

# Emergency Contraception Administration, Toxicology Kit Use, and Postassault Reporting: A Comparison of Sexual Assault Nurse Examiner (SANE) and Non-SANE Medical Providers

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## ABSTRACT

Sexual assault nurse examiners (SANEs) are specially trained to meet the postassault medical forensic needs of sexual assault patients. However, there remains a dearth of literature comparing directly postassault service provision and action in cases treated by SANