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**Document Title: Testing the Efficacy of SANE/SART Programs:
Do They Make a Difference in Sexual Assault
Arrest & Prosecution Outcomes?**

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Abstract

Statement of Purpose: To explore the impact of SANE/SART interventions on the judicial process.

Goals and Objectives: The goal of this study is to test the efficacy of SANE/SART programs as a tool in the criminal justice system. The American Prosecutors Research Institute and Boston College tested the hypotheses that SANE/SART exams increase arrest and prosecution rates. In testing this hypothesis, the project team sought to answer five primary research questions:

1. Is the arrest rate higher in cases where a SANE/SART exam is performed as compared with cases in which no exam is performed?
2. Is the indictment/charging rate higher in such cases?
3. Are guilty pleas more likely to be entered in such cases, and are pleas likely to be to the existing charge or to a lesser charge?
4. Is the conviction rate higher in such cases?
5. Is the sentence more severe in such cases?

Description of Research Subjects: In each study site, the project team randomly selected up to 125 sexual assault cases in which there was a SANE or SART intervention and 125 cases in which there was no SANE/SART intervention. A total of 262 SANE/SART and 268 non-SANE/SART cases were selected.

Research Design and Methodology

Methods for Achieving Goals and Objectives: Case information was collected from SANE/SART, prosecution files in Monmouth County, New Jersey, Sedgwick County, Kansas, and Suffolk County, Massachusetts. Comparisons were made between SANE/SART and non-SANE/SART cases to determine if the intervention predicted the likelihood of criminal justice system outcomes including identification/arrest of a suspect, filing of charges, case disposition, type of penalty, and length of sentence. Descriptive, multivariate, and inferential statistics were used to examine the differences between cases and the relationships between SANE/SART intervention and case outcome.

Results and Conclusions: The results of the study indicate that compared to non-SANE/SART cases, SANE/SART cases are reported more quickly, have more evidence (DNA evidence in particular) available, and have more victim participation, although SANE-only cases had the lowest participation levels. SANE/SART intervention is also a factor in the identification and arrest of a suspect, the strongest predictor that charges will be filed, and helps to increase the likelihood of conviction. Insufficient information was available to determine the impact of SANE/SART intervention on penalty and length of sentence. Overall, the findings are quite supportive of SANE/SART programs and their efficacy as a tool in the criminal justice system.

EXECUTIVE SUMMARY

Over the past 25 years, there has been significant reform in sexual assault law and the protection of women. In the early 1970s, little attention was paid to the issues of rape, survivors of rape, and sexual offenders. As a result of a handful of very public rape forums and attention from feminist groups, the anti-rape movement began to take shape and bring about social change with regard to how the public and policy makers viewed sexual offenses and perhaps more importantly, how the medical community and criminal justice system handled sexual offenses.

This movement highlighted some of the most significant issues with regard to the treatment of rape and rape survivors. In particular, rape victims were often “blamed” by medical and law enforcement professionals; rape examinations were humiliating and dehumanizing, were often not thorough, and lacked a systematic method for evidence collection (Bahm, 2001; Campbell, Wasco, Ahrens, Sefl, & Barnes, 2001; Girardin, 2005; Holmstrom & Burgess, 1983). As these issues came to light, communities across the country began to involve nurses in the care of sexual assault victims (Lang, 1999; Ledray, 1999). Nurses were provided training on first response care to sexual assault victims, collecting forensic evidence, conducting evidentiary examinations, and maintaining the chain of evidence and evidence integrity (Campbell, 2004). These nurses became known as Sexual Assault Nurse Examiners (SANEs).

Building on the success of SANE programs, communities began creating teams of primary and secondary responders called Sexual Assault Response Teams (SARTs). SARTs bring together law enforcement, detectives, victim advocates, and healthcare providers to assist sexual assault victims through the criminal justice process. The intent

is two-pronged: 1) to increase the odds of prosecution by enhancing evidence collection and facilitating communication between all parties in the process, and 2) to help victims recover from and cope with their experience through counseling and support (Girardin, 2005; Wilson & Klein, 2005).

Current Research on SANE/SART Interventions

To date, research on SANE/SART interventions has been limited to descriptive case studies. For example, one early study showed that 90 percent of victims who had been served by a SANE program elected to file a police report and that 61 percent of the cases resulted in arrest or successful conviction (Solola, Scott, Severs & Howell, 1983). Another study of cases involving SANE examinations over a 3-year period in Madison, Wisconsin showed a 100 percent conviction rate, which was attributed to the quality of evidence collected and testimony by SANEs (O'Brien, 1992). Still other studies have shown an increase in the number of charges filed and the number of guilty pleas (Crandall & Helitzer, 2003).

Other studies have shown that the consistent documentation and evidence collection by SANEs contributes to conviction rates and that the evidence is collected more accurately when collected by SANEs (Crandall & Helitzer, 2003; Ledray, 1999, 2001; Lenehan, 1991; Little, 2001; Sievers, Murphy & Miller, 2003). In addition, research indicates that SANE interventions increase victim participation in the justice process (Ledray, 2001; Ledray & Summelink, 1996).

However, the impact of SANE/SART interventions on judicial processes is not always immediate. Wilson and Klein's (2005) study of the Rhode Island SART found the impact on judicial processes to be negligible but did have positive results for victims.

Overall, the research to date seems to indicate that SANE/SART interventions have merit. However, these interventions have yet to be subject to more rigorous research using control groups of cases in which SANE/SART interventions were not used as a basis for comparing judicial outcomes. The American Prosecutors Research Institute (APRI) and Boston College (BC), with funding from the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice, designed a study to examine SANE/SART interventions more rigorously, using a quasi-experimental design. Moreover, the APRI/BC study draws from data collected in three geographically and demographically diverse communities allowing for a comparative approach rather than a case study approach.

Overview of Study Methodology

The goal of this study is to test the efficacy of SANE/SART programs as a tool in the criminal justice system. In particular, the study was conceptualized to determine if the performance of a SANE exam or a SART response impacts sexual assault case outcomes by comparing cases in which there was a SANE/SART intervention and those in which there was not. In testing this hypothesis, APRI and BC focused on the following questions:

1. Is the arrest rate higher in cases where a SANE/SART exam is performed as compared with cases in which no exam is performed?
2. Is the indictment/charging rate higher in such cases?
3. Are guilty pleas more likely to be entered in such cases, and are pleas likely to be to the existing charge or to a lesser charge?
4. Is the conviction rate higher in such cases?
5. Is the sentence more severe in such cases?

It is important to note that this study focused on the impact of SANE/SART interventions on the formal criminal justice response, not the victim’s decision or likelihood to report the assault to the police or to obtain services.

To test the study hypothesis and answer the research questions, APRI and BC collected case information from SANE/SART, police, and prosecution files in three jurisdictions: Monmouth County (Freehold), New Jersey; Sedgwick County (Wichita), Kansas; and Suffolk County (Boston), Massachusetts. In each study site, the project team randomly selected up to 125 sexual assault cases in which there was a SANE or SART intervention and 125 cases in which there was no SANE/SART intervention.¹ Exhibit 1 shows the final sample of cases collected from each study site.

Exhibit 1: Number of Cases Collected for Each Study Site²

Study Sites	SANE Only	SANE/SART	Non SANE/SART	Total
New Jersey	0	79	72	151
Kansas	0	77	108	185
Massachusetts	106	0	88	194
Total	106	156	268	530

Comparisons were made between SANE/SART cases (both SANE only and SANE/SART combined) and non-SANE/SART cases to determine if the intervention predicted the likelihood of certain criminal justice system outcomes. These outcomes included identification/arrest of a suspect, the filing of charges, case disposition, type of penalty, and length of sentence. In addition, APRI and BC collected information on a

¹ The study focused only on adult female victims over the age of 18 at the time of incident.

² SANE only cases were defined as cases in which a SANE conducted an examination of the victim; SANE/SART cases were defined as cases in which there was a SART response including a SANE exam or response. Non-SANE/SART cases were defined as those cases in which a victim refused a SANE/SART intervention, never sought assistance from a SANE/SART, or did not have a SANE exam. Non-SANE/SART cases did, however, include cases in which victims may have received treatment by non-SANE personnel in medical facilities.

number of other variables that could impact or mitigate the effect of SANE/SART

interventions and case outcomes. These variables included the following:

- Victim/offender relationship – stranger, non-stranger
- Whether or not services were offered and refused
- Number/types of services provided
- Time between the incident and the report (in days)
- Level of participation of the survivor in the criminal justice process – statement given, testified, victim impact statement, contact with prosecutor
- Race of victim
- Race of perpetrator
- Use of force, particularly of a weapon
- Previous arrests
- Previous convictions
- Level of evidence collected – videotape, pictures, clothing, fabric/fibers, hair samples, bodily fluid, nail scrapings, rape kit
- DNA collected
- Documented injuries by police
- Number of witnesses
- Suspect claimed sexual act was consensual
- Victim refusal to move forward with charges

The APRI and BC project abstracted information on all the variables discussed above from case files maintained by SANE programs, police incident/arrest reports, and prosecution files during intensive 5-day site visits.

As originally conceptualized, the project team intended to conduct analyses on each site and then to conduct comparative analyses. However, because the sample size within each site was smaller than the intended 250 total (125 SANE/SART; 125 non-SANE/SART), the results would not have been reliable. Therefore, to increase statistical power, the information was aggregated together for all sites. The analyses included descriptive statistics for key variables such as victim/offender relationship, types of services documented, etc. These descriptive statistics included averages and a comparison of the averages to determine if there are differences between SANE/SART

cases and non-SANE/SART cases. More complex multivariate and inferential statistics were used to examine the relationships between a SANE/SART intervention and case outcomes (arrest, charges filed, conviction, penalty, and length of penalty).

Overview of Study Findings

Before addressing the primary research questions, APRI and BC staff conducted descriptive analyses on the SANE/SART intervention itself to determine if cases involving a SANE/SART are statistically different from cases without a SANE/SART intervention.

These analyses identified several important differences between SANE/SART and non-SANE/SART cases. First, SANE/SART cases are reported more quickly than non-SANE/SART cases. Specifically, an average of 3.4 days elapsed between the time of the incident and the report in SANE only cases. For SANE/SART-cases, the average time between the incident and the report was 5.6 days. For non-SANE/SART cases, however, an average of 33 days elapsed between the time the incident occurred and the time when the victim reported the assault. These findings are statistically significant, meaning that they did not happen by chance alone and there is a difference between SANE/SART cases and non-SANE/SART cases in terms of the elapsed time between the incident and report.

Second, more evidence, and in particular, more DNA evidence, is available in SANE/SART cases as compared with non-SANE/SART cases. SANE/SART cases yielded an average of 3.1 types of evidence; SANE-only cases produced an average of 2.6 types of evidence; and whereas non-SANE/SART cases yielded only 1 type of evidence. More importantly, DNA evidence was collected in 97 percent of SANE-only

cases and 37 percent of SANE/SART cases. DNA was collected in only 10 percent of non-SANE/SART cases.

Earlier research on SANE/SART interventions indicated that one of the positive outcomes of such interventions was increased victim participation in the system—making police reports and giving formal statements, testifying and/or appearing at court hearings, providing victim impact statements, and cooperating with the prosecution. APRI and BC did find that victims who received a SANE/SART intervention averaged higher participation levels than those who did not receive SANE/SART services (1.3 compared to 0.9, on a scale of 0 to 4). Surprisingly, the lowest participation levels observed were for victims who received SANE-only services.

Likelihood of Identification and Arrest

Previous studies have shown that SANE/SART cases tend to increase the likelihood of arrest; however, no comparative data existed that allowed researchers to determine if increased arrests were related to a SANE/SART intervention. By incorporating a control group (i.e., the non-SANE/SART cases), APRI and BC were able to examine if having a SANE/SART intervention increases the likelihood of arrest, given a host of other factors such as:

- The number and types of services offered to victims
- The time between incident and report
- Victim participation in the justice process
- Victim and offender race
- Victim/offender relationship
- Use of force
- Use of weapon

Overall, 39 percent of the cases resulted in arrest, and an additional 71 suspects were issued a summons to appear or were indicted at Grand Jury but not arrested. The

analysis showed that a SANE/SART intervention is a factor, but not the strongest predictor, in the identification and arrest of a suspect. SANE/SART cases are 1.7 times more likely to result in an arrest than cases in which there was no intervention. However, victim/offender relationship (i.e., if the victim knew her assailant) and higher levels of victim participation were the strongest predictors of arrest. The use of force was also a factor.

Likelihood that Charges will be Filed

Overall, 62 of the 208 cases in which an arrest was made (12%) were not charged, either because the case was administratively dismissed by law enforcement (6.5%), the prosecutor decided not to file charges (40.3%), or the Grand Jury returned a no true bill (53.2%). Nearly 60 percent of these cases were non-SANE/SART cases. In addition, there were 251 cases in which no arrest was made and no charges were filed. The victim refused to move forward with charges in 135 of these 251 cases (54%). In 81 of these cases (32%), a suspect was never identified.

APRI and BC found that a SANE/SART intervention is the strongest predictor that charges will be filed in an adult female sexual assault case. In fact, SANE/SART cases are 3.3 times more likely to result in the filing of charges than cases without a SANE/SART intervention. SANE-only cases are 2.7 times more likely to result in charges being filed.

Likelihood of Guilty Pleas and Convictions

In this study, the majority of cases that were charged resulted in convictions (68% compared to 32%). Nearly half of the cases (47.7%) were disposed via guilty plea, and a

third (33%) were disposed at trial—23 percent of which were convicted at trial as shown in the Exhibit below.

Exhibit 2: Disposition of Charged Cases

Disposition	Number of Cases	Percentage of Cases
Dismissed	28	18.8%
Plea (lesser charge)	48	32.2%
Plea (existing/most serious charge)	23	15.5%
Hung jury/retrial	2	1.3%
Not guilty at trial	14	9.4%
Guilty (lesser charge)	11	7.4%
Guilty (existing/most serious charge)	23	15.4%

Basic analyses indicate that SANE/SART interventions are more likely to result in convictions than cases without a SANE/SART intervention. However, when other factors are taken into consideration, the relationship between a SANE/SART intervention and a conviction is diminished significantly. It would appear that although having a SANE/SART intervention helps to increase the likelihood of conviction, the strongest predictors of conviction are the victim’s participation in the process and the relationship between the victim and offender.

Impact of SANE/SART Interventions on Penalty and Length of Sentence

Unfortunately, the amount of information about penalties and sentences was limited in the data set. However, of the 73 cases for which information was available, the majority of convictions (43.8%, n=35) resulted in a sentence of incarceration, followed by a combination of incarceration and probation (33.8%, n=27). The average sentence length was 85 months or just over 7 years.

It does not appear that having a SANE/SART intervention impacts either the sentence or the length of penalty. However, this conclusion is drawn with caution, based on a very small number of cases overall, and warrants further examination.

Summary

Overall, the study findings are quite supportive of SANE/SART interventions as valuable tools in the criminal justice system's ability to respond to adult female sexual assault cases. Of particular note are the following: SANE/SART interventions are effective tools in collecting and preserving valuable evidence for prosecution, including DNA evidence. This may be due in part to the amount of time that elapses between incident and report in SANE/SART cases.

SANE/SART interventions significantly increase the likelihood that charges will be filed in sexual assault cases. This is a particularly important finding in that it parallels findings from earlier studies and provides the first comparative evidence supporting the hypothesis that SANE/SART interventions are a valuable tool in the criminal justice system and for prosecutors in particular. In addition, although not the strongest predictor of arrest, the study's findings that SANE/SART interventions are more likely to lead to arrest than cases in which there is no intervention. These are particularly important findings because they affirm what earlier case studies showed.

The findings are less clear with regard to the hypothesis that SANE/SART interventions increase the likelihood of conviction. While the study did find an association between SANE/SART interventions and convictions, it is not necessarily a direct association, and in fact, other factors were more likely to predict conviction than a SANE/SART intervention. Another factor not included in this study that might shed additional light on the relationship between SANE/SART interventions and convictions is the inclusion of SANE testimony at court proceedings.

Another important, albeit negative finding, with regard to the efficacy of SANE/SART interventions, deals with victim participation in the criminal justice process. Earlier studies suggested that SANE/SART interventions, because of their more sensitive treatment of victims, increased the likelihood that victims would participate more fully in the justice process. The APRI and BC did find that a combined SANE and SART response yielded higher levels of participation than non-SANE/SART cases. However, SANE-only cases showed the lowest levels of participation. This finding has implications for SANE programs and the types of services and support given to victims by SANE nurses. It also affirms that coordinated approaches, involving first responders from different disciplines, help to keep victims informed and engaged in the process.

Despite this last major finding, the results overall are in favor of SANE/SART programs and help to establish their efficacy as a tool in the criminal justice system. As is often the case, research findings beget new questions to be answered, and the current study's findings are no exception. In particular, questions about victim's motivation for seeking out SANE/SART services are important not only for understanding why some women get services and some do not but also for potentially examining the extent to which this motivation carries over to their willingness to participate in the justice system process.

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Testing the Efficacy of SANE/SART Programs

Do They Make a Difference in Sexual Assault Arrest & Prosecution Outcomes?

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CHAPTER 1 INTRODUCTION

The past twenty-five years have witnessed significant reform in sexual assault law and the protection of women. Many of these reforms come from the implementation of SANE (Sexual Assault Nurse Examiner) programs and SART (Sexual Assault Response Teams) (referred to hereafter as SANE/SART). SANEs are specially trained, certified registered nurses who have forensic training and clinical education to help victims of sexual assault. They offer victims compassionate care and are responsible for collecting evidence that could potentially lead to arrest, prosecution, and conviction of the assailant. SANEs often work as part of a SART—a coordinated, multidisciplinary community effort that includes law enforcement, detectives, victim advocates, and the SANE.¹ SANE/SART programs provide victims with emotional and mental support but also make the task of evaluating the victim and collecting important evidence as private and sensitive as possible.

There is no doubt among victims' advocates, forensic nurses, and prosecutors that these programs have been instrumental in assisting victims through the traumatizing experience of rape. However, there has been little research or empirical evidence establishing the efficacy of SANE/SART programs in terms of the successful arrest, prosecution, and conviction of rapists. The American Prosecutors Research Institute (APRI) and Boston College (BC), with funding from the National Institute of Justice, U.S. Department of Justice, designed the current research to fill the gap in the literature and to determine if SANE/SART programs make a difference in the outcomes of sexual

assault cases. In particular, the project examines the impact of SANE/SART programs on arrest and conviction rates and determines at what stage of the criminal justice process SANE/SART interventions make a difference.

The answers to these questions will assist prosecutors, policy makers, and practitioners to be more effective in pursuing sexual assault cases, to create and implement policy that protects and restores victims, and to provide information to maintain quality training and education for those working with sexual assault victims.

The Evolution of SANE/SART: Review of the Literature

The Anti-Rape Movement and the Development of Rape Crisis Centers

In the early 1970s, when police departments and rape crisis centers first began to address the crime of rape, little was known about rape victims or sex offenders. Feminist groups had just begun to raise the issue of rape, and in 1971, the New York Speak-Out on Rape drew widespread attention to rape. A contemporary feminist who raised the issue early were Susan Griffin (1971) in her now classic article on rape as the "all-American" crime. Susan Brownmiller (1975) wrote the history of rape and urged people to deny its future. The general public was not particularly concerned about rape victims; very few academic publications or special services existed; funding agencies did not see the topic as important; and health policy was almost non-existent.

By 1972, the anti-rape movement began to attract women from all walks of life and political persuasions. Various strategies began to emerge, particularly the self-help

¹ U.S. Department of Justice, Office of Violence Against Women. (September 2004). *A National Protocol for Sexual Assault Medical Forensic Examinations: Adults/Adolescents*. Washington D.C.: U.S.

program now widely known as the "rape crisis center." One of the first such centers was founded in Berkeley in early 1972, known as Bay Area Women Against Rape (BAWAR). Within months of the opening of the Berkeley center, similar centers were established in Ann Arbor, Michigan; Washington D.C.; and Philadelphia, Pennsylvania. Concurrently, hospital-based rape counseling services began in Boston and in Minneapolis. Soon, centers replicated and services flourished. Although volunteer ranks tended to include a large number of university students and instructors, they also included homemakers and working women. The volunteer makeup usually reflected every age, race, socio-economic class, sexual preference, and level of political consciousness. Volunteers were, however, exclusively women. Among the women, the most common denominators were a commitment to aiding victims and to bringing about social change (Largen, 1985).

The "Second Assault:" Early Treatment of Rape Victims by the System

The rape crisis centers provided victims with the support and counseling that enabled them to move through the traumatizing experience of rape both mentally and emotionally. However, rape survivors would often experience "victim-blaming treatment from system personnel" that would often worsen the victim's physical and mental distress (Campbell, Wasco, Ahrens, Sefl & Barnes, 2001). Additionally, the physical ordeal of the medical exam and subsequent investigation could often be a humiliating and de-humanizing experience for the victim. These post-assault experiences became known as the "second assault" of the victim.

Rape victims would often go through a series of uncomfortable experiences after their victimization that would constitute a "second assault." First, rape victims were traditionally seen in the emergency room by male physicians and generalist nurses, who

often lacked the time and experience to do a thorough examination of the victim that would assist law enforcement and prosecutors (Girardin, 2005). Rape victims were not a high priority for emergency care, and even when medical needs were satisfied, their emotional needs were not. Prior to the SANE programs, medical staffs had an image of the “real” rape victim and much energy went into determining the “legitimacy” of the rape case, i.e., was the victim *really* raped? Rape victims often felt depersonalized, lost, and neglected.

Second, the environment of the emergency department and needs of the victim were often at odds. Many victims complained about the long wait, having to wait alone, a lack of privacy, and not being informed of exam results. Rape victims were not a priority with emergency department physicians. Physicians were reluctant to do the rape examination because they lacked experience and training in forensic evidence collection and because they were vulnerable to being subpoenaed and required to testify (Bahm, 2001). Physicians were able to examine the victim’s body for bruises and prepare slides to look for sperm. However, they were often unaware of the need to collect evidence from clothing, carefully folding clothes to prevent dried stains from brushing off, giving the victim a comb to gather pubic hairs that may have been left by an assailant, or clipping the victim’s fingernails to provide skin scrapings of the assailant. There was also a lack of continuity of care. Medical departments did not communicate with each other, so victims returning for follow-up care found it difficult to be asked again by new people why they needed medical attention.

Finally, documentation collected on the victim would often include damning information such as prior sexual experience or phrases that included judgmental

statements about the victim. Ultimately, victims were left on their own to cope financially, legally, and emotionally with the aftermath of the crime (Holmstrom & Burgess 1983).

SANE/SART: Past and Present

It was against this backdrop of problems that prompted communities throughout the United States to involve nurses in the care of the sexual assault victim (Lang, 1999; Ledray, 1999). Nurses, medical professionals, counselors, and advocates working with rape victims agreed that services provided to sexual assault victims in the emergency room were inadequate when compared with the standard of care given to other patients (Ledray, 2001). Thus, SANE programs and SARTs emerged in the 1970s with the first SANE in Tennessee. SANE programs were created whereby specially trained forensic nurses provide 24-hour coverage as first-response care to sexual assault victims in emergency rooms and non-hospital settings (Campbell, 2004).

Nurses have always cared for patients who were victims of violence. However, forensic nursing has only recently been recognized as an emerging specialty area of contemporary nursing practice (Doyle, 2001; Taylor, 1998; Winfrey & Smith, 1999). Forensic nursing history has been traced to the 18th century when midwives were called into court to testify on issues pertaining to virginity, pregnancy, and rape (Lynch, 2006). Clinical forensic nursing practice focuses on the collection of evidence from living patients who have been victims of crimes or traumatic injuries. The forensic and clinical training SANEs receive allow them to “relieve emergency departments of a group of patients who typically have non-urgent physical needs but extremely urgent needs for evidence collection, crisis intervention, and emotional care” (Girardin, 2005).

Today, SANE programs have grown in number and many are still reaching maturity. Ciancone, Wilson, Collette, and Gerson (2000) conducted a survey of SANE programs in the United States. Of the 58 programs that responded, 55% had been in existence for less than 5 years and 16% had been in existence for more than 10 years. Campbell and colleagues (2005) surveyed SANE programs and reported on the rapid growth of programs; 58% had emerged within the past 5 years. Trends noted included newer programs created through a joint task force or through collaboration with other community groups; more diverse funding available as opposed to using hospital funds; and significantly larger programs with more staff and serving more patients, which reflected organizational growth.

The SANE soon became an integral part of a team of primary and secondary responders known as a SART (Sexual Assault Response Team). As previously mentioned, the SART includes law enforcement, detectives, victim advocates, and healthcare providers. The main goal of a SART is to assist the sexual assault victim through the criminal justice process. The second goal is to increase the odds of successful prosecution by enhancing evidence collection and facilitating communication between all parties in the process. The third goal is to help victims recover and cope from their experience through counseling and support (Girardin, 2005, Wilson & Klein, 2005).

Nationally, the SANE/SART model has grown exponentially. Although virtually all these programs were developed to facilitate standard comprehensive and expert care of sexual assault survivors, the literature clearly shows that policies and procedures do vary from program to program.

Structure and Operation of SANE/SART Programs

SANE programs operate out of a variety of locations including hospitals and community-based facilities. They also vary in terms of their community relationships, structure, services offered, and their development. Ciancone et al. (2000) found that the median number of patients seen annually by SANE programs was 95. Approximately 75% of the programs were affiliated with a hospital, a police department, or a rape crisis center. More than half of the exams were conducted in a medical clinic, office or hospital setting. Ninety percent offered prophylaxis and treatment for sexually transmitted diseases (STD); however, STD cultures, HIV testing, and screening for illegal drugs and alcohol were selectively performed based on whether or not patients had evidence of active disease, requested the test, or had high-risk exposures. The authors suggested that best-practice protocols be designed to eliminate the inconsistencies among programs and that further research be conducted, particularly the collection of outcome measures in order to define the impact of the programs (Ciancone et al., 2000).

Campbell and colleagues (2005) conducted a national study of the organizational components of SANE programs that examined four areas: 1) history of the program; 2) current structure, function and operations; 3) program goals and desired outcomes; and 4) community relationships. A summary of the *history and development* included how the program began (by a planning committee or task force); *why the program was created* (need for better care for victims, better evidence collection, reduce waiting time); and *funding of program* (hospital funds, state grant, private donations, local government grant). A summary of the SANE programs' *structure* included staffing, location for conducting exams, program setting, and payment for services. A summary of SANE

programs' *goals and outcomes* included primary program goals (provide quality care, improve evidence collection, meet patient's emotional needs, empower survivors; prompt reporting to police). *Good outcomes* in a case were described as, "patient is not blamed or made to feel it was her fault," "patient educated about resources," "good quality medical care," "evidence collected correctly/professionally," "case is prosecuted and victim ready to talk with a counselor" (Campbell et al., 2005). The last organizational category was *community relationships*. The quality of community relationships included rape crisis centers; police/law enforcement; prosecutor's office; and hospitals (for non-hospital based programs); quality of relationships with other staff in the hospital emergency department and hospital administrator (Campbell et al., 2005).

The SANE programs promote a philosophy of care that is evidence-based and consists of the following tasks:

- 1) *Initial Medical Evaluation*: This is not a routine physical exam. The emergency physician will typically take vital signs of the victim; however, the physician is asked not to treat injuries until the SANE documents injuries with pictures and collects evidence. The victim is advised of this procedure and must sign a consent form (Ledray, 2001).
- 2) *Evidentiary Exam*: The SANE is responsible for conducting the evidentiary exam and ensures that the victim's dignity is protected and is not re-traumatized by the exam. Victims are a part of the decision process throughout the evidence collection phase. Most protocols suggest the exam be completed within 72 hours after the sexual assault. However, some research indicates that evidence may be available beyond the 72 hour time period (Protocol, 2004). There is significant variation in how evidence is collected. However, all evidentiary exams include the following (Ledray, 2001):
 - a) written consent from the victim, documentation of assault history
 - b) forms of violence used and where
 - c) medical information of the victim including pregnancy status of the victim
 - d) a physical exam for trauma, genital and non-genital
 - e) collecting the victim's clothing and packaging according to state policy
 - f) specimen collections from the body surfaces including skin, hair, and nails

- g) body fluid and orifice specimen collection
- h) blood draw and urine specimen for drug analysis
- i) DNA screen
- j) prophylactic treatment of STDs or culturing

3) *Maintaining Chain of Evidence and Evidence Integrity*: The SANE is responsible for ensuring complete documentation with signatures and the disposition of evidence. Additionally, the SANE is also responsible for identifying, collecting, and preserving evidence and for securing evidence in a designated area free of contaminants (Evans, 2003).

4) *Crisis Intervention and Counseling*: This includes a mental health assessment and referral for follow-up counseling. This is usually the primary role of the rape crisis center advocate. However, the SANE also provides crisis intervention and ensures that follow up counseling services are available (Ledray, 2001).

In addition, SANE programs utilize specialized forensic equipment such as a colposcope, which is a non-invasive, lighted, and magnifying instrument for examining the perineum and anogenital area for the detection of small lacerations and bruises (Voelker, 1996). Other equipment may include a camera attached to the colposcope, and some use toluidine blue dye for the detection of micro lacerations and abrasions. SANEs also document bruises and injuries using photography. Today, many are using digital cameras. SANEs are also trained in identifying and documenting patterned injuries, treatment of injuries, maintaining chain-of-evidence, and providing expert witness testimony (Ledray, 1999).

Building on the success of the SANE model, many communities have established a SART, which is a coordinated community approach to deal with the multiple needs of rape survivors and to prosecute offenders. Under this approach, SANEs work in a team with police and sheriffs, prosecutors, rape crisis advocates or counselors, and emergency department medical personnel to better collect evidence and provide services to victims. Some variations exist with the structure of SART programs. For instance, some

programs are hospital-based and others consist of medical teams that contract with police or sheriff's departments (Lewis, DiNitto, Nelson, Just & Ruggard 2003). In addition, some states have SART programs that do not have a formal SANE component. The state of Rhode Island relies on medical personnel who are *not* SANEs, to collect forensic evidence as part of their SART (Wilson & Klein, 2005).

Research on SANE/SART Programs

The U.S. Department of Justice, Office for Victims of Crimes (2001) reported that SANE programs have made a profound difference in the quality of care provided to sexual assault victims by offering prompt, compassionate and comprehensive forensic evidence collection. This report traced the establishment of the first SANE programs in the mid-1970s in Minneapolis, MN; Memphis, TN; and Amarillo, TX. By 1991, approximately 20 SANE programs existed in the United States; in 1996, there were 86 known programs; by 1997, that number rose to 116, and by 1999 it was estimated that there were more than 300 programs in existence.

More recently, Campbell, Patterson, and Lichty (2005) examined the effectiveness of SANE programs across five areas: 1) promoting the psychological recovery of survivors; 2) providing comprehensive and consistent post rape medical care (e.g., emergency contraception, sexually transmitted disease [STD] prophylaxis); 3) documenting the forensic evidence of the crime completely and accurately; 4) improving the prosecution of sexual assault cases by providing better forensics and expert testimony; and 5) creating community change by bringing multiple service providers together to provide comprehensive care to rape survivors. Campbell, Patterson, and Lichty found that SANE programs are effective across these areas; however, the authors

note that most research on SANE/SART programs has not included “adequate methodological controls” to establish empirical evidence attesting the effectiveness of such programs.

Early studies of SANE/SART programs were descriptive case studies that did not use control samples of non-SANE/SART cases. For example, Solola and colleagues (1983) studied the management of rape cases by the SANE program in Memphis and reported that more than 90% of the victims elected to file a police report of the sexual assault. However, in 38% of the cases, prosecution was not possible because the assailant was unknown. Arrest and successful prosecution was possible in 61.4% of the cases with identified suspects or in only about a quarter of all rape cases. O’Brien (1992) reported a 100% conviction rate for cases involving SANE examinations over a 3-year period in Madison, Wisconsin, citing the quality of evidence collected and testimony by SANEs. Solola observed increases in the number of guilty pleas in cases with SANE intervention.

Several researchers have explored the possible reasons for the increase in conviction rates that may be associated with SANE/SART model. The *World Health Organization*, reported that a study in Canada found that documentation by trained forensic or other medical providers can increase the likelihood that a perpetrator will be arrested, charged, and convicted (World Health Organization, First World Report on Violence and Health 166, 2002). In addition, Ledray (1992, 1997), Lenehan (1991), and Little (2001) reported that relevant consistent documentation and evidence collection contributed to an increase in convictions. There is also evidence indicating that when a SANE intervenes there is a higher rate of victim participation in the criminal justice

system (Ledray 2001; Ledray & Summelink, 1996). Researchers have further demonstrated that evidence collection is more accurate when collected by a SANE (Crandall & Helitzer, 2003; Ledray, 2001; Sievers, Murphy & Miller, 2003). Amey and Bishai (2002) studied the quality of medical care of rape victims, Crandall and Helitzer (2003) reported on the impact of SANE programs in New Jersey. Crandall and Helitzer (2003) also found that in Albuquerque, New Mexico, the SANE program established in 1996 improved patient care, improved the job quality of care providers, and increased the number of charges brought against rapists and the number of entered guilty pleas. However, the impact of SANE programs on judicial processes is not always immediate. Wilson and Klein (2005) found in Rhode Island that the impact of the SART program on judicial processes as applied to sexual assault cases was negligible. They attribute the findings to the fact that the Rhode Island program is still maturing. However, the program was found to have immediate and positive results for victims.

The research on SANE/SART programs and forensic research in the area of rape and sexual assault has also focused on forensic markers of injury to rape victims (Burgess, Hanrahan & Baker, 2005). The early research (outside of descriptive reporting of injuries) has been on the use of the colposcope. Slaughter and Brown (1992) reported finding 87% of rape victims they examined (n=131) had identifiable injury via colposcope. Slaughter et al. (1997) reported findings on 311 women and children and compared them to 75 controls. They found positive anogenital findings in 68% as compared to 11% in the control group having consensual sex (n=75). However, the study included several methodological issues, including the fact that the time from rape to

examination varied with the rape victims (up to 72 hours post assault) while the controls were examined within 24 hours following intercourse.

