9	7.5	9	8.8	11	6.3	8	8.8	10	6.5	4	8.1	10
Semen identified on defendant's clothing	9.6	13	9.0	10	9.4	12	7.0	10	10.4	12	10.0	8	9.7	11

* Weight, 1 = most important; 13 = least important; in some cases, evidence had the same relative value, and therefore the same rank

Table 3-18. Effect of Physical Evidence on Prosecutorial Decision-Making under Simplified Fact Scenarios
(Individual Prosecutors Overall)

Arrest Warrants	% Yes	
Assuming an arrest was not made immediately based on observations by the police in a case, are you typically involved with the police in deciding whether there is probable cause to seek an arrest warrant?	62	
In cases where the complainant <u>cannot</u> make a good eyewitness identification of the suspect, do you rely on supporting physical evidence analysis results (medical examination results, finding of semen, etc.) to support an arrest warrant affidavit?	91	
In cases where the complainant <u>cannot</u> make a good eyewitness identification of the suspect, and the physical evidence analysis results are negative or uninformative (no good medical evidence, no sperm found, etc.), would you tend to support an arrest affidavit anyway?	8	
In cases where the complainant <u>can</u> make a good eyewitness identification of the suspect, but the physical evidence analysis results are negative or uninformative (no good medical evidence, no sperm found, etc.), would you tend to support an arrest affidavit anyway?	75	
Prosecution		
Assuming that physical evidence analysis results that <u>exclude or tend strongly to exclude</u> the defendant (for example, genetic marker tests that show the semen had to come from a different person, or fingerprints that would have to have come from the perpetrator but do not match the defendant). Under the following sexual assault case circumstances, % who would	Dismiss	Proceed, to trial if necessary
The complainant claims to <u>know</u> the suspect, <u>can</u> make an unequivocal eyewitness identification, and <u>would be</u> a good, credible witness	53	47
The complainant claims to <u>know</u> the suspect, <u>can</u> make an unequivocal eyewitness identification, but <u>would not be</u> a good, credible witness	70	30
The complainant does <u>not know</u> the suspect, <u>cannot</u> make an unequivocal eyewitness identification, but <u>would otherwise be</u> a good, credible witness	95	5
The complainant does <u>not know</u> the suspect, <u>cannot</u> make an unequivocal eyewitness identification, and <u>would not be</u> a good, credible witness	100	
DNA Evidence	% Yes	
Do you think DNA typing is more informative (conclusive) than the traditional genetic comparison tests done in the laboratory in these cases?	98	
In a case in which all the eyewitness and physical evidence was strongly in your favor, but no DNA testing had been done, would you:		
Ask for DNA testing to strengthen the case even further	30	
Proceed without DNA testing	70	
If, under these circumstances, the defense wanted to have DNA testing done, would you:		
Go along, with the idea that it would probably strengthen your case even further	98	
Oppose the testing, with the idea that it might exclude the defendant	2	
A DNA typing test was done, and the results <u>excluded</u> the defendant as the depositor of the semen found in the complainant. Under the following circumstances, % who would:	Dismiss	Proceed, to trial if necessary
All the other physical and eyewitness evidence strongly favored the state's case	42	58
All the other physical and eyewitness evidence did not particularly favor the state's case, but did not particularly help the defendant either	89	11
All the other physical and eyewitness evidence did not favor the state's case, and helped or tended to help the defendant	100	

Responses from AL (10), AK (3), CT (9), FL (3), IL (16), ME (1) and NV (2)

Table 3-19. Relative Value of Expert Testimony at Trial - Individual Prosecutors and Defense
Summation of Number of Respondents x Weight*

	Max Possible	Min Possible	Criminalist Value	Physician Value
Alabama	30	10	26	25
Alaska	9	3	6	8
Connecticut	27	9	20	23
Florida	9	3	8	7
Illinois	48	16	33	36
Nevada	6	2	5	6
Prosecutors Overall	129	43	98	105
Defense Overall	24	8	17	17

* Weight: 3, Very valuable; 2, Valuable; 1, Not important

"Defense Overall": 8 defense attorneys in AK, CT, IL, ME, NV

4 Recommendations

Recommendations from this project are based on survey data gathered, literature reviews and discussions with a variety of different people at the study sites and elsewhere. The recommendations are general because we think it would be presumptuous and unproductive to specify detailed protocols. Procedures can follow sound general principles or recommendations, but ultimately must be adapted to local conditions, practices, situations and laws.

A. Coordination of Effort

Coordinating the efforts of all the parties and agencies involved in sexual assault investigations may be the most important thing a jurisdiction can do to insure that cases are handled, investigated and prosecuted expeditiously.

Every jurisdiction should take steps to form a coordinating or steering committee, or a task force, for this purpose, if they have not already done so. In some places, this step has been mandated by law (e.g. in Connecticut, under P.A. 93-340). However, coordinating committees can be and have been established without a legal mandate.

The coordinating committee should be made up representatives of the police agency (ies), prosecutor's office, victim services agency (ies), hospital(s) and/or clinic(s), and forensic science laboratory, at a minimum. Representatives from other agencies may be included, as necessary and appropriate. If the committee is coordinating efforts in child sexual abuse cases as well as in adult sexual assault cases, for example, representatives from child protective service agencies and from specialized treatment and/or diagnostic centers for child victims would be included.

If adult and child abuse cases are handled very differently, and by completely different agencies in a jurisdiction, it may be advisable to have two different coordinating committees.

The coordinating committee, once formed, should be permanent. It should meet periodically to discuss problems that have come up, and try to find solutions for them. In addition, the protocols and procedures that are followed require periodic change and updating, as laws, caseloads and circumstances change in the jurisdiction.

The coordinating committee should have the goal of simplifying and streamlining all the protocols and procedures that are followed in providing service to victims. A major goal should be simplification of the paperwork. Another major goal should be the design and implementation of an evidence-collection protocol (including the sexual assault evidence collection kit) that meets everyone's criteria and goals insofar as possible.

The S.A.R.T. (Sexual Assault Response Team) concept is in close accord with this recommendation. The concept has been developed in many jurisdictions in the years since the data gathering for this project was completed. The SART idea is closely associated in many places with the notion of having specially trained Sexual Assault Nurse Examiners (S.A.N.E.) responsible for the immediate clinical management of complainants [163].

B. Investigation

In most jurisdictions, adult and child cases are handled differently, and often by different agencies.

1. Adult Cases

With "adult" cases (which might include teenaged victims, even though they are minors strictly speaking), the police are generally involved in the case from the beginning or very early. Police departments vary considerably in size and degree of investigative specialization, and these factors affect the way a given police agency handles a case. However, the basic investigative strategies are similar, even if different individuals or units within the department are responsible for different aspects of the same case.

Ideally, specialized training in the handling of sexual assault cases should be provided for police personnel who respond to sexual assault complaints. The training should be focused on helping police understand the psychological dynamics of sexual assault, and provide them with a basis for understanding victims' behavior. Investigators should be sensitive to a victim's situation and state of mind, and should keep an open mind about the case, especially in first or early contacts with a complainant. Training should also include familiarization with the protocols and procedures that should be followed, and notifications that must be made. They should be able to inform a victim about the procedures that will be followed, policies concerning compensation for the medical examination, what to expect as the case progresses, and so forth.

Cases come to the attention of the police in a number of different ways, and the police agency's response can differ, depending on the way a sexual assault case is reported to them, and on their size and internal organizational structure. In general, a case could be reported to the police (a) as an immediate emergency, needing immediate response; (b) as having just recently happened, but the immediate emergency has passed; or (c) as having happened some hours or days earlier.

In some cases, a victim may report a sexual assault to someone other than the police, such as a friend, confidant, or a victim services counselor. These individuals (sometimes called "outcry" witnesses) should be interviewed in the course of the investigation.

An immediate emergency would generally be a situation where an offender is still, or could be, present at the scene, and either the victim or someone else notifies police. In these circumstances, police operators should try if possible to stay on the line with the victim, and try to provide reassurance and comfort until police can arrive. Once the immediate emergency is under control, police officers can proceed as they would in the initial stages of any investigation.

Generally, the investigation will proceed in two stages, the initial response, then the follow-up. In larger departments, initial responders are likely to be patrol officers, with the follow-up investigation handled by detectives. In some departments, the initial responder and follow-up investigator could be the same person.

Initial responders should try to get essential information about the case, but it is not generally necessary to get into too much detail. The information that is essential depends on the type of case, and the time that has elapsed between the incident and the report to police. If the offender was a stranger, and the incident is recent, it is essential to get a description from the victim (and any witnesses, if there are any), and information about the exit route taken, etc.

The focus in these cases is getting the information out to police officers so the offender can be located. If the offender's identity is known to the victim, the focus is gathering information from the victim, any available witnesses, and the scene, that may indicate force, threat of force, or other indication of non-consent. In carrying out these duties, initial responders should be able to provide comfort, understanding and reassurance to the victim. The victim should be taken to an appropriate hospital or clinic for a medical examination.

If the incident occurred within 3 to 4 days of reporting, she should be encouraged to consent to a sexual assault evidence-collection protocol in connection with the medical examination. The medical and evidence-collection procedures should be explained to the victim, so she knows what to expect. Victim services personnel should be notified, if the victim is agreeable. Policies and procedures about payment for the medical examination, consent forms for treatment, STD testing, and release of evidence to the police agency should be explained. The clothing the victim was wearing at the time of the assault can be important evidence, and should be collected either at the scene or at the medical facility. It may be necessary to advise victims to bring a change of clothing with them, if the clothing they are wearing will be collected. Ideally, police and/or victim services personnel will transport, or arrange for transportation of, the victim to the medical facility and back home again. The scene of the assault should be examined carefully for any evidence, as would be done at any crime scene, and the scene should be processed for evidence as necessary.

If more than four days time has elapsed between the assault and reporting, it is unlikely that the sexual-assault evidence collection protocol will yield any useful evidence. However, it is still advisable to encourage victims to be seen at a medical facility for medical reasons. If a victim was injured, the injuries may still be documentable, and the clothing she was wearing at the time of the incident and possibly other evidence from the scene could still be available. In some cases of drug-facilitated sexual assault, relevant drugs and/or metabolites may be detectable for many weeks in the head hair. Depending on case circumstances, it may be worthwhile to collect such a specimen even some weeks after the incident.

The follow-up investigation will generally take place some time after the initial response and the medical facility visit (if there was one). Follow-up investigators generally need to interview victims at length about the assault. Every effort should be made to conduct this interview in a private setting where the victim can feel comfortable. The interviewer should try to be gentle, understanding and non-judgmental. The interviewer should explain that he/she has to ask detailed questions about the assault itself and about the victim's actions during and after the incident in order to do a thorough investigation. Information gathered at this stage of the investigation will be important in determining the future course of the case.

If the victim has been seen at a medical facility, and a sexual assault evidence collection kit taken, information about the victim's actions immediately following the incident should be obtained. This information includes things like whether the victim changed clothes, bathed, douched, brushed her teeth, went to the bathroom, etc. It should also be determined whether the victim had consensual sexual relations within 3 to 4 days before the assault. If so, the issue of obtaining reference specimens from the consensual partner could arise. In some places, this information is obtained by clinical personnel at the medical facility as part of their information gathering. Some sexual assault evidence collection protocols provide checklists for recording this type of information.

2. Child Sexual Abuse Cases

Cases involving children usually do not usually come to the attention of police directly from the victim. Frequently, a third party notifies police or child protective services about the case. The third party to whom the child victim revealed the information is generally an important witness (outcry witness), and investigators will want to interview them. It is also common for a child victim to reveal sexual abuse some time later than the actual incident or incidents.

Children suspected of being victims of sexual abuse should be interviewed by trained professionals. In some places, there are centers set up that are appropriately equipped and staffed for this purpose.

Because considerable time has often elapsed between an abusive incident and revelation, medical examinations of child victims may not be indicated. If an abusive incident is recent, a medical examination has the potential of providing corroborative evidence. However, such examinations are almost certainly very traumatic for younger children, and should be conducted only if indicated, and then only by trained specialists. It is rare to find semen in a child victim, though most authorities would agree that such a finding would be difficult to explain other than as evidence of abuse, especially in a young child. Other indices of child sexual abuse were mentioned above in § 2.B.

C. Evidence Collection

1. Scenes

Scenes of sexual assaults should be treated like any other crime scene. They should be secured and protected to the extent possible, thoroughly searched, and processed for physical evidence. In these cases, as in any other type of case, the search for evidence should be guided by the fact pattern of the case, and reasonable theories of what may have occurred based on the available information. Investigators should focus on physical evidence that will help in founding, solving and then prosecuting the case. As we have noted above, identification of the offender is the principal issue in some cases, while in others, it is absence of consent. Clothing can be important evidence, and the clothing that was worn at the time of the assault should be collected if possible. Sometimes, this clothing is collected at the hospital or clinic in connection with the medical examination, but in some cases it would be collected elsewhere (such as at a victim's residence). Investigators should also be aware of the potential evidentiary value of condoms. If a condom is used in a sexual assault, it contains biological evidence from both the victim and the offender.

2. Clinical / Medical

It is taken for granted that any clinic or hospital seeing a sexual assault victim will attend to any injuries and to medical and health issues (testing for pregnancy, STDs, etc.) with appropriate follow-up care. Many states have passed laws concerning provision of and mechanisms of payment for the medical examination of sexual-assault complainants (For example: 215 Illinois Comp. Stat. 125/4-4 (1995); Nevada Rev. Stat. 217.300 (1995); Florida Stat. 395.1021 and 960.28 (1995); Code of Alabama 15-23-5 (1995); Maine Rev. Stat. 30-A at 287; Connecticut Gen. Stat. 19a-112a (e) 116). The appropriate information should be shared with the patient by clinical personnel.

Our recommendations are focused on the evidence-collection effort that typically accompanies the clinical examination.

One of the first things that comes up in connection with a hospital or clinic visit by a sexual assault victim is the paperwork associated with consent for treatment, consent for STD or HIV testing, consent for release of the sexual-assault evidence to the police, history and information forms, etc. In some protocols, the paperwork is duplicative and some of the requested information may not even be necessary. With planning and coordination of effort, it should be possible to reduce the paperwork burden to the minimum required by the hospital or clinic, law enforcement agency and laboratory. Further, forms can be designed so that the required number of copies of information is produced for all the parties entitled to it, and that information is not available to parties not entitled to it. In busy emergency rooms, this strategy would help to streamline the examination procedure, while still fulfilling consent, information and evidentiary requirements.

Coordination of the efforts of all parties was stressed above. Coordinating these efforts is easier if fewer medical institutions are involved. We recognize that victims cannot be forced to go to a particular facility. However, the more hospitals and clinics in a jurisdiction that see sexual assault victims, the greater the difficulty in coordinating efforts and providing current and ongoing training for the clinical staff.

If investigative, victim services, medical, and evidence collection efforts are to be effectively coordinated, there is a need for periodic training of the clinical staff in medical facilities. The greater the turnover of staff in emergency room settings (e.g. rotation of residents on emergency services of large, teaching hospitals), the greater the need for periodic and ongoing training. In some jurisdictions, videotape programs on the clinical management of sexual assault complainants, and the evidence-collection protocol, have been prepared. These programs are relatively brief, can be kept up to date, and are very useful in training new medical staff members. In this regard, the sexual assault nurse examiner (SANE) programs in some jurisdictions appear to be very successful. Sexual assault nurse examiners are specially trained in this work, and in many places, where physician turnover in emergency services is high, or where physicians may not be available on a 24-hour basis, these specialized nursing personnel provide a solution to the problem of serving victims knowledgeable and in coordination with police, victim services and other agencies. The coordinated, clinical response concept has been enlarged in some jurisdictions to what is called the "sexual assault response team." We recognize that physicians have the primary responsibility for patient care, clinical laboratory testing, and medical follow-up. There is no compelling reason, however, why specially trained and certified nurse examiners cannot assume a primary role in the evidence-collection aspects of the clinical examination of sexual assault complainants [23;24].

Injuries to sexual assault complainants should be documented photographically, if possible. The presence of such injuries may provide important evidence at a later stage of the case. Careful documentation of injuries that will heal (and not be present later) can be important in the later prosecution of a defendant.

3. Sexual Assault Evidence Collection Kits

Tables 2-1 and 2-2 (in § 2 above) reveal considerable variation in the contents, accompanying protocols and marking/labeling requirements of various kits.

Because different jurisdictions have different policies, requirements, laboratory capabilities, and consensus protocols, it would be unrealistic to try to recommend a universal evidence-collection kit. We do recommend, however, that certain principles be adopted and followed in designing these kits. First, as emphasized in § 4A above, a coordinating committee or task force should be involved in formulating the overall evidence collection protocol. This protocol includes the paperwork and forms, the type of evidence that is to be collected, the form in which each type of evidence will be collected, the packaging for the different evidence, and the marking/labeling requirements. In some jurisdictions, state laws establish coordinating committees, assign responsibility for the design and/or approval and/or distribution of sexual-assault evidence kits, and/or provide for training (117).

In § 4.C.2, it was recommended that the required consent and information forms be simplified as much as possible. To the extent possible, the required forms should be made a part of the sexual assault evidence-collection kit. In our surveys, there was some jurisdictional variation in what information is kept in the patient file exclusively, or shared with the law enforcement agency, the laboratory (and/or the prosecutor's office). To some extent, this variation may reflect different state laws, or hospital practices, on patient record confidentiality. Some of the information that is collected is unequivocally related to health care, and must be restricted to the patient's medical or hospital files. Other information may be relevant to the investigation, and is needed by law enforcement. Still other information may be relevant to the interpretation of physical evidence findings by the laboratory. The distinctions should be clearly delineated according to the state and local laws and practices, and the forms designed accordingly.

The evidence collection kit itself should contain provisions for collecting and packaging every item of evidence that is, or might be, collected in a case, as part of the evidence-collection protocol in connection with the medical examination. The nature of these items will vary, depending on the case history, the capabilities of the clinical facility and the forensic science laboratory, and the logistics involved in storing the completed kit and transporting it to the laboratory. The consensus protocol adopted by the coordinating committee or task force should take all these factors into account in deciding what is to be collected, and in designing the evidence collection kit accordingly.

Some kits include some provision for collecting trace evidence and debris that may fall off a victim's clothing during disrobing at the medical facility. In most kits, a large clean piece of paper, on which the victim can stand while disrobing, serves this purpose. Generally, this procedure is a good one, provided that the piece of paper does not come into direct contact with the floor (most kits suggest placing another, throw-away piece of paper, or a clean sheet, under the debris-collection paper). Some kits also provide paper bags for the packaging of clothing. Clothing should be collected, to the extent that it may contain evidence. Since clothing, and paper bags large enough to contain clothing items, can be bulky, it may be more efficient to provide paper bags for clothing separately from the actual sexual assault kit. Clothing worn during the assault may contain evidence, and should be collected. Underwear could have drainage stains that are important, even if it is different from that worn during the actual assault. In some cases, relevant clothing may be collected by investigators prior to transporting a complainant to a medical facility.

Most kits provide for the collection of vaginal, and/or oral, and/or anal swabs and smears. These items are clearly essential for the laboratory to identify any semen that is present, and if so, to do DNA typing.

The presence of motile sperm in a victim is the only way to provide evidence of recent semen deposition. Provision for this examination should only be made, however, if trained, knowledgeable personnel are available at the clinical facility to do it. Many kits provide swabs for collecting stains on (rather than in) a victim's body, or possible saliva traces around bitemarks. These provisions are simple, and recommended.

Most kits provide for collecting reference blood from a victim. A reference specimen is essential for the forensic laboratory if semen is found, and DNA typing tests are to be performed. If the reference specimen is to be liquid blood, it should be collected in an EDTA (or ACD) vacutainer tube. There is never a reason to collect blood in a clot tube, although some kits have them. There really isn't much reason to collect liquid blood as a reference specimen any more. It is more subject to deterioration than the alternatives, and should be refrigerated. Reference blood could easily be collected as a small dried bloodstain on a filter paper, cloth or FTA card. A finger stick would provide more than ample quantity. A buccal swab is likewise an acceptable reference specimen. Blood stains or buccals should be thoroughly dried before packaging. At one time, saliva needed to be collected as a reference specimen for ABO typing, but no longer. Provisions for saliva specimen collection should be removed from kits.

It is essential that the kit instructions specify that swabs or swatches containing biological evidence be thoroughly dried prior to packaging. Some of the surveyed kit instructions already have this direction included, but others do not.

Most, but not all of the surveyed kits make some provision for the collection of head and/or pubic hair evidence and reference standards. There are several issues in connection with the collection of hair evidence as part of the kit. Most kits that provide for pubic hair brushings or combings also provide for collection of reference pubic hair from the victim. However, some provide for combings / brushings but, not for reference standards. This practice doesn't really make sense. If questioned hairs are to be collected, reference hairs should be collected. Hair examiners do not agree on the number of reference hairs required. This lack of consensus is probably the source of the variation in the different kits. It should be kept in mind that microscopical morphological hair comparison cannot identify a person [125]. It might exclude a suspect, however. Another novelty is mitochondrial DNA typing [229-231]. A few laboratories are equipped to do such testing, and it is fair to say that mtDNA typing of hair is by no means a routine procedure in sexual assault cases. MtDNA typing does not individualize a person to anywhere near the same extent as genomic (nuclear) DNA typing. It may "include" a suspect in a group of potential depositors numbering in the thousands. It may also exclude a suspect. Nuclear (genomic) DNA typing is sometimes possible in hair roots, but not in hair shafts. Thus, typical shed (telogen) hairs are potentially suitable for mtDNA but not nuclear DNA typing. Both the potential forensic value and negatives involved in collection of pubic and / or head hairs should be considered in deciding whether to include provisions for hair collection in kits. It makes little sense to collect hairs if they are not going to be examined.

Apart from the hair comparison issue, clinical personnel should be alert to the possibility of semen evidence being found on a victim's pubic hair. Such hairs would be potentially valuable evidence, and can be collected by cutting.

Different sexual assault evidence collection kits may additionally provide for the collection of outer clothing or underwear, biological stains on the victim's body, genital swabbings, fingernail scrapings or cuttings, and "debris" (such as grass, soil, or other trace materials that may be found associated with a victim's body rather than with clothing.

Providing for the collection of victim's clothing at the hospital or medical facility is generally a good idea. The containers (typically paper bags) could be part of the evidence-collection kit, or separate (kept in hospital stock, for example). The value of their being part of the kit lies in having all the items needed for evidence collection in one "package" (the kit), rather than someone having to keep track of containers separately. However, depending on the design of the kit (many of the outside containers are boxes or paper bags that are not very big), it will generally not be possible to put the packaged clothing back into the kit itself.

Providing for collection of biological stains on the victim's body is a good idea. One or more cotton swabs and envelopes is all that is required. One or more envelopes for "debris" is also a good idea. Fingernail scrapings or cuttings should be collected if the history suggests that the victim scratched the offender [126]. Providing for a "genital" (vulvar) swab is generally a good idea, in cases where penetration was very slight (and the vaginal swabs would be expected to yield no semen evidence).

We do not recommend that any testing be done in the clinical setting. One kit provides for an acid phosphatase test. All testing on the evidence should be done in the forensic science laboratory. The sole exception to this recommendation is an examination for motile spermatozoa, if the clinical examiner has the knowledge, training and experience to do it. A small portion of the swab evidence could be used for the motile sperm examination without compromising the swab evidence. The value of finding motile sperm is that it is virtually the only physical evidence finding that can be interpreted to mean that the seminal fluid deposition was recent (within hours).

Evidence-collection kits should be manufactured or assembled to agreed-upon specifications, and with good quality control. An "integrity seal" (broken only when the kit is ready to be used) is recommended. Obviously, completed kits need to be sealed as evidence, and providing sealing tape for this purpose within the kit is a good idea. Finally, the labeling/marketing requirements for the personnel using the kit should be simplified as much as possible, along with the kit's instructions. Some kits require not only that the outside container information be filled out, but also that information be written on every evidence item container within the kit as well. In some cases, a clinical examiner may have to record the victim's name, date, time and his/her own name and initials, twenty or thirty times.

Many of the individual evidence item containers are designed and intended to be placed back into the kit's outside container (bag or box). One good strategy for simplifying labeling and marking is followed in Kit A (Tables 8 and 8A). A unique number (laboratory case number) is pre-printed on the outside kit container and on every container and item within the kit itself. This strategy could easily accommodate bar codes. In this way, every sub-container that can be placed back into the outer kit container following evidence collection would already be labeled. Similar labels or codes could be used on paper containers for clothing or debris, even if they were not returned to the outer kit.

Most kits provide a check-box on the outside container, or on individual evidence item packages, to indicate whether an item was collected. We recommend this practice. It helps the laboratory examiner to inventory the kit contents. For this protocol to be effective, all the evidence item containers must be returned to the kit whether they were actually used or not.

The instructions provided with the kit should be straightforward and easy to follow. The instructions can be on a separate page, or printed on the outside kit container, or printed on each individual evidence item container.

Some kits have a page of instructions, and have instructions on the outside container and/or the individual evidence item containers as well. In some cases, the instructions in two places contradict one another. A single, consistent set of instructions is desirable.

D. Forensic Science Laboratory

Most forensic science laboratories have well-established protocols for the examination of evidence. It is important that laboratory personnel are included in committees or task forces designed to coordinate efforts.

We believe that communication and coordination between investigators and laboratory personnel is essential. In sexual assault case coordination, there are other people and agencies that must also be a part of the coordinated effort. Everyone involved in these cases should understand the purposes of collecting various types of evidence, and the strengths and limitations of their analyses. Laboratory personnel should devote some time and effort to insuring that investigators and others involved in these cases understand the laboratory's requirements, capabilities and limitations.

DNA typing using the thirteen core CODIS loci has the potential of matching biological evidence depositors to stains essentially to the exclusion of other people. Equally important, it is a powerful tool in excluding non-depositors. The databanking of DNA profiles of convicted sex offenders has introduced a new dimension to sexual assault investigations involving unidentified offenders. Further, the CODIS forensic file allows cases to be connected through DNA profiles when the depositor is still unknown. As more profiles are entered into CODIS, there will be more and more identifications and associations through the database.