Sommers, Fisher, & Karjane (2005) analyzed the role of colposcopy in the forensic examination of adolescent and adult women and noted that identifying an injury pattern to predict rape remains problematic. Patel, Curtner & Forster (1992) warned that if colposcopy was required to support a claim of rape, there was the risk that courts would doubt a woman's history if injury was absent. Injury has been noted to play a role in the reporting of rapes. Bachman (1993) found that the level of injury sustained in a rape increased the likelihood of the rape being reported to police. Finally, the issue of injury has been studied following consensual sex or tampon use. Fraser and colleagues (1999) reported on an international sample of 107 women, aged 18-35, followed over a 6-month period to look for changes in vaginal and cervical appearance. Colposcopy noted 56 alterations during 314 inspections with the most common lesions being petechiae (30 of 134), erythema (9 of 314), abrasions (5 of 134) and edema (4 of 314). The incidence of these conditions was highest when the inspections followed intercourse in the previous 24 hours or after tampon use. Two primary issues are critical in rape cases: 1) identification of the assailant and 2) consent (or lack thereof). The issue of identification is being addressed by rape kit DNA evidence. The issue of non-consent is being addressed by research on differentiating injuries based on visual inspection, contrast media, or colposcopy. One such study is underway by Sommers, Schafer and Zink (2005).

The literature clearly shows how SANE/SART programs have been instrumental in helping rape survivors. These programs provide the emotional and mental support to

empower victims while also helping victims navigate the criminal justice process.

However, there is little empirical evidence that attests to the efficacy of SANE/SART programs and their impact on judicial processes. The majority of present research lacks a control for non-SANE/SART cases and tends to focus on variations in program structure, victim impact, and the use of forensic equipment. In addition, the research is largely descriptive and based on testimony and case studies (Ledray, 2001). The American Prosecutors Research Institute (APRI) and Boston College (BC) project examines both SANE/SART programs *and* non-SANE/SART programs to determine differences in impact. Moreover, this research focuses on geographically and demographically diverse jurisdictions allowing for a comparative approach rather than a case study method.

Finally, the project considers several control variables that have not been included in previous research examining the connection between SANE/SART programs and case progress within the criminal justice system. The findings fill a critical void by establishing *systematic* evidence that will help strengthen existing programs, serve as a guide for establishing new programs, and facilitate better criminal justice response.

CHAPTER 2 STUDY METHODOLOGY

Project Goals and Research Questions

The goal of this study is to test the efficacy of SANE/SART programs as a tool in the criminal justice system. In particular, the study was conceptualized to determine if the performance of a SANE/SART exam impacts sexual assault case outcomes by comparing cases in which there was a SANE exam and/or SART response and those in which there was not. In testing this hypothesis, the project team sought to answer the following research questions:

1. Is the arrest rate higher in cases where a SANE/SART exam is performed as compared with cases in which no exam is performed?
2. Is the indictment/charging rate higher in such cases?
3. Are guilty pleas more likely to be entered in such cases, and are pleas likely to be to the existing charge or to a lesser charge?
4. Is the conviction rate higher in such cases?
5. Is the sentence more severe in such cases?

It is important to note that this study focused on the impact of SANE/SART interventions on the formal criminal justice response, not the victim's decision or likelihood to report the assault to the police or to obtain services. Understanding the victim's motivation and decision-making is clearly an important study. However, given the challenges faced by prosecutors in securing convictions in sexual assault cases, the research team believed that research focusing on programs that impact actual case outcomes would have the most significant impact, particularly with the proliferation of SANE/SART programs across the country. As such, the cases examined were only those

in which a report had been made to law enforcement. The victims may or may not have had a SANE/SART intervention, which serves as the theoretically relevant independent variable in the study. As will be discussed in the following section, the research team collected data that allowed the team to control for any selection bias that may have arisen from cases not processed through the SANE/SART system.

The data collected enabled the research team to draw conclusions regarding the impact of SANE/SART programs on arrest and conviction rates as well as where in the criminal justice process a SANE/SART intervention made a difference. The examination of dependent variables followed a temporal sequence, i.e., there was a report, then an arrest, then charges filed, and so on. If the case file information indicated a negative response at one point, then there would be a negative response on all later points.

In addition, the project team examined the participation of the victim in the criminal justice process and the types of services that were offered to victims. As a large portion of SANE/SART programs focus on understanding victims' reactions to sexual assault and ensuring proper treatment to minimize the chance of further trauma to the victim, a central hypothesis to be tested is that improved case outcomes may be a result of increased participation by the victim in the identification, apprehension, and prosecution of the perpetrator. Moreover, the level of services offered and provided to victims, particularly those related to prosecution would likely affect case outcomes as well. Both the victim's participation in the criminal justice system and specifics of SANE/SART services, including evidence collection, were considered in determining the true impact of SANE/SART interventions on case outcomes.

Data Collection Design and Implementation

APRI and BC chose a quasi-experimental design for the study as the performance of a SANE/SART exam could not be randomly assigned, thus making an experimental design impossible. The research study focused on differences in case outcomes in selected prosecutorial districts between cases in which a SANE exam was performed or there was a SART response and cases in which a SANE or SART intervention was not performed.

SANE/SART and non-SANE/SART cases between 1997 and 2001 were drawn randomly from police incident reports and the data were then matched to records in the SANE/SART programs and/or the prosecutor's office. Although every attempt was made to follow this protocol, the sampling strategy was not able to be implemented in one site because the prosecutor's office tracked cases by victim and defendant name, not by a police report or incident number. Working with the police department and the state crime lab, a list of adult female sexual assault victims was identified. The police department and a SANE nurse culled the list into a SANE and a non-SANE sample and provided the list of victim names to the prosecutor's office so files could be matched. Once the match occurred, a unique case identifier was assigned to the file to maintain victim anonymity and confidentiality. In all sites, the project team also made distinctions between cases involving only a SANE exam and cases in which a SART responded as well.

Originally the study sites were selected based on the date of SANE/SART program implementation, geographic and demographic diversity, volume of sexual assault cases, and availability of data on the proposed variables. However, due to challenges faced by the research team, as discussed later in this chapter, the final sites

were determined based on availability of data and likelihood of obtaining a sufficient non-SANE sample.

Dependent and Independent Variables

As the focus of the study was the impact of SANE/SART interventions on case outcomes, case outcomes served as the dependent variables and the performance of a SANE/SART program as the independent variable.² For cases in which no exam was performed, the study team collected data on whether or not SANE/SART services were offered. In addition, the project team collected data on several case-specific control variables to determine their impact on any observed relationship between the dependent and the independent variables. The variables that were examined included the following:

Dependent Variables – Criminal Justice Outcomes:

- Arrest – arrest, no arrest – dichotomous
- Charges Filed – charges filed, no charges filed – dichotomous
- Convicted – conviction, no conviction – dichotomous
- Penalty – suspended sentence, probation, incarceration and probation, incarceration – ordinal
- Length of penalty – number of months – interval

Independent Variable:

- Was a SANE/SART intervention done – SANE only, SANE/SART, no exam – nominal
- Was a SANE/SART intervention done – SANE/SANE SART, no exam – dichotomous

Control or Intervening Variables:

- Victim/offender relationship – stranger, non stranger – dichotomous
- Whether or not services were offered and refused – dichotomous
- Number/types of services provided – interval/nominal
- Time between the incident and the report (in days) – interval

² In the event of a SANE exam conducted in conjunction with a SART response, or conversely a SANE exam done without a SART response, an alternative measure of the theoretically relevant dichotomous independent variable was formed and entered in separate models. These alternative measures were as follows: Non-SANE were coded as “0”; SANE exam and SANE/SART interventions were grouped together and coded as “1”.

- Level of participation of the survivor in the criminal justice process – statement given, testified, victim impact statement, contact with prosecutor – interval
- Race of victim – nominal (White as reference group)
- Race of perpetrator – nominal (White as reference group)
- Use of force, particularly of a weapon – dichotomous
- Previous arrests – interval
- Previous convictions – interval
- Case outcome – guilty of most serious charge at trial, guilty of lesser charge at trial, not guilty at trial, dismissed, plea to lesser charge, plea to most serious charge, no charges filed, administrative dismissal, no true bill, referred to another jurisdiction, and other – ordinal
- Level of evidence collected – videotape, pictures, clothing, fabric/fibers, hair samples, bodily fluid, nail scrapings, rape kit – interval
- DNA collected – dichotomous
- Documented injuries by police – dichotomous
- Number of witnesses – interval
- Suspect claimed sexual act was consensual – dichotomous
- Victim refusal to move forward with charges – dichotomous
(Appendix A contains copies of the three data collection forms used: the incident form, case abstraction form, and the SANE/SART data collection form)

Exhibit 1, on the following page, shows the number of responses, minimum and maximum values, means, and standard deviations for ordinal and dichotomous variables.

Prior to and during site visits, project staff also conducted interviews with staff in the prosecutors' offices and the SANE/SART programs to obtain qualitative information about the legislative and criminal justice context during the time period, using a semi-structured interview guide. In particular, the project team sought information about changes in legislation regarding sexual assault such as revisions to the criminal code, sentencing guidelines, or civil commitments of sexually violent predators; police department policies regarding the handling of sexual assault cases; prosecution policies such as no plea policies; and other relevant changes with regard to the handling of sexual assault victims or perpetrators.

Exhibit 1: Descriptive Statistics for Interval and Dichotomous Variables

	N	Minimum	Maximum	Mean	Std. Deviation
Arrest (no = 0; yes = 1)	530	0	1	.39	.489
Charges filed (no = 0; yes = 1)	530	0	1	.41	.492
Convicted (no = 0; yes = 1)	139	0	1	.68	.467
Length of penalty in months	84	6	412	84.55	86.378
Victim/offender relationship (stranger = 0; non-stranger = 1)	530	0	1	.68	.467
Were services offered by police to victim? (no = 0; yes = 1)	474	0	1	.54	.499
Number of services provided	497	0	4	.70	.807
Time between the incident and the report (In Days)	493	0	846	18.99	81.527
Level of participation	530	0	4	1.13	1.076
Use of force (no = 0; yes = 1)	530	0	1	.64	.480
Was a weapon used against victim? (no = 0; yes = 1)	447	0	1	.17	.372
Number of previous arrests	138	0	55	6.59	8.697
Number of previous convictions	114	0	16	3.04	3.823
Level of evidence collected	529	0	8	1.94	1.595
DNA collected (no = 0; yes = 1)	530	0	1	.35	.478
Were injuries documented by police? (no = 0; yes = 1)	459	0	1	.28	.449
Number of witnesses	491	0	2	.36	.541
Did suspect claim sexual act was consensual? (no = 0; yes = 1)	166	0	1	.57	.497
Did victim refuse to move forward with charges? (no = 0; yes = 1)	405	0	1	.50	.501

Data Collection Instruments and Method

The research team developed three standardized records abstraction forms to collect data: 1) the incident form, 2) the case abstraction form, and 3) the SANE/SART data collection form (see Appendix A for all three forms.) Staff members in the SANE/SART programs and members of the project team were responsible for extracting the data from the various reports and files in each of the prosecutorial districts, as discussed below.

The incident form was designed to collect data from police reports and the prosecution files about the actual sexual assault. Specifically, details about the incident collected included the time between incident and report, use of force; victim/offender relationship, types of evidence collected, types of services offered to victim, previous suspect arrests and convictions, and other demographic information about the victim and the perpetrator the.

Prosecution data and case outcome data were drawn from the prosecutors' case files, using the case abstraction form. Most case files contained a case summary and disposition sheet that served as the primary source of data. The key variables that were extracted from the files were whether or not charges were filed, the specific charge(s) filed, whether or not there was a guilty plea and to what charge, whether or not a trial was held and the outcome, whether or not there was an appeal and the outcome of the appeal, what the sentence was, and participation of the victim in the prosecution. With regard to participation of the victim in the prosecution, the team extracted information regarding the victims' cooperation with the prosecutor, whether or not the victim appeared at Grand

Jury proceedings or testified at trial, and whether or not the victim gave a victim impact statement (where applicable).

Information about the SANE/SART intervention was abstracted from the SANE/SART files, using the SANE/SART data collection form. Specific information regarding the evidence collected during the victim's exam, nature of the assault, evidence/forensic kits collected, victim's demeanor, weapon(s) used, number of assailants, and the victim/offender relationship were collected.