The greatest problem now facing laboratories is backlogs, both in casework and in developing and entering convicted offender profiles. The National Commission on the Future of DNA Evidence has recommended significant additional federal resources be provided to laboratories to help reduce backlogs. And progress is being made. But the problems will not be solved quickly. Changes in profiling technology have not helped. Ideally, every relevant biological specimen submitted to the laboratory in a sexual assault case should be analyzed in order to take maximum advantage of DNA capabilities.

The most recent problem in the investigation of sexual assaults is drug-facilitated sexual assault. For the first time ever, forensic toxicologists have had to become involved in the analysis of specimens from sexual assault complainants. The analytical methods for the most common drugs (benzodiazepines, GHB, ketamine and a few others) are validated for urine, and in some cases for hair. Because the drugs are significantly amnesic, complainants may not report these incidents in a timely way, making it less likely that any drugs will be detected. It is not usual practice to collect urine from a sexual assault complainant as part of an examination. Sexual assault evidence collection kits have never provided for urine specimen collection. Some kits provide for hair collection, but for a different purpose. In addition, if hair is to be collected for drug analysis, it should be collected some days after the incident anyway. Some of the drugs and/or metabolites can be detected for quite a few days in urine using NCI-GC-MS, but many toxicology labs do not have this capability. It is not yet clear how big the drug-facilitated sexual assault problem is, or whether it is growing. For now, however, representatives from the toxicology laboratory should be added to the evidence collection and analysis coordination group.

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Appendix A.

1 Prevalence, Incidence and Characteristics of Sexual Assault in the U.S.

Measurement of crime rates is a complex subject, more so because every crime is not reported to the police or other appropriate authorities. With sexual assault and sexual abuse offenses, underreporting is a well-documented problem. Moreover, the definition of what constitutes "rape," "attempted rape," "sexual abuse of a child," etc., along with the method(s) used to gather data, has significant effects on the estimates obtained.

A. Official Government Crime Rate Measures - UCR and NCS

1. Overall Estimates of Sexual Assault Incidence

In the United States, the U.S. Department of Justice administers two statistical programs designed to measure the magnitude, nature and impact of crime. One is Uniform Crime Reports abbreviated "UCR" (see www.fbi.gov); the other is the National Crime Survey abbreviated NCS (see www.ojp.usdoj.gov/bjs). These programs and the differences between them are described in some detail in a undated press release from the Bureau of Justice Statistics (BJS) entitled "The Nation's Two Crime Measures". A similar document is available online. Not all the older data mentioned in this report are available online. But hard copies of the annual reports (UCR or NCS) for many years can be found or obtained in hard copy. BJS also publishes many special analyses of crime data. The more recent ones are at their web site. The older ones may only be available in print versions.

The UCR program is administered by the Federal Bureau of Investigation (FBI). It began in 1929, and collects information on homicide, forcible rape, robbery, aggravated assault, burglary, larceny-theft, motor vehicle theft and arson, reported to law enforcement authorities. These are collectively called "index" crimes. UCR data are compiled from monthly reports made directly to the FBI or to centralized state agencies that then report to the FBI. Each report submitted is examined for reasonableness, accuracy and deviations that may indicate error. Large variations in crime levels may indicate modified records procedures, incomplete reporting, or changes in a jurisdiction's boundaries. Monthly reports are compared with previous submissions of the same agency, and with those of similar agencies, to identify unusual fluctuations. Law enforcement agencies active in the UCR program represent about 98% of the population. UCR provides crime counts for the nation, and for regions, states, counties, cities and towns. The UCR is published annually, covering the prior year in detail (and typically showing historical trends and patterns for certain measurements). The report also covers crimes cleared, persons arrested, and detailed demographic information about victims and arrestees for a range of different crimes. Following a substantial redesign effort, UCR is currently operating under a more comprehensive and detailed reporting system called "National Incident-Based Reporting System" (NIBRS).

The National Crime Survey (NCS) is administered by the Bureau of Justice Statistics, and began in 1973. It collects detailed information on the frequency and nature of rape, personal robbery, aggravated and simple assault, household burglary, personal and household theft, and motor vehicle theft.

Interviews are conducted by U.S. Census Bureau personnel with all household members at least 12 years of age in a nationally representative sample of approximately 49,000 households (about 101,000 persons). Households stay in the sample for 3 years, and are interviewed at 6-month intervals. New households rotate into the sample on an ongoing basis. The survey collects information on crimes suffered by individuals and by households, regardless of whether they were reported to the police. Reasons given by respondents for reporting or not reporting crimes are recorded. Other information includes detailed demographic data on victims and offenders and crimes, as well as information about time and place of occurrence, use of weapons, nature of injuries and economic consequences. NCS is thus a kind of victimization prevalence estimate based on statistical sampling.

In examining official crime rate data, it is important to appreciate the differences in approach and methodology between the two major programs. With respect to sexual assault offenses, UCR measures only crimes that have been reported to the police, while NCS estimates the total rate of offenses, reported and unreported. These measurements are probably as accurate as the methodology allows for crimes involving persons "of maturity age", as defined by state statutes. The extent to which sexual abuse or assault of child victims is measured is not completely clear. In the UCR, the age of a victim does not preclude the crime being counted, but the nature of the charges might do so. Even if an incident is reported, a suspect would have to be charged with one of the crimes UCR measures in order to have the case counted. In the NCS, persons age 12 and over are included in the survey. But the questions refer to certain defined offenses. Thus, if a child of 12 who was the victim of a completed or attempted rape (and chose to report it to the questioner), the incident would be scored. If that same child were the victim of some other form of sexual abuse, however, the incident might not be scored because the crime does not fall within the scope of the NCS. There are some other estimates of sexual abuse of, and sex crimes against, children. They are discussed further below.

The number of forcible rape offenses reported to police nationwide, as recorded by the UCR program (Figure A-1), climbed steadily from 1973 to 1980, then decreased slightly for a few years before trending upward again to 1992. Since then, the number of violent crimes, including rape, has decreased steadily and dramatically through 1999. There were 89,107 rapes reported in 1999 (32.7 per 100,000), the lowest in over 20 years. A very slight increase, less than 1%, is reported in the preliminary data for 2000.

The fluctuations in the number (and rate) of reported forcible rape offenses over time might be accounted for by absolute increases / decreases in the number offenses, or by changes in rate of reporting the crime, or by a combination of both. The data do not provide a clear answer. According to NCS data, the rates of reporting rape to the police have fluctuated between around 40% and 60% over the 1972-1992 period. It is also clear from NCS data that rates of reporting rape victimization do not particularly correlate with the rates of reporting other violent-crime victimizations.

Rates of victimization per 1,000 persons, age 12 or over, by violent crime and by sexual assault from the NCS are shown in Fig. A-2 for 1973-1996. The rate of sexual assaults fluctuates from year to year over a range of about 0.6 to about 1.1 per 1,000 persons in the 1973-1992 period. The break in the graph between 1992 and 1993 is important. In 1992, the survey was completely redesigned [174-176], primarily to try to improve the estimates of sexual assaults. Because of the redesign, comparison of data after 1993 with data before 1993 is not warranted.

Using questionnaire survey methods to estimate the prevalence of completed and attempted rapes, and of less serious forms of sexual assault, is a complex subject. Methodological parameters significantly affect estimates. A full discussion of this matter is well beyond the scope of this appendix. The issues are lucidly presented in a recent report on a study of sexual victimization of college women [177]. It appears that more explicit survey screening questions lead to higher estimates of sexual victimization. Researchers think that subjects may be generally reluctant to reveal these types of victimizations and that more prompting in the screening questions helps to elicit reporting of incidents that might otherwise go undetected. Thus, Figure A-2 shows different estimates for the rates of violent crime and rape from 1993 on than would have been obtained with the old methodology, but it is also clear that the trendline was downward, as was the case for most of the 1990s. From 1993 – 2000, the estimated rate of crimes of violence declined 44.1% and that for rape and sexual assault 52% [178]. In 2000, the latter figure stood at 1.2 per 1,000 persons aged 12 and older. Between 1993 and 1999, NCS found that the percentage of rape and sexual assault victimizations reported to the police fluctuated between 28.3 and 30.9 [178].

The rate of forcible rape offenses reported to police per 100,000 of population for our principal study sites is shown in Fig. A-3 for 1990, 1991 and 1992, and compared with overall U.S. data. Some sights show rates that are significantly higher than those of the U.S., while others are substantially lower. In this sense at least, the study sites provide a reasonable representation of U.S. crime rates.