Data to address the primary questions of the study were gathered on-site by the SANE/SART program staff and members of the project team. A 5-day site visit was required as project team members physically reviewed each case file to extract the data. To facilitate the site visit, the cases were selected in advance and assigned a unique identifier to the case to ensure confidentiality.

Research Challenges

Although the proposed study was reviewed by the Boston College Institutional Review Board (IRB) to assess human subjects' protection issues, the study team encountered IRB obstacles at many study sites that required additional time to address. Access to law enforcement and prosecution files for most sites selected was granted; however, in some jurisdictions, to collect information from the SANE/SART file, which was typically a part of a medical report, an additional hospital IRB approval was required. As each SANE/SART exam was performed by a medical professional, hospitals required the study team to submit a proposal for a hospital IRB review. Although supporting the study, hospital officials were obligated to maintain the requirements of the Health Insurance Portability and Accountability Act of 1996 or

HIPAA, which provides extensive privacy rights to patients' medical information and records.

To ensure confidentiality, the proposed study was designed in a manner to preserve the privacy of persons with whom information related. Unfortunately, as with any study, time was limited and the review boards involved only met at specified times during the year to review studies thus limiting access to certain sites. To pursue these sites would have been cost prohibitive as these sites required much more time dedicated than originally budgeted.

In addition, matching police and prosecution files proved a difficult task in some jurisdictions and thus required additional time. For some jurisdictions, prosecutorial case files and law enforcement files were numbered in way that allowed the research team to track designated files from the police department to the prosecutor's office with ease. Data were collected from the law enforcement agency that handled the greatest percentage of sexual assault cases in the jurisdiction. Among the three jurisdictions studied, the largest agencies were the city police departments. For one jurisdiction, the police department and the prosecutor's office numbered files differently thus making it impossible to track cases from the entry point in the criminal justice system (i.e., sexual assault reported to the police or a SANE/SART exam performed) through to case closure. Moreover, when examining case file information in the police and the prosecution files, pivotal case data was missing thus restricting the number of cases that could be included in the sample. In addition, although many prosecutor's offices have now moved to automated systems to track case file information, typically these offices are burdened with archived or a backlog of older cases that required personnel to manually enter data

into the system. As such, the study team encountered problems with obtaining older files as these were typically archived and access was limited.

Another major challenge encountered dealt specifically with identifying a non-SANE/SART sample. For example, in some jurisdictions, the SANE program had been operational since the mid-1990s and the initial review of sexual assault files indicated that very few cases handled by the prosecutor's office did not have a SANE exam, making it difficult, if not impossible, to draw a large enough sample of non-SANE cases. As a result, as part of the selection criteria for study sites, the study team selected sites where the SANE program was implemented in the late 1990s thus making it possible to collect a sufficient number of non-SANE cases.

Study Sample

Originally, when the study was first conceptualized, APRI proposed five study sites. However, due to the challenges mentioned, the study team reduced the proposed number of study sites to three. As previously stated, the final sites were determined based on availability of data and likelihood of obtaining a sufficient non-SANE sample. As a result, the three study sites selected for the study were Sedgwick County (Wichita), Kansas; Suffolk County (Boston), Massachusetts; and Monmouth County (Freehold), New Jersey. Appendix B contains information about each of the study sites, including the following:

- Number of rapes and violent crime reported during the time frame studied
- Per capita income and population
- Racial/ethnic breakdown

These data were gathered from secondary data sources such as the Uniform Crime Reports or the National Incident Based Reporting System, National Crime Victimization Survey, and the U.S. Census.

Cases that were opened and closed between 1997 and 2001 were randomly selected from police incident reports in New Jersey and Kansas and the state crime lab in Massachusetts as all sexual assault reports were automatically sent to the crime lab. From these data sources, the project team obtained a list of adult female sexual assault reports during the time period. It is important to note that the data collected from the police incident forms were from the largest police departments in the participating jurisdictions.³ Staff from the SANE/SART program in each jurisdiction reviewed the list and identified all cases in which a SANE/SART exam was performed. The project team then split the list into two groups (non-SANE/SART cases and SANE/SART cases) and then randomly selected up to 125 cases in each category. Exhibit 2 shows the breakdown of SANE/SART and non-SANE/SART cases collected by each study site.

Exhibit 2: Number of Cases Collected for Each Study Site

Study Sites	SANE Only	SANE/SART	Non SANE/SART	Total
New Jersey	0	79	72	151
Kansas	0	77	108	185
Massachusetts	106	0	88	194
Total	106	156	268	530

In total, data were collected data on 530 cases—106 SANE cases, 156 SANE/SART, and 268 non-SANE cases. Although significantly lower than the proposed

³ In selecting the study jurisdictions, the research team found that the largest police department in the three jurisdictions handled the majority of sexual assault cases. Because many jurisdictions have numerous law enforcement agencies that can refer cases to the prosecutors' offices, it would be cost-prohibitive to select cases from all the law enforcement agencies in each jurisdiction.

total sample size of 1,250 cases, the quality of data was very good and a review of the data demonstrated that the analysis plan as originally proposed was still valid. More importantly, unlike other similar studies, APRI and Boston College were able to maintain a non-SANE sample, thereby maintaining the integrity of the quasi-experimental design and the ability to conduct comparative analyses.

The major impact of basing the findings on three sites is on the study team's ability to generalize to a larger population. Because of contextual differences, APRI and Boston College maintained that generalization may be difficult and based on the final sample size, would caution that some findings should be interpreted with care. Also, due to the smaller sample size, the analyses did not include within-site and cross-site comparisons. Rather, the analyses focused on a comparison of differences between SANE only, SANE/SART, and non-SANE/SART cases across all sites.

Analysis Plan

The project team used SPSS to analyze the data, using descriptive, multivariate, and inferential statistics to answer the research questions. Analyses were not generated for specific jurisdictions but rather aggregated together to increase statistical power. Descriptive statistics were generated using the SPSS Crosstabs and the Tables commands for key model variables (e.g., victim-offender relationship, types of services received by the victim, and types of evidence documented).

Multivariate and inferential statistical tests were used to examine the relationship between the independent and dependent variables and to control for the effects of the intervening variables among all sites. The theoretically-relevant independent variable of whether or not a SANE/SART exam was performed was included in all multivariate,

inferential tests. In each of the multivariate models (for the differing dependent variables), the unit of analysis was the case.

Analyses of the variance (ANOVA) were conducted to determine if the level of victim participation in the criminal proceedings, level of evidence collected, services received by victims, and the length of time between incident and report differed based on SANE/SART interventions and non-SANE/SART interventions.

A series of logistic regression analyses were employed for dichotomous dependent variables to predict the probability and odds ratio that offenders were arrested, charged, or convicted based on independent and control variables. The statistical analyses were conducted across all study sites. A hierarchical logistic regression was employed to determine the association between the likelihood of offender arrest and SANE/SART intervention. The predictor variables entered in step 1 were number of services, time between the incident and the report (in days), level of participation in the criminal proceedings, race of victim (dummy coded – White as reference group), race of offender (dummy coded – White as reference group), number of previous arrests, number of previous convictions, force used during the assault, and use of weapon. The SANE/SART dichotomous independent variable was entered in step 2.

A hierarchical logistic regression was employed to determine the association between the likelihood of charges filed and SANE/SART intervention. The same control variables used in step one of the previous regression model were used in step 1 of this regression model. However, the SANE/SART categorical independent variable (reference group – Non SANE/SART) was entered in step 2.

A hierarchical logistic regression was conducted to determine the association between offender conviction and SANE/SART intervention. The predictor variables that were entered in step 1 were time between the incident and the report (in days), level of participation in the criminal proceedings, force used during the assault, and use of weapon. SANE/SART dummy coded independent variable (reference group – Non SANE/SART) was entered in step 2.

A hierarchical linear regression was used to test the relative influence of SANE/SART interventions on the sentence length in convicted cases. However, due to missing data for sentence and length of penalty, post hoc analyses of the variance (ANOVA) was conducted to determine if the type of sentence and length of sentence differed based on SANE/SART interventions and non-SANE/SART interventions.

CHAPTER 3

RESULTS OF THE COMPARATIVE ANALYSES

As described in the methodology section of this report, the study was designed to answer several key questions about the efficacy of SANE/SART interventions as a tool in the criminal justice system. In particular, the study was designed to answer four questions: 1) what is the impact of SANE/SANE interventions on the likelihood of suspect identification and arrest, 2) are guilty pleas more likely to occur in SANE/SART cases, 3) what is the likelihood of conviction increases for SANE/SART cases, and 4) does a SANE/SART intervention increase the “severity” of the penalty (i.e., probation versus incarceration) and the length of penalty.

The following sections describe the results of the analyses in terms of the study questions. The general characteristics of the SANE/SART intervention are discussed first, followed by the SANE/non-SANE comparative analyses. The bifurcation of the sample into SANE/non-SANE created small cell counts for some variables, which is noted in the discussion. For this reason, some variables and questions were collapsed to increase the reliability and validity of the results.

SANE/SART Intervention

The study yielded a total of 530 adult female sexual assault cases. As designed, the study sample was split into SANE cases, SANE/SART cases, and non-SANE cases. Exhibit 2 shows the breakdown of cases in each category:

Exhibit 2: Study Sample

	Frequency	Valid Percent
SANE only	156	29.4%
SANE/SART	106	20.0%
Non SANE/SART	268	50.6%
Total	5630	100.0%

SANE only cases were defined as those cases in which a SANE performed an exam or attended to the victim. *SANE/SART cases* included cases in which a SART response occurred including a SANE exam or response. *Non-SANE/SART cases* were defined as those cases in which a victim refused a SANE/SART intervention, never sought assistance from a SANE/SART, or did not have a SANE exam. Non-SANE/SART cases did include cases in which the victims received treatment from non-SANE personnel in medical facilities.

Before addressing the primary research questions, it is important to understand the characteristics of the sample in terms of the key differences between SANE/SART interventions and non-SANE/SART interventions. These differences form the foundation for the variables of interest both in terms of independent and control variables.

One of the defining characteristics of SANE/SART interventions is that the victim is engaged very early in the process and evidence is collected within a matter of days to increase the likelihood that useful forensic or biological evidence is not destroyed. Among the cases in the study sample, an average of 33 days elapsed between the time of the incident and the initial report in non-SANE cases. For SANE/SART cases, the average length of time between incident and report decreased to 5.6 days, and for SANE only cases, the average was 3.4 days. ANOVA statistics show that the difference in means between the three types of cases is statistically significant at the .000 level.

Another important element of the SANE/SART intervention is the collection of evidence. SANE practitioners, law enforcement, and prosecutors report that SANE/SART cases have more and better quality evidence than cases in which there is no SANE/SART intervention. In fact, among the cases in this study, it would appear that SANE/SART cases do result in the collection of more evidence. Overall, there are 1.9 types of evidence collected on average for all cases. However, cases in which there is a combined SANE/SART intervention yielded an average of 3.1 types of evidence; SANE only cases produced an average of 2.6 types of evidence, whereas non-SANE/SART cases yielded only 1 type of evidence. The differences in means are statistically significant at the .000 level.

Types of evidence documented in this study included photographs, videotapes, clothing, fibers, hair samples, rape kits, and DNA samples. Of the various types of evidence, it is DNA evidence that can be most useful in the prosecution of sexual assault cases. Overall, only 35% of the cases in the sample had DNA evidence. One would expect that if SANE/SART interventions yielded more useful evidence, this evidence would include DNA evidence. This notion is supported by the study findings, as the results show statistically significant differences in the number of cases involving DNA evidence ($p \leq .000$). DNA evidence was available in 97% of SANE only cases and in 37% of SANE/SART cases. On the other hand, DNA was available in only 10 percent of non-SANE/SART cases.