2. Reporting Sexual Assault and Rape to the Police

Nationally, the NCS data for 1973-1987 [179] show that a completed rape was more likely to be reported than an attempted rape, victims were more likely to report rapes by strangers than non-strangers, and when weapons were used, or when there was injury. Data from 1987-1991 [180] confirm the same trends, except there was very little difference between reporting rates when the offender was a stranger vs. a non-stranger. Victims 12-15 years old and 50-64 years old were much more likely to report the crime than victims in other age cohorts in the 1973-87 period. Reporting by victims from different racial groups varied only slightly. The most important reasons for not reporting rape in both the 1973-1982 and 1987-1991 data included: "nothing could be done," "personal or private matter," and "fear of reprisal." The most important reasons given for reporting rape in the 1987-1991 study included "stopping or preventing this happening to me or someone else again," and "punishing the offender." In 1993-1995, it is estimated that about one-fourth to one-third of rapes and sexual assaults were reported to the police, according to the NCVS [170]. In a recent study of sexual victimization among college women, who are within the age cohort that typically has the highest incidence of sexual victimization, more than 95% of the sexual assaults were not reported to officials, although three-quarters of the victims told another person [177]. In the analysis of intimate-partner violence that was part of a larger study of violence against women, about four-fifths of rapes went unreported to the police [181;182].

3. Victim – Offender Relationship

Victim-offender relationship is an important variable in the investigation and prosecution phases of a case, if the case is reported to police. The trends in recent years have tended toward more sexual assaults involving offenders known to the victim and fewer involving strangers.

Based on NCS data for 1979-1987 [179;183;184], as well as 1991 and 1992, the percentage of completed rapes by strangers varied from 46 to over 64 percent of all such victimizations. In the 1979-1987 period, "intimates" accounted for 20% of the 49% of completed rapes committed by non-strangers. In the 1997-1999 period, The number of completed rape victimizations by strangers hovered around 23% (compared with around 47% for all violent victimizations) [185]. In a recent study of victimization of college-age women conducted in 1997, 93.4% of those reporting a completed rape knew the offender, characterizing him as a classmate, friend, or current or former boyfriend [177]. In a recent intimate-partner violence study that involved 8,000 women (and 8,000 men), 7.7% said that they had been raped by an intimate partner at some point in their lifetimes, and 0.2% said this had occurred within the past 12 months [181;182]. The latter number projects to an estimate of 201,394 intimate-partner sexual assaults in a year. BJS recently reviewed intimate partner violence over a five year period [186].

4. Victim and Offender Ages

The rape-victimization rate is substantially higher among younger women, particularly those 16 to 24, than in other age cohorts, although in some years the incidence among young girls ages 12-15 is nearly as high [174-176;179;183-185;187]. Similarly, most sexual assault offenders are younger, typically under age 30 by a significant majority [170;183-185]. The UCR data tend to show that arrests for rape are substantial for suspects under age 25 [188-190] in 1991 and in 1992. The arrest of younger suspects disproportionate to their representation in the overall population follows a well-recognized trend that is seen for other violent crimes.

5. Location

Rape victimizations occur in many different locations. Most of the data suggest that in most years, a majority of the victimizations occur in the victim's home, with someone else's home (such as a friend or relative) being the next most frequent location [183-185;191].

6. Weapons and Self Protective Actions

Data spanning multiple recent years indicates that weapons were used in rape victimizations 20% to about 30% of the time, more often in completed than in attempted rapes [179;180]. In 1987-1991, weapons use was materially higher when the offender was a stranger. In the late 1990s, the percentage of cases in which weapons were reported in all types of sexual assault cases is something under 10% [185]. The number remains higher in cases involving strangers. The most common weapons reported were a gun or knife.

In the victimization data, most victims report having taken some self-protective action, and most say it helped [179;185]. Overall, about half the victims received injuries other than the rape injuries, more when the offender was a stranger. About 60% of victims got some type of medical care following the incident from someone (including self-administered), and about 30% of those in the 1979-1987 studies were treated in a hospital.

7. Ethnicity and Race, Intimate Partner and Clearance Variables

Most rapes were reported being perpetrated by offenders perceived as being of the same race as the victim [179;185]. African-American women are victimized at higher rates than White women until 1998 when the rates equalized [192]. In the data for the late 1990s, the differences in victimization rates between Hispanic and non-Hispanic women are not very large.

Rates are high among Amerindians.

Intimate partners were responsible for 20% of completed and 10% of attempted rapes in 1979-87 [179]. Violent crime by intimates (spouses, ex-spouses, boyfriends and girlfriends, but not other relatives or acquaintances) was the subject of a special study using NCS data [193]. Of 328,000 state prisoners incarcerated in 1991 for a violent offence, 7% had victimized an intimate, and of those incarcerated for rape, 10% had victimized an intimate. The victim was more likely to be a girlfriend than a spouse or ex-spouse. Recently, a very large study on intimate-partner violence was completed and published [181;182]. This survey found that 1.5% of women and 0.9% of men reported sexual assault by an intimate partner within the previous 12 months. These estimates imply that 1.5 million women and almost 835,000 men are victimized annually. Most of these incidents are never reported. Women experience more intimate-partner violence than men. Women with male intimate partners experienced more incidents than those living with female intimate partners. And men living with male intimate partners experienced more incidents than those living with women.

In 1991-1992, approximately half the rape victimizations reported to police were cleared by arrest [188;189]. However, the clearance rate was substantially lower among the "under 18" group of suspects. The clearance rate for rape was not substantially different in 1998 and 1999 [190]. These trends are closely mirrored by clearance rates for all violent offenses. Not surprisingly, the clearance rates for violent crime (including rape) tend to be significantly higher than those for all offenses, if all age cohorts are considered.

B. Other Estimates of the Incidence and Prevalence of Rape

There have been a number of surveys conducted to determine the incidence and prevalence of rape, attempted rape, and less serious forms of sexual misconduct. Some of these surveys have been interpreted to show that the incidence of rape and attempted rape is far greater than that reflected in official government measures (primarily NCS data). Comparisons between the independent survey data and NCS measures is not always straightforward. Some surveys have, for example, collected data on the extent to which respondents have ever been the victim of a sexual assault, where NCS data are collected for a particular year, and occasionally analyzed for a specific period of years. There are also sometimes differences in the definitions of "rape" or "attempted rape" or "sexual assault" that make comparisons difficult.

Among the most widely cited independent surveys are those of Koss and collaborators [194-198], Russell [199;200] and Kilpatrick et al. [201] reporting the results of The National Women's Study. Koss and collaborators surveyed college students, 3,862 on one campus in one study, and a national sample of 6,159 that included 3,187 women in another study. The second is sometimes referred to as the "Ms. Magazine Project on Campus Sexual Assault." Russell surveyed 930 women in the San Francisco area, and analyzed the data for incidence of rape and attempted rape with and without "spousal" incidents included. Kilpatrick et al. surveyed (by telephone) 2,004 adult women residents of Charleston County South Carolina. Mills and Granoff [202] surveyed 106 male and 113 female students (selected from undergraduate English courses) at the University of Hawaii at Manoa. The National Women's Study (funded by NIDA) is a three-year longitudinal study of 4,008 adult women, 2,008 of whom are a random cross section, and 2,000 of whom are an oversample of women between the ages of 18 and 34 [201].

Most of these surveys have reported incidences of rape and attempted rape that are far higher than those represented by the official governmental crime survey data. Some of the investigators have faulted the data collection methods used by the government agencies, arguing that they can be expected to underestimate the incidence of these crimes. Russell's survey data, for example, suggest that the incidence of rape and attempted rape is some seven times higher than NCS estimates for the same period. Similarly, Koss has estimated that the incidence in her survey data to be between 10 and 15 times higher than NCS estimates for the year 1985, even if the strict UCR definition of rape is employed and adjustments are made for differences in data collection methods. However, these studies are not without their critics. Gilbert has argued in both the scholarly and popular literature that both Koss' and Russell's estimates of the incidence of rape and attempted rape are excessive for methodological reasons, and that there is an identifiable "feminist" advocacy slant to their methods, measurements and interpretations [203;204]. He perceives a danger that the uncritical and widespread dissemination of these survey results by the popular media can create false impressions in the public mind, and even lead to unwarranted changes in efforts to help prevent sexual assault problems on college campuses. Some of the more widely disseminated survey results were prominently featured in hearings before the Senate Judiciary Committee on Senator Biden's "Violence Against Women" bill in the 102 Congress [205;206]. The hearings led to the passage of the Violence Against Women Act of 1993, part of the so-called "Crime Bill." Some additional legislation was passed in 2000. These laws established some new federal agency offices, and made available funds for research as well as support of state efforts to minimize and respond to violence against women, including sexual assault.

Benson et al. [207] reviewed the literature on "acquaintance" or "date" rape on college campuses, and tried to relate the data to the criminal, social and campus policy issues involved. Berkowitz [208] did a similar kind of review, but focused primarily on males and college campus prevention programs aimed at them. "Date" and "acquaintance" rape are discussed at length in a volume edited by Parrot and Bechhofer [209]. Recently, Fisher et al. [177] reported a large national study of sexual violence against college women. The incidence of completed rape in this population was about 1.7% of respondents, an estimate about ten fold higher than is seen in the NCVS surveys. In a comparison study, the researchers found evidence that the interview in the methodology of their main study was much more likely to elicit an interviewee to report an incident than were interview techniques more similar to those of NCVS.