Related to evidence collection is the documentation of injury to the victim. Injuries were documented in 37% of SANE/SART cases and only 20% of non-

SANE/SART cases. As with the findings about amount of evidence, this finding is statistically significant at the .000 level.

Another presumed benefit of a SANE/SART intervention is that it will increase the likelihood that the victim will cooperate and participate in the justice process. For the purposes of this study, participation was operationalized as making formal statements to law enforcement, testifying and/or appearing at court hearings, providing a victim impact statement, and cooperating with the prosecution. In fact, participation in the process is highest among cases in which there was a SANE/SART intervention (1.3 on a scale of 0 to 4), followed by non-SANE/SART cases (0.9). Of note is the fact that SANE only cases yielded the lowest average participation ($p \leq .01$).

The types of services that sexual assault victims receive can be important in avoiding “re-victimization” and encouraging continued involvement in the justice process. APRI and BC staff abstracted information from the case files on the various services offered to victims. These services included:

- Transportation to the emergency room
- General transportation (e.g., to home, the police station, etc.)
- Shelter provided
- Rape crisis counseling
- Law enforcement/crisis intervention
- Clothing
- Making phone calls for victims
- Provision of information, flyers, and/or phone numbers
- Referral to SANE/SART

Overall, very few services were offered to victims on average. Statistically, SANE and SANE/SART cases were offered more services than non-SANE cases (an average of 1 service for SANE/SART cases and 0.7 services for SANE only cases, compared with 0.5 services for non-SANE cases, $p \leq .000$).

In terms of characteristics about the cases, the two most relevant variables based on the literature were use of a weapon and the relationship between the victim and the offender. Very few cases in the study sample involved the use of a weapon (only 17%, n=74) and thus the study team was unable to conduct any analysis by type of case (e.g., SANE, SANE/SART, non-SANE).

Descriptive analysis of the victim/offender relationship shows that in the largest percentage of cases the perpetrator was a friend or an acquaintance as shown in Exhibit 3 below. The next largest category was a stranger relationship at 32%.

Exhibit 3: Victim/Offender Relationship

Relationship	Frequency	Percent
Intimate part/Cohabitant/Married/Dating	75	14.20%
Child in common/Formerly married/Former intimate partner	50	9.40%
Relative/Step-parent/Caregiver	14	2.60%
Friend/Acquaintance	203	38.30%
Coworker/Employer	17	3.20%
Stranger	171	32.30%
Total	530	100.00%

For the purpose of the inferential analyses, the victim/offender relationship was recoded into a dichotomous variable of stranger/non-stranger.

Do SANE/SART Interventions Increase The Likelihood of Suspect Identification/Arrest?

Overall in the sample, 208 of the 530 cases resulted in an arrest of a suspect (39%). There were an additional 71 cases in which a suspect was identified and issued a summons to appear in court or was indicted but not arrested. No arrest was made in 251 cases (47%). In nearly a third of these cases (n=81), arrest was not made because a suspect was never identified.

When comparing the difference between SANE/SART cases and non-SANE/SART cases, the analysis showed an apparent relationship between the conduct of a SANE exam or the existence of a combined SANE/SART intervention and the likelihood that a suspect would be arrested. A case in which a SANE exam occurred is 1.5 times more likely to result in the arrest of a suspect than a case in which no SANE exam occurred ($p \leq .05$). However, these results only account for 1 percent of the variance. Cases in which there is a combined SANE/SART intervention are 3 times more likely to be arrested as compared with non-SANE/SART cases ($p \leq .000$).

Logistic regression was used to control for several variables to further determine the likelihood of arrest. Variables included in the equation included:

- Services offered to the victim
- Number of services offered
- Time between incident and report
- Level of victim participation in the criminal justice system
- Victim and offender race
- Victim/offender relationship (e.g., stranger/non-stranger)
- Use of force
- Use of weapon

Overall the model explains 30 percent of the variation in likelihood of arrest. However, a SANE/SART intervention is not the strongest predictor of arrest. In fact, when controlling for other variables, a case involving a SANE/SART intervention (Sane2Category) is only 1.7 times more likely to result in arrest than a case in which there was no intervention ($p \leq .05$). As shown in Exhibit 4, victim/offender relationship, previous arrest of the suspect, and level of victim participation in the process have the greatest effect on the likelihood of arrest ($p \leq .000$). The use of force is also statistically significant in the model ($p \leq .01$).

Exhibit 4: Predictors of Arrest

Dependent Variable: Arrest		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1	Services offered to victim	0.015	0.418	0.001	1	0.971	1.016
Step 1	Number of services received by victim	0.340	0.245	1.931	1	0.165	1.405
Step 1	Time between incident and report	0.000	0.001	0.005	1	0.946	1.000
Step 1	Victim level of participation in criminal proceedings	-0.449	0.125	12.862	1	0.000	0.638
Step 2	Victim race (White)			4.763	3	.190	
Step 2	Victim race (Hispanic)	.462	.601	.591	1	.442	1.587
Step 2	Victim race (Black)	-.607	.360	2.840	1	.092	.545
Step 2	Victim race (Other)	-2.159	1.943	1.235	1	.266	.115
Step 2	Suspect race (White)			1.759	3	6.24	
Step 2	Suspect race (Hispanic)	-.192	.504	.145	1	.703	.825
Step 2	Suspect race (Black)	.276	.326	.718	1	.397	1.318
Step 2	Suspect race (Other)	-.352	.649	.294	1	.587	.703
Step 3	Offender/victim relationship	1.318	0.353	13.962	1	0.000	3.735
Step 4	Use of force	0.776	0.310	6.246	1	0.012	2.172
Step 4	Weapon	0.656	0.412	2.540	1	0.111	1.928
Step 5	Sane2Category (a)	0.552	0.280	3.880	1	0.049	1.737
	Constant	-1.544	0.572	7.273	1	0.007	0.214

a: Sane2Category: SANE only & SANE/SART combined =1; non-SANE = 0.

Do SANE/SART Interventions Increase the Likelihood that Charges Will Be Filed in Sexual Assault Cases?

Overall, a total of 62 cases of the 208 in which an arrest was made (12%) were not charged either because the case was administratively dismissed by law enforcement (6.5%), the prosecutor decided not to file charges (40.3%), or the Grand Jury returned a no true bill (53.2%). Nearly 60% of these cases were non-SANE/SART cases. In addition, there were a total of 251 cases in which no arrest was made and no charges were filed. Of these 251 cases, the victim refused to move forward with charges in 135 of the

cases (54%). In 81 of the cases (32%), a suspect was never identified, and thus no arrest was made or charges filed.

Using the same control variables as in the previous model, logistic regression was run to determine if SANE/SART interventions increase the likelihood that charges will be filed. As shown in Exhibit 5, SANE/SART cases (Sane3Category(1)) are 3.3 times more likely to result in the filing of charges than cases without a SANE/SART intervention (Sane3Category) ($p \leq .000$); SANE-only cases (Sane3Category(2)) are 2.7 times more likely to result in charges being filed. The level of victim participation ($p \leq .000$) and use of force ($p \leq .05$) were also significant factors in the model.

Exhibit 5: Predictors of Charges Being Filed

Dependent Variable: Charge		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1	Services offered to victim	-.074	.423	.031	1	.861	.928
Step 1	Number of services received by victim	-.459	.262	3.056	1	.080	.632
Step 1	Time between incident and report	-.003	.002	2.046	1	.153	.997
Step 1	Victim level of participation in criminal proceedings	.589	.118	24.919	1	.000	1.802
Step 2	Victim race (White)			.838	3	.840	
Step 2	Victim race (Hispanic)	.210	.534	.155	1	.694	1.234
Step 2	Victim race (Black)	.182	.318	.325	1	.568	1.199
Step 2	Victim race (Other)	.697	.943	.546	1	.460	2.007
Step 2	Suspect race (White)			5.014	3	.171	
Step 2	Suspect race (Hispanic)	.606	.435	1.941	1	.164	1.833
Step 2	Suspect race (Black)	.225	.302	.557	1	.456	1.253
Step 2	Suspect race (Other)	-.797	.606	1.732	1	.188	.451
Step 3	Offender/victim relationship	.188	.292	.415	1	.519	1.207
Step 4	Use of force	.670	.287	5.444	1	.020	1.954
Step 4	Weapon	.600	.352	2.911	1	.088	1.823
Step 5	Sane3Category (a)			17.977	2	.000	
Step 5	Sane3Category(1)(a)	1.206	.314	14.713	1	.000	3.339
Step 5	Sane3Category(2)(a)	.976	.338	8.344	1	.004	2.654
	Constant	-2.465	.435	32.081	1	.000	.085

a: Sane3Category: Non-Sane=0, SANE/SART combined =1; SANE only = 2.

Based on the earlier descriptive analyses of SANE/SART interventions, it would appear that the two most defining elements of a SANE/SART intervention (on average more evidence collected and significantly more DNA evidence collected) are the driving force behind the relationship between a SANE/SART intervention and the likelihood of charges being filed. In fact, when DNA evidence and amount of evidence are added into the model, it mediates the relationship between SANE/SART interventions and charges being filed. This is likely due to problems with multicollinearity between the amount of evidence collected and the SANE/SART status.

Do SANE/SART Interventions Increase the Likelihood of Guilty Pleas and Convictions?

Among charged cases, the majority were convicted (68% compared to 32%). As shown in Exhibit 6 below, almost half of the cases (47.7%) were disposed via guilty plea as compared with 33% of the cases that were disposed at trial. Cases were most frequently pled to a lesser charge.

Exhibit 6: Disposition of Charged Cases

Disposition	Number of Cases	Percentage of Cases
Dismissed	28	18.8%
Plea (lesser charge)	48	32.2%
Plea (existing/most serious charge)	23	15.5%
Hung jury/retrial	2	1.3%
Not guilty at trial	14	9.4%
Guilty (lesser charge)	11	7.4%
Guilty (existing/most serious charge)	23	15.4%

Because of low cell counts, analyses examining whether or not conviction was to a lesser or existing charge were not reliable, particularly when the sample is partitioned into SANE/non-SANE cases. However, a comparison of convictions (using a dichotomous variable of convicted/not convicted) in SANE only, SANE/SART, and non-SANE/SART cases revealed some statistically significant differences.

Cases involving a SANE/SART intervention are 3.5 times more likely to result in a conviction than non-SANE/SART cases ($p \leq .05$). This finding, before controlling for other intervening variables, accounts for 12 percent of the variance in likelihood of conviction. The findings with regard to a SANE only case are not as reliable. The analysis showed that there appears to be trend compared with non-SANE cases (i.e., conviction may be more likely in a SANE case); however, the finding was not statistically significant. Moreover, low cell counts make this finding unreliable.

When control variables are added to the model, the significance of a SANE/SART intervention on the likelihood of conviction is negated, as shown in Exhibit 7 below. Level of victim participation and the victim/offender relationship have the most bearing on the likelihood of conviction ($p \leq .05$). The combined SANE/SART intervention (Sane3Category(1)) increases the likelihood of conviction by 2.9 times but is not quite statistically significant. However, the amount of explained variance increases from 14% to 23% when the SANE/SART intervention is added to the model. SANE-only cases (Sane3Category(2)) are not statistically significant in the model.

Exhibit 7: Predictors of Conviction

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1	Time between incident and report	-.008	.008	.963	1	.326	.992
Step 2	Victim level of participation in criminal proceedings	.512	.241	4.518	1	.034	1.669
Step 3	Offender/victim relationship	-1.319	.670	3.880	1	.049	.267
Step 4	Use of force	-.112	.663	.029	1	.866	.894
Step 4	Weapon	1.010	.628	2.588	1	.108	2.745
Step 5	Sane3Category			9.335	2	.009	
Step 5	Sane3Category(1)	1.064	.552	3.713	1	.054	2.899
Step 5	Sane3Category(2)	-1.136	.686	2.748	1	.097	.321
	Constant	.397	.977	.165	1	.685	1.487

a Variable(s) entered on step 1: Sane3Category.