The National Women's Study [201], a three year study of 4,008 randomly selected women across the nation completed about 1992, was mentioned above. Although expressed in different terms, the data on victim age does not appear to be at great variance with eight-year NCS data. The number of rapes (using 1990 as the comparison year) was more than five times higher than the NCS estimate. As to the victim-perpetrator relationship, a much lower percentage of rape by strangers was detected than in the eight-year NCS data. The percentage attributable to "intimates" by NCS and the "husband / ex-husband" and "boyfriend / ex-boyfriend" by the NWS may be comparable. The NWS found that 84% of victims did not report the crime to the police, a significantly higher number than is seen in NCS data. Of 391 victims in the survey, 66% said that they would be "a lot" or "somewhat" more likely to report the crime if there were a law preventing disclosure of their identity to the media. Over 75% of all the women in the survey and of rape victims, as well as over 90% of the victim-service agencies surveyed, support such laws.

The NWS asked respondent victim-service agencies about what effect two highly publicized rape trials had on the likelihood of victims reporting the crime. About the William Kennedy Smith case in West Palm Beach FL, 20% said victims would be "much less likely" and 71% said "somewhat less likely" to report, while 9% said "more likely." About the Mike Tyson case in Indianapolis IN, 18% said "much less" or "somewhat less" likely, while 76% said "somewhat more likely" and 6% said "much more likely" to report.

2 Prevalence and Incidence of Sexual Abuse and Assault Against Children

There have been a number of systematic efforts to measure the rate of child abuse and neglect, including child sexual abuse and sexual assault. Many of the same methodological problems that create difficulties in measuring the rates among adolescents and adults occur in this area as well. These difficulties are further compounded by the fact that the victims are children.

In 1988, the Department of Health and Human Services (DHHS) issued a report on its findings of the prevalence of child abuse and neglect [210]. This study was conducted pursuant to specific congressional mandate [211], and was designed to determine the extent to which the prevalence had changed since a prior study in 1980. The older study is sometimes called "NIS-1", the more recent "NIS-2" ("NIS" standing for "National Incidence Study"). NIS-1 was conducted by the National Center on Child Abuse and Neglect (NCCAN) in response to specific congressional mandate [212]. In NIS-2, five levels of official recognition or public awareness of child abuse and neglect were conceptualized. DHHS has supported a data-collection effort since 1975 through a contract with the American Humane Association to obtain information about cases reported to child protective service (CPS) agencies in the states, i.e., so-called "level 1". NIS-2 attempts to measure recognition "levels" 1, 2, and 3, and includes data on cases reported to some official or professional, or to CPS. In addition, NIS-2 utilized two sets of definitional standards, one corresponding to those used in NIS-1, and a broader set that measured the incidence of children placed at risk for harm, but not yet harmed. The narrower NIS-1 standards measured the incidence of children who experienced demonstrable harm. Use of both sets of standards in NIS-2 enabled a comparison of the "original definition" data in 1988 with that of 1980, to determine whether the incidence of child abuse and neglect was changing. Although there is apparently not widespread consensus on definitions of what comprises child abuse or neglect, the NIS-1 and NIS-2 criteria are well defined, and thus generate two sets of data collected about 8 years apart for comparison.

DHHS has designed an additional program for voluntary reporting of the incidence of child abuse and neglect by the states. This effort was a response to the creation of Section 6 of CAPTA legislation and certain amendments [213]. Data collected by this program (called NCANDS) for 1992, as well as some comparative historical data, was published in 1994 [214].

Over a 17-year period, there is an upward trend in the incidence of child abuse reported to CPS agencies. In terms of disposition of investigations conducted in 1992 from the NCANDS data representing 49 states and about 1.5 million cases, about 95% of the cases were settled in terms of a finding, with about 41% either substantiated or indicated, and about 54% not substantiated. Among types of maltreatment to which victims in the NCANDS study were found to have experienced, neglect represented about half the cases, but sexual abuse accounted for about 14%.

The incidence of various forms of abuse and neglect remained relatively constant for 1990 through 1992, and sexual abuse represented the third most frequent form out of the categories represented. Younger children, especially from one year of age upward, experienced abuse or neglect at a significantly higher rate than older victims. Under either the original or revised definitions, there is a very high correlation of incidence of all types of abuse and neglect with family incomes below \$ 15,000 per year. Female children are victims more frequently than male children, regardless of whether the original or revised definitions are followed. In addition, the incidence increases, as would be expected, under the broader revised definitions.

Table A-1 shows a summary of seven studies that provided estimates of the incidence of child sexual abuse based on retrospective self-reports [215]. These data indicate incidences ranging from 12% to 38% of women and from 3% to 16% of men, depending on factors such as the age range of the study, what experiences were included, and methodological design.

Gelles and Straus [216] compared two sets of incidence data on parental violence toward children collected ten years apart (1975 and 1985) and found a decrease in 1985 relative to 1975, although the incidences were high in both studies. Possible reasons for their observations are discussed. It does not appear that child sexual abuse was isolated as a category of abuse in these studies.

BJS studies from selected state crime reporting data (for 12 states) indicate that 51% of the female rape victims in 1992 were under age 18 [217]. An estimated 16% of the victims were under age 12 in the twelve-state data. Extrapolated to the national total, about 17,000 girls under age 12 would have been victims in 1992; however, this estimate is conservative because these estimates are based on cases reported to law enforcement agencies, and BJS had reason to believe that the 12 states from which data were gathered might not be nationally representative. BJS also gathered some information on the relationship between victim and offender from two sources: one was interviews with victims in three states for cases that had been reported to law enforcement; the other was interviews with convicted offenders in the nation's prisons. For victims under 12 years old, both sources indicated a high percentage of intrafamilial relationship (46% in victim interviews, 70% in offender interviews). In the 12-17 year-old age bracket, the corresponding figures were 20% and 36%. The three-state survey revealed that 20% of victims under 12, 11% of those 12-17, and 1% of those 18 or over, were raped by their fathers.

It was noted above that about 32% of child abuse reports were "substantiated" and that about 54% were "not substantiated" according to the 1992 NCANDS data [214]. The principal "gatekeepers" in the child protection system are, first, the intake worker, who receives the initial report and determines whether the report deserves further investigation, and, second, the investigative caseworker. Many reports are screened out, and some cases that are pursued are determined to be unsubstantiated by additional investigation. There is no national figure for child sexual abuse as such, but studies on 576 reports in Denver in 1983 [218], and on 796 representative cases in New York state in 1985 [219] indicated 53% and 40% substantiation, respectively.

Abel et al. [220] examined the child abuse problem from another perspective, by interviewing 561 nonincarcerated paraphiliacs and reporting what they said about their victims. This population of offenders, drawn from Memphis TN and New York NY, was relatively young (about 80% under age 40), about 30% were married and about 48% were single, the majority were well educated. About 62% were white, about 24% were black, and about 11% were Hispanic. They came from a broad range of income levels and religious backgrounds.

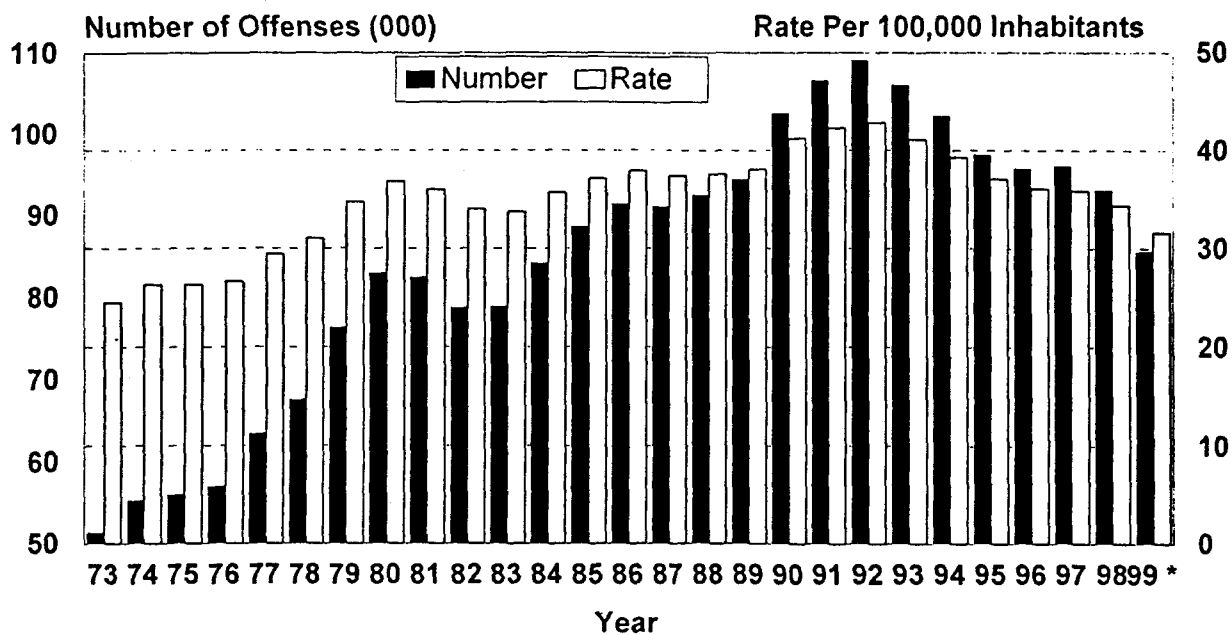
Some of these offenders had committed very large numbers of paraphilic acts, while others had committed a few. The incidence of child molestation and rape was relatively low, compared with other acts such as voyeurism and masochism. Female victims were targets of more non-incest offenders than were males, and were much more frequent targets of incest offenders. Non-incest offenders who targeted males as victims reported more than seven times as many victims as did those who targeted females. Of all the categories of pedophilia, the majority of child molestations were committed by individuals who targeted young boys outside the home, while the next most frequent were committed by individuals involved in incest with a female victim.