What Impact Do SANE/SART Cases Have on the Penalty and the Length of Sentence in Convicted Cases?

Sentencing information was available for only 73 of the 95 cases that were convicted. The majority of convictions resulted in a sentence of incarceration (43.8%, n=35) followed by a combination of incarceration and probation (33.8%, n=27). Only 17.5 percent of convicted cases (n=14) received only probation. The remaining cases either received a suspended sentence (1 case) or some other type of alternative to incarceration (3 cases).

On average, convicted sex offenders were sentenced to 85 months (slightly more than 7 years) of either probation, probation/incarceration, or incarceration. Sentences ranged from 6 months to 412 months. Exhibit 8 shows the average sentence length by type of sentence.

Exhibit 8: Average Sentence Length (in months)

Sentence	Mean (in months)	Minimum	Maximum
Suspended sentence	22	22	22
Probation	22.9	12	36
Incarceration/probation	56.3	6	140
Incarceration	134.9	6	360
Other	37	37	37
Total	84.55	6	360

A comparative analysis of the penalties in SANE/SART cases and in non-SANE/SART cases revealed no statistically significant differences. In fact, none of the variables in the model influenced the type of sentence or length of sentence. However, it should be noted that there was a significant amount of missing data with regard to sentence and length of penalty in the data set. These analyses were run on only 73 cases.

CHAPTER 4 CONCLUSIONS

Anecdotally, members of the forensic nursing community, victim advocates, law enforcement, prosecutors, and even policymakers believe that the SANE/SART intervention has a significant impact on both the survivors of sexual assault in terms of their recovery and experience with the justice system, the collection of evidence, and the criminal justice system's ability to prosecute sexual assault cases. Overall, the APRI/BC study found mixed results with regard to the efficacy of the SANE/SART intervention as a tool in the criminal justice system. Nonetheless, there are a number of findings that deserve discussion.

First, with regard to the intervention itself—the SANE exam or SART response, the data clearly demonstrate that SANE/SART interventions result in cases that are significantly and statistically different from non-SANE/SART cases on several different fronts. In particular, the protocols followed by SANE and SART personnel yield more evidence on average than cases in which no SANE/SART intervention occurs. More importantly, SANE/SART cases are much more likely to have DNA evidence than non-SANE/SART cases. This finding is further supported by the fact that the non-SANE/SART cases in the sample included cases in which rape kits and other evidence were collected by non-SANE/SART personnel.

In addition, the amount of time that elapses between the incident and the report is much lower for victims who are seen by a SANE or a SART than for those who are not. As a result, the likelihood that evidence is available and preserved is much greater. Moreover, victims are offered more services in SANE/SART cases than in non-

SANE/SART cases. One might expect that because of the short amount of time that elapses between the incident and the report and the offer of more services would result in an increase in victim participation in the criminal justice process—another presumed benefit of SANE/SART interventions. While victims in combined SANE/SART cases do receive more services on average than in non-SANE/SART cases, the difference is small, and it does not appear to have a marked effect on victim participation in the process. In fact, SANE only cases yield the lowest levels of victim participation in this study.

This finding has important implications for SANE-only programs and raises a number of additional questions for future study. Specifically, do victims participate less in the system when a SANE exam yields a useful evidence for prosecution? Do victims feel that by having a SANE exam, no additional participation is needed? These are important questions but fall outside the scope of the current study. Additionally, as noted earlier, many questions about the victim's motivation for having a SANE exam exist. Answers to these questions and others related to victim motivation may yield useful information about why SANE-only cases have the lowest levels of victim participation in the justice system.

Second, the SANE/SART intervention has the greatest impact on charging decisions in adult female sexual assault cases and is a contributing factor in the likelihood that suspects will be identified and arrested. This is a particularly important finding in that it parallels findings from earlier studies and provides the first comparative evidence supporting the hypothesis that SANE/SART interventions are a valuable tool in the criminal justice system and for prosecutors in particular.

As noted earlier, the case is less likely to result in an arrest of a suspect if the victim knows her assailant, if the suspect has a prior criminal history, and/or the more a victim participates in the system. These three factors have a greater impact on the likelihood of arrest than having a SANE/SART intervention alone. However, having a SANE/SART intervention does further increase the likelihood of arrest by 1.7 times and is statistically significant. Initially, this finding would seem to indicate that the SANE/SART intervention has limited value to law enforcement in making an arrest. However, it is possible that the majority of suspects, who are arrested, are done so at the scene and thus the arrest occurs before a SANE/SART response. Additional data would be needed to examine the likelihood of arrest after the conduct of a SANE/SART response, as the current data set only examined arrest as a dichotomous variable and did not document the amount of time that elapsed between the reported incident and arrest.

Third, for charging decisions, there is a direct association between a SANE/SART response and the likelihood that charges will be filed by the prosecutor (either by direct file or through Grand Jury indictment). In fact, a SANE/SART intervention is the greatest predictor that charges will be filed—3.3 times more likely and 2.7 times more likely in SANE-only cases. Because of the amount of evidence collected and the availability of DNA are highly correlated with a SANE/SART intervention, these appear to be the defining characteristics that predict the filing of charges. In addition, the more the victim participated in the process by giving statements, cooperating with prosecutors, attending and providing testimony at hearings, and providing impact statements, the more likely the case was to result in a conviction. Likewise, use of force was a predictor of charges being filed.

Fourth, the study sought to test the hypothesis that SANE/SART interventions increase the likelihood of conviction, and the analyses show mixed results. Basic analysis, without controlling for the influence of various factors, show that SANE/SART cases are 3.5 times more likely to result in a conviction than non-SANE/SART cases. However, the impact of a SANE/SART intervention on the likelihood of conviction is negated when other variables are included in the model.

In general, the victim's participation in the process and the relationship between the victim and the offender seem to have a more direct association with conviction. Unfortunately, the number of cases available for analysis of convictions was 105. As such, it was impossible to explore these results further to determine if there is a relationship between different types of convictions (i.e., guilty pleas to lesser or existing charges and trial verdicts). In addition, the current study did not take into account whether or not SANEs provided expert testimony in cases, which may further explain or strengthen the findings with regard to conviction. Additional research on these topics is warranted.

Finally, the length of sentence is not impacted by a SANE/SART intervention or any other of the variables in the study. This finding, however, should not be considered conclusive as there was significant missing data in the dataset with regard to length of sentence. As the study team found, prosecutors' files do not always have the actual sentencing information as part of the formal record. Future study on this topic should include data gathered from official court records to supplement what information is available in prosecutors' offices.

Overall, the findings are quite positive with regard to the efficacy of SANE/SART interventions and provide the first comparative evidence of the impact of SANE/SART interventions on adult female sexual assault case outcomes. The findings should be interpreted with care as some of the analyses were run with relatively small sample sizes (as noted in the report) and for this reason should not be generalized to the larger population. Nonetheless, it is clear that there are direct associations between SANE/SART interventions and the likelihood of arrest, charges being filed, and conviction. As described earlier, a number of questions arise from the study findings that warrant more attention in the research field particularly with regard to victim motivation for seeking out a SANE/SART intervention, the inter-relationship between the amount of evidence collected and SANE/SART cases, and factors influencing the likelihood of conviction and the length of penalty.

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APPENDIX A
Date Collection Instruments

SANE-SART Incident Form

*Case Identification Number <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> (*i.e., Complaint Number, Incident Number, Police Report Number; etc.) Jurisdiction: _____ (County) Police Department: _____ (Initial response)	<input type="radio"/> SANE Only <input type="radio"/> SANE-SART <input type="radio"/> Non SANE-SART
--	---

Incident Information

1. Date of incident? / / 1a. Date of report? / /

2. Time of incident? : am pm to : am pm

3. Location of incident? (Fill in all that apply)

- victim's home outside
- private residence place of employment
- vehicle dorm room
- hotel room institutional setting
- parking lot other _____
- bar/restaurant

4. Time between incident and report?

minutes hours days months

5. Who initially contacted the police?

- (Fill in all that apply) victim witness suspect
- neighbor friend/acquaintance relative
 - child medical professional coworker
 - rape crisis caretaker/caregiver no contact with PD
 - anonymous tip other _____

6. Type of force used against victim? (Fill in all that apply)

- threat of force kicking
- punching/hitting/slapping drugs/alcohol
- grabbing/pulling/dragging other _____
- pushing/shoving/throwing no force indicated

6a. Weapon used? yes no

6b. If yes, what type of weapon?

- gun
- knife
- other _____

6c. Were physical restraints used? yes no

6d. If yes, what type of restraint?

7. Witness present? (Fill in all that apply)

- neighbor relative
- friend/acquaintance coworker
- child not applicable
- passerby other _____

8. What was the principle sex charge?

9. Other arrest charges?

61062



Victim Information

1. Victim/offender relationship? *(Fill in all that apply)*

- intimate partner stranger
- cohabitant relative
- married friend/acquaintance
- child in common coworker/employer
- formerly married/separated step-parent/step-grandparent
- dating caregiver/caretaker
- former intimate partner other _____

2. Race of the victim? *(Fill in all that apply)*

- white asian/pacific islander hispanic
- african american native american other _____

3. Age of the victim? unknown

4. Services given by the police? yes no unknown

4a. If yes, what services were provided? *(Fill in all that apply)*

- transportation to the emergency room provide clothing for victim
- transportation in general phone calls on behalf of victim
- shelter information/flyers/phone numbers
- referral to rape crisis referral to SANE-SART
- law enforcement/crisis intervention other _____

5. Victim demeanor at time of report? *(Fill in all that apply)*

- tearful/crying withdrawn/flat
- angry hysterical
- shaking/trembling afraid
- nervous other _____
- upset information not provided

6. Were injuries documented by the police? yes no

6a. What types of injuries did the victim sustain? *(Fill in all that apply)*

- bruising burns broken bones other _____
- cuts/abrasions sprains hair pulled out

61062



6b. Were pictures taken of injuries? yes no unknown

6c. What type of physical evidence was collected? (Fill in all that apply)

- videotape bodily fluid
 pictures nail scrapings
 clothing rape kit
 fabric/fibers other _____
 hair samples none collected

6d. Was DNA evidence obtained? yes no unknown

Suspect Information

1. Race of suspect? (Fill in all that apply)

- white asian/pacific islander hispanic
 african american native american other _____

2. Age of suspect? unknown

3. Did suspect claim sexual act was consensual? yes no unknown

3a. Was suspect arrested? yes no unknown

3b. If suspect was granted exceptional clearance, state the reason: _____

4. Previous sexual assault incidents with the same victim and defendant?

- yes/documented alleged/not documented no

4a. If yes, what was the result of the incident? (Fill in all that apply)

- arrest prosecution conviction under investigation information not available

4b. Previous domestic violence incidents with the same victim and defendant?

- yes/documented alleged/not documented no

4c. If yes, what was the result of the incident?

- arrest prosecution conviction under investigation information not available

61062



5. Number of arrests for felony offenses, including sexual assault and domestic violence?

5a. Number of arrests for misdemeanors?

5b. Number of arrests, class unknown?

5c. Number of arrests for sexual assaults?

5d. Number of arrests for domestic violence?

5e. Was prior arrest history available? yes no

6. Number of convictions for felony offenses?

6a. Number of convictions for misdemeanors?

6b. Number of convictions, class unknown?

6c. Number of convictions for sexual assaults?

6d. Number of convictions for domestic violence?