Finkelhor [121] provided some data on the incidence of sexual abuse of males, gathered primarily from samples of adolescent or adults reporting on experiences from their childhood. There was some variation in the definitions of sexual abuse, and in the age bracket covered by the questioning. Even taking these variations into account, however, the data reviewed suggested much higher incidences of abuse of boys under age 13 than were evident in the NCANS data reported around 1979 to 1980 (around 65 to 130 times higher).

A 1999 NCANDS report provides data for 1999 as well as some five and ten year comparisons [221]. Almost 3 million cases were referred, almost 55% from professionals. About 40 % were screened out, and about 60% investigated. Just over 29% of the investigated cases resulted in findings of substantiated or indicated abuse or neglect. About 55% resulted in a finding that maltreatment was not substantiated. Victimization rates in 1999 are the lowest in ten years, 11.8 per 1,000. Sexual abuse declined every year for five years up to and including 1999, and represented 11.3% of the 1999 cases. The substantial drops in victimization rates have been the subject of newspaper commentary [222].

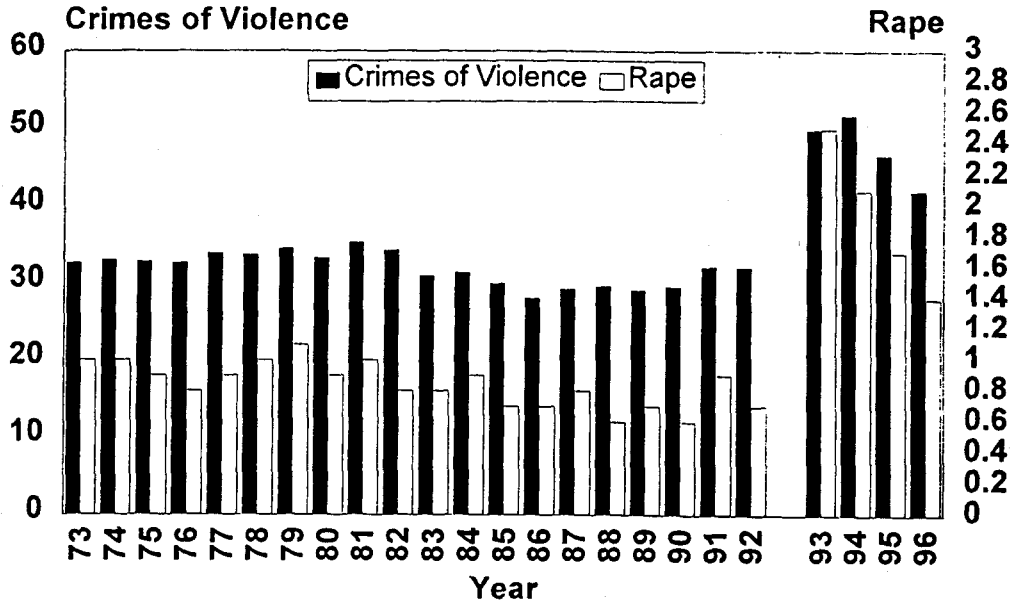
BJS recently issued a report on sexual assaults on minors and young children that had been reported to law enforcement [53]. This survey encompassed about 60,000 cases in 12 states from 1990 to 1996. One-third of of sexual assault victims were 12-17 years old, and 34% were under 12. Even more disturbing was the finding that 14% of victims were under age 6. Girls are at highest risk for sexual assault at age 14 based on projections from this study. 86% of all victims were female, and the proportion of female victims increased with victim age. Most of these incidents occurred within a residence, and did not involve a weapon other than fists or hands. 17% of the offenders were juveniles (under age 18). 34% of offenders involving juvenile victims were family members and another 59% were acquaintances. About 42% of the cases were cleared by arrest or other means.

Figure A-1. Forcible Rape - Number and Rate of Offenses (UCR)



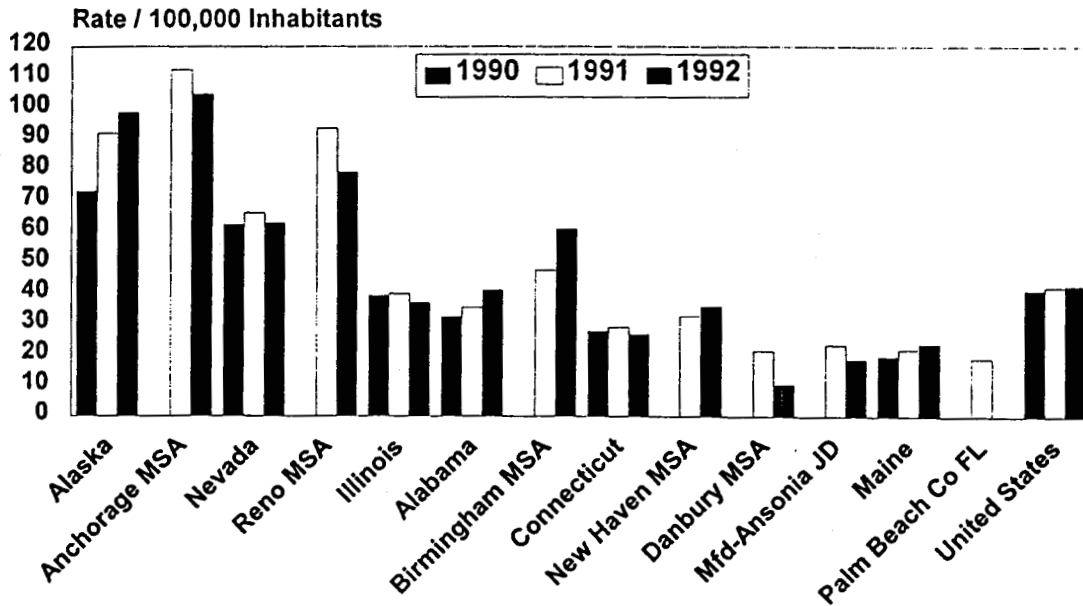
* 1999 estimated from preliminary reports

Figure A-2. NCS - Victimitizations / 1000 persons age 12 or older



"Crimes of Violence": Rape, Robbery, Aggravated Assault, Simple Assault

Figure A-3. UCR Rate of Forcible Rape by Study Site Location



Data not available for every location for every year
 MSA, Metropolitan statistical area; JD, Judicial district

Table A-1. Estimated Incidence of Child Sexual Abuse Based on Retrospective Self-Reports [215]

Estimate	Victim Age Range	Study Characteristics	Comments	Reference
24% of women	"pre-adolescent"	personal interviews; 4,441 volunteer subjects	excluded peer experiences	a
19% of women 9% of men	through age 16	796 college students	20% of offences were exhibitionism	b
12% of women 3% of men	"child"	mail survey; 2,000 drivers in Texas	sexual abuse undefined	c
15% of women 5% of men	through age 16	household survey; 521 Boston area parents	excluded peer experiences	d
38% of women	through age 18	personal interviews; random sample of 933 adult women in San Francisco	included peer experiences; excluded exhibitionism; questions very detailed	e
27% of women 15% of men	before age 16	national population survey; 2,008 respondents	included peer experiences; 28% of offences were exhibitionism; questions very detailed	f
27% of women 16% of men	through age 18	national telephone survey by Los Angeles Times poll; 2,626 respondents	included peer experiences and exhibitionism; four comprehensive screening questions	g

- a [223]
- b [224]
- c [225]
- d [121]
- e [226]
- f [227]
- g [228]

Appendix B. Legal Definitions

The legal definitions of different degrees of what we commonly call "rape," "attempted rape," "sexual assault," etc., differ from state to state. Some examples are given below. The legal definitions are critical in criminal cases, because the statutes define the terms that are used in bringing various charges, and the elements of each defined crime. Prosecutors are required to prove "beyond a reasonable doubt" all the elements of a crime in order to obtain a conviction. The elements of different "sexual" crimes, as defined in different statutes, can have a significant effect on the nature, role and significance of physical evidence in the case. The examples are taken from the statutes of some of the states that were included as sites in our study.