6e. Was prior conviction information available? yes no

61062



Case Abstraction Form

<p>*Case Identification Number <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>(*i.e., Complaint number, Incident Number, Police Report Number, etc.)</p> <p>Jurisdiction: _____ (County)</p> <p>Police Department: _____ (Initial response)</p>	<p><input type="radio"/> SANE Only</p> <p><input type="radio"/> SANE-SART</p> <p><input type="radio"/> Non SANE-SART</p> <p>Date of Incident: <input type="text"/> / <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p style="text-align: center; font-size: small;">month/day/year</p>
---	---

Victim Participation

1. Was an initial statement made by the victim to the police? yes no
- 1a. Was a formal statement made by the victim to the police? yes no
2. Did the victim testify... no proceedings requiring testimony refused to testify at grand jury
 in court hearing unknown other _____
3. Did the victim provide an impact statement? yes no unknown
4. Did the victim appear for hearings/was she present in court? yes no unknown
5. Did the victim provide restitution information? yes no unknown
6. Was the victim in contact with the prosecutor's staff? yes no unknown
7. Did victim refuse to move forward with charges? yes no unknown
8. Other victim participation? yes no Specify: _____
9. Was a protection from abuse order issued against the suspect prior to the incident? yes no unknown
10. Was DNA evidence available? yes no unknown

Suspect Information - Arrest and Charges

<ol style="list-style-type: none"> 1. Was the suspect? (Fill in all that apply) <input type="radio"/> held in jail <input type="radio"/> arrested/issued an arrest warrant <input type="radio"/> issued a true bill/indictment <input type="radio"/> issued a bench warrant <input type="radio"/> issued a summons to appear/subpoena 	<ol style="list-style-type: none"> 2. Charges at arrest: _____ (Include code numbers) _____ _____ Charges put forth by prosecutor/Grand Jury: _____ _____ _____ Charges at disposition: _____ _____ _____
---	--



2a. Was the principal sex charge at arrest or summons _____ the principal sex charge filed or presented to Grand Jury?

- greater than same as less than not applicable

2b. Was the principal sex charge filed or returned in an indictment _____ the principal sex charge at disposition?

- greater than same as less than not applicable

3. Case outcome: *(Choose only one response)*

- | | |
|---|---|
| <input type="radio"/> administrative dismissal by law enforcement | <input type="radio"/> hung jury/no retrial |
| <input type="radio"/> no charges filed | <input type="radio"/> hung jury/retrial |
| <input type="radio"/> dismissed | <input type="radio"/> not guilty @ trial |
| <input type="radio"/> pre-trial judicial dismissal | <input type="radio"/> guilty of lesser charge @ trial |
| <input type="radio"/> plea to lesser charge | <input type="radio"/> guilty of most serious charge @ trial |
| <input type="radio"/> plea to existing charge | <input type="radio"/> referred to another jurisdiction |
| <input type="radio"/> plea to most serious charge | <input type="radio"/> other _____ |
| <input type="radio"/> no true bill | |

3a. Was the case appealed?

- yes, appeal affirmed yes, judgment overturned yes, outcome unknown no

3b. If yes, reason for the appeal? _____

4. Penalty: *(Choose only one response)*

- suspended sentence probation incarceration and probation incarceration other _____

5. Length of penalty months or months to months

12252



Testing the Efficacy of SANE-SART Programs
SANE/SART DATA COLLECTION INSTRUMENT

*Case Identification Number: -
 (*i.e., Complaint Number; Arrest Record Number; Incident Number; Police Report Number; etc.)

- SANE Only
- SANE-SART
- Non SANE-SART

Jurisdiction: _____

Date of Incident: - -
 month/day/year

Police Department: _____

Patient/Victim Information:

1. DOB of victim: / /
month day year
2. Race of victim: White Native American
 Hispanic Other: _____
 African American Not Documented
 Asian/Pacific Islander
3. Was an interpreter used? Yes No Not Needed
4. Fill in all that apply: SANE exam
 No SANE exam
 Rape Crisis Response (check if yes, blank if no)
 Do not know if Rape Crisis responded
 DNA Evidence Collected
 Other: _____
5. Where was the exam conducted?
 Hospital Emergency Department
 Hospital Clinic
 Intensive Care Unit
 OBGYN
 Other: _____
6. Name of the facility where the exam was performed? _____
7. Date of Assault: / /
month day year
8. Time of Assault: : AM
 PM
9. Date of exam: / /
month day year
10. Time of exam: : AM
 PM
11. Reported assault on day of exam? Yes No
12. Reported assault on: Day of Incident
 Day after Incident
 2 Days after Incident
 3 Days after Incident
 4 Days after Incident
 5 Days after Incident
 Longer than 5 days after incident
13. Reason(s) given for not reporting immediately?
 Yes
 No
 Information not available

46019



Patient/Victim Information (continued):	
14. Victim demeanor at the time of the exam? <input type="radio"/> Tearful/Crying <input type="radio"/> Afraid <input type="radio"/> Angry <input type="radio"/> Nervous <input type="radio"/> Hysterical <input type="radio"/> Upset <input type="radio"/> Shaking/Trembling <input type="radio"/> Other: _____ <input type="radio"/> Withdrawn/Flat _____	15. Where did the assault occur? <input type="radio"/> House/Apartment <input type="radio"/> Hotel/motel <input type="radio"/> Outdoors <input type="radio"/> Unsure <input type="radio"/> Dormitory <input type="radio"/> Other: _____
16. Number of Assailants? <input type="radio"/> One <input type="radio"/> Two <input type="radio"/> Three <input type="radio"/> Four <input type="radio"/> Five or more	

Assailant Information:

1. Assailant relationship to patient/victim?

- Spouse/Live-in Partner Acquaintance/Friend
- Ex-spouse/Ex-live-in Partner Relative
- Stranger Child in common
- Boyfriend Co-worker
- Date Other: _____

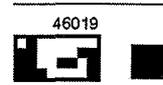
2. DOB of assailant? / /
month day year

3. Race of assailant?

- White Native American
- Hispanic Other: _____
- African American Not Documented
- Asian/Pacific Islander

4. Was there penetration, however slight of...

- ...Vagina?: **Yes, by:**
- No Unsure Attempt Penis Finger Tongue Object/Other: _____
- ...Anus?: **Yes, by:**
- No Unsure Attempt Penis Finger Tongue Object/Other: _____
- ...Mouth?: **Yes, by:**
- No Unsure Attempt Penis Finger Tongue Object/Other: _____



Assailant Information (continued):

5. During the assault, were acts performed by the patient/victim upon the assailant?
 Yes No Unsure
6. Did ejaculation occur?
 Yes No Unsure
7. Was a condom used?
 Yes No Unsure
8. Did the assailant use any substance as lubrication? (saliva is considered lubrication)
 Yes No Unsure
9. Did the assailant kiss, lick, spit, or make other oral contact with the patient/victim?
 Yes No Unsure
10. Did the assailant touch the patient/victim with bare hands or fingers?
 Yes No Unsure
11. Any injuries to the patient/victim?
 Yes No Unsure
12. Were photographs taken of the victim's injuries?
 Yes No Unsure
13. Who took photographs of the victim's injuries? *(leave blank if no photos taken)*
 Police Medical Professional Other: _____
14. Any injuries to assailant?
 Yes No Unsure
15. Use of weapon: Yes No Unsure
- 15a. If yes, what was the weapon (gun, knife, blunt object, etc.)? _____
16. Threats? Yes No Unsure
- 16a. If yes, were threats: Physical Verbal Both Other: _____
17. Choking? Yes No Unsure
18. Bites? Yes No Unsure
19. Restraints? Yes No Unsure
- 19a. If yes, what types of restraints were used? _____
20. Any other information not otherwise provided:

46019



Case Status at time of exam:

1. Evidence Collection Kit completed: Yes No Unsure
2. Toxicology Kit used: Yes No Unsure
3. Restraining Order in place before assault? Yes No Unsure
4. Restraining Order in place after assault? Yes No Unsure
5. Elder Abuse Report? Yes No Unsure
6. Disabled Person Report? Yes No Unsure
7. Weapon Report? Yes No Unsure

46019



APPENDIX B
Study Sites Demographic Information

1997-2001 National Numbers of Violent Crimes and Forcible Rapes Compared to State Study Sites*

Study Years	<i>National</i>		<i>Kansas**</i>		<i>Massachusetts</i>		<i>New Jersey</i>	
	Violent Crime	Forcible Rape	Violent Crime	Forcible Rape	Violent Crime	Forcible Rape	Violent Crime	Forcible Rape
1997	1,634,770	96,120	11,151	1,179	39,411	1,647	39,673	1,729
1998	1,533,887	93,144	10,972	1,128	38,192	1,687	35,720	1,623
1999	1,426,044	89,411	10,159	1,065	34,023	1,663	33,540	1,409
2000	1,425,486	90,178	10,470	1,022	30,230	1,696	32,298	1,357
2001	1,436,611	90,491	10,909	945	30,587	1,856	33,094	1,278

* Data Sources: Uniform Crime Reports as prepared by the National Archives of Criminal Justice Data.

** Note: Since complete data were not available for 1993-2000, Kansas's crime counts for those years are estimated.

National Annual Income Compared to Study Sites by State*

	<i>National</i>		<i>Kansas</i>		<i>Massachusetts</i>		<i>New Jersey</i>	
	Total # of Households 105,539,122		Total # of Households 1,038,940		Total # of Households 2,444,588		Total # of Households 3,065,774	
Income in 1999 (Household)	Number of People	Percent	Number of People	Percent	Number of People	Percent	Number of People	Percent
Less than \$10,000	10,067,027	9.5	88,926	8.6%	214,700	8.8%	213,939	7.0%
\$10,000 to \$14,999	6,657,228	6.3	66,264	6.4%	137,187	5.6%	143,783	4.7%
\$15,000 to 24,999	13,536,965	12.8	143,138	13.8%	248,208	10.2%	288,606	9.4%
\$25,000 to \$34,999	13,519,242	12.8	145,431	14.0%	253,125	10.4%	305,449	10.0%
\$35,000 to \$49,999	17,446,272	16.5	187,850	18.1%	355,195	14.5%	437,373	14.3%
\$50,000 to \$74,999	20,540,604	19.5	211,014	20.3%	490,998	20.1%	608,244	19.8%
\$75,000 to \$99,999	10,799,245	10.2	99,933	9.6%	312,741	12.8%	413,928	13.5%
\$100,000 to \$149,999	8,147,826	7.7	62,926	6.1%	267,300	10.9%	391,123	12.8%
\$150,000 to \$199,999	2,322,038	2.2	16,106	1.6%	80,640	3.3%	130,492	4.3%
\$200,000 or more	2,502,675	2.4	17,352	1.7%	84,494	3.5%	132,837	4.3%
Median household Income (dollars)	41,994	-	\$40,624	-	\$50,502	-	\$55,146	-

*Source: U.S. Census Bureau, Census 2000

National Race Distribution Compared to County Study Sites*

	<i>National</i>	<i>Sedgwick County Kansas</i>	<i>Suffolk County Massachusetts</i>	<i>Monmouth County New Jersey</i>
Population of Residents Reporting One Race	Total Population 281,421,906**	Total Population 452,869**	Total Population 689,807**	Total Population 615,301**
White alone	211,460,626	359,489	398,442	519,261
Black or African American	34,658,190	41,367	153,418	49,609
American Indian and Alaska Native alone	2,475,956	5,041	2,689	879
Asian alone	10,242,998	15,137	48,287	24,403
Native Hawaiian and other Pacific Islander alone	398,835	265	441	153
Another Race alone	15,359,073	18,867	56,342	10,685

*Source: U.S. Census Bureau, Census 2000

**Note: This also includes the total population of residents that reported a combination of two or more races.