Alabama

This information is taken from the "Criminal Code," §§ 13A-6-60, 13A-6-61, and 13A-6-62.

§ 13A-6-60 provides definitions of many terms, such as "sexual intercourse," "deviate sexual intercourse," "sexual contact," "female," and so forth. It further provides definitions and explanations of terms and circumstances, and further definitions of legal issues that have resulted from appellate cases, and thus comprise the current judicial interpretations of the criminal codes.

§ 13A-6-61 Rape in the first degree. (a) A male commits the crime of rape in the first degree if: (1) He engages in sexual intercourse with a female by forcible compulsion; or (2) He engages in sexual intercourse with a female who is incapable of consent by reason of being physically helpless or mentally incapacitated; or (3) He, being 16 years or older, engages in sexual intercourse with a female who is less than 12 years old. (b) Rape in the first degree is a Class A felony.

§ 13A-6-62 Rape in the second degree. (a) A male commits the crime of rape in the second degree if: (1) Being 16 years old or older, he engages in sexual intercourse with a female less than 16 and more than 12 years old; provided, however, the actor is at least two years older than the female. (2) He engages in sexual intercourse with a female who is incapable of consent by reason of being mentally defective. (b) Rape in the second degree is a Class B felony.

Sodomy is defined under different sections of the code. Definitions and interpretations of the statutory language affect the charges that can be made against a defendant under a particular fact pattern, and they affect the way physical or medical evidence findings may be used in support of one or more elements of a particular crime.

Connecticut

§ 53a-65 of the General Statutes provides numerous definitions required for an exact interpretation of the statutory language.

§ 53a-70 Sexual Assault in the First Degree (Class B Felony - one year of the sentence not suspendable) A person is guilty of sexual assault in the first degree when 1. such person compels another person to engage in sexual intercourse by the use of force against such person or a third person,

OR by the threat of use of force against such other person or a third person which reasonably causes such person to fear physical injury to such person or a third person, or 2. the actor engages in sexual intercourse with a person under thirteen years of age.

§ 53a-70a Aggravated Sexual Assault in the First Degree (Class B Felony - minimum five year sentence not to be suspended or reduced). The actor commits sexual assault in the first degree (§ 53a-70), AND 1. He uses or is armed with and threatens the use of or displays or represents by his words or conduct that he possesses a deadly weapon, OR 2. With intent to disfigure the victim seriously and permanently, or to destroy, amputate, or disable permanently a member or organ of the victim's body, he causes such injury to such victim, OR 3. under circumstances evincing an extreme indifference to human life, he recklessly engages in conduct which creates a risk of death to the victim, and thereby causes serious physical injury to such victim.

§ 53a-70b Sexual Assault in Spousal or Cohabiting Relationship (Class B Felony) 1. The spouse or cohabitor compels the other spouse or cohabitor to engage in sexual intercourse; 2. a. by the use of force against such other spouse or cohabitor, OR b. by the threat of the use of force against such other spouse or cohabitor; 3. which reasonably causes such other spouse or cohabitor to fear physical injury.

§ 53a-71 Sexual Assault in the Second Degree (Class C Felony, nine months of the sentence not suspendable). A person is guilty of sexual assault in the second degree when such person engages in sexual intercourse with another person, and such other person is, 1. under sixteen years of age, OR 2. mentally defective or mentally incapacitated to the extent that he is unable to consent to such sexual intercourse, OR 3. physically helpless, OR 4. less than eighteen years of age and the actor is such person's guardian or otherwise responsible for the general supervision of such person's general welfare, OR 5. in custody of law or detained in a hospital or other institution and the actor has supervisory or disciplinary authority over such other person.

Public Act 93-340 amended §§ 53a-65 and 53a-71. Old definitions were revised and new ones included in § 53a-65. § 53a-71 was enlarged to include definitions of the age relationships of the actor and other person, and further to include sexual intercourse under various circumstances between therapists and patients. P.A. 93-340 also replaced § 19a-112a of the statutes with language creating a permanent commission on the standardization of the collection of evidence in sexual assault cases. The thirteen-member commission includes designees of the chief state's attorney, permanent commission on the status of women, commissioner of health services, commissioner of children and youth, department of public safety (including state police and forensic science lab), Connecticut Sexual Assault Crisis Services, Connecticut Hospital Association, Connecticut College of Emergency Room Physicians, one ob-gyn and one pediatrics specialist from the Connecticut Medical Society, and two emergency room nurses selected from their professional associations. Among other things, the Commission's duties include standardizing medical protocols (including the rape kit) for sexual assault complainants.

Florida

Chapter 794 of the State Substantive Laws covers Sexual Battery, defined as "oral, anal or vaginal penetration by or union with the sexual organ of another or the anal or vaginal penetration of another by any other object; however, sexual battery does not include acts done for bona fide medical purposes."

§ 794.011 (2) A person 18 years of age or older who commits sexual battery upon, or injures the sexual organs of, a person less than 12 years of age in an attempt to commit sexual battery upon said person commits a capital felony [punishable as provided elsewhere]

(3) A person who commits sexual battery upon a person 12 years of age or older without that person's consent, and in the process thereof uses or threatens to use a deadly weapon or uses actual physical force likely to cause serious personal injury shall be guilty of a life felony [punishable as provided elsewhere]

(4) A person who commits sexual battery upon a person 12 years of age or older, without that person's consent, under any of the following circumstances, shall be guilty of a felony of the first degree [punishable as provided elsewhere]: (a) victim is physically helpless to resist; (b) offender coerces victim to submit by threatening to use force of violence on the victim likely to cause serious personal injury, and victim reasonably believes that offender has the present ability to execute the threat; (c) offender coerces victim to submit by threatening to retaliate against the victim, or any other person, and victim reasonably believes that offender has the ability to execute the threat in the future;

(d) when the offender without prior knowledge or consent of the victim administers or has knowledge of someone else administering to the victim any narcotic, anesthetic, or any other intoxicating substance which mentally or physically incapacitates the victim; (e) when victim is mentally defective and offender has reason to believe this, or has actual knowledge of this fact; (f) when victim is physically incapacitated.

Other points specifically stated in the statutes include: 1) that the common law rule that "a boy under 14 years of age is conclusively presumed to be incapable of committing the crime of rape" is not in force [§ 794.02]; 2) that when criminality of conduct depends on the victim being below a certain age, ignorance of the age, misrepresentation of age by victim, or bona fide belief that victim is over the specified age, are no defense [§ 794.021]; and other provisions that cover rules of evidence (e.g. testimony of victim need not be corroborated), increased penalties for sexual battery involving multiple offenders, protection of victim's identity, etc.

Nevada

NRS § 200.364 provides definitions for the "sexual assault and seduction" segments of the statutes. "Perpetrator" is any person who commits sexual assault. "Sexual penetration" means cunnilingus, fellatio, or any intrusion, however, slight, of any part of a person's body or any object manipulated or inserted by a person into the genital or anal openings of the body of another, including sexual intercourse in its ordinary meaning. "Statutory sexual seduction" is (a) ordinary sexual intercourse, anal intercourse, cunnilingus or fellatio committed by a person 18 years of age or older with a person under the age of 16 years; OR (b) Any other sexual penetration committed by a person 18 years of age or older with a person under the age of 16 years with the intent of arousing, appealing to, or gratifying the lust or passions or sexual desires of either of the persons. "Victim" is a person who is subjected to sexual assault.

§ 200.366 Sexual assault. 1. A person who subjects another person to sexual penetration, or who forces another person to make a sexual penetration on himself or another, or on a beast, against the victim's will or under conditions in which the perpetrator knows or should know that the victim is mentally or physically incapable of resisting or understanding the nature of his conduct is guilty of sexual assault. 2. Any person who commits sexual assault shall be punished:

(a) If substantial bodily harm to the victim results from the actions of the defendant committed in connection with or as part of the sexual assault: (1) By imprisonment in the state prison for life without possibility of parole; OR (2) By imprisonment in the state prison for life with possibility of parole, eligibility for which begins when a minimum of 10 years has been served.

(b) If no substantial bodily harm to the victim results: (1) By imprisonment in the state prison for life, with possibility of parole, beginning when a minimum of five years has been served; OR (2) By imprisonment in the state prison for any definite term of five years or more, with eligibility for parole beginning when a minimum of five years has been served. (c) If the victim was a child under the age of 14 years, by imprisonment in the state prison for life, with possibility of parole, eligibility for which begins when a minimum of 10 years has been served. 3. The trier of fact in a trial for sexual assault shall determine whether substantial bodily harm has been inflicted on the victim in connection with or as a part of the sexual assault, and if so, the sentence to be imposed upon the perpetrator.

Subsequent sections define penalties for "statutory sexual seduction," permit perpetrators and victims to be married if force or threat of force was used, and place limitations on parole for convicted offenders.

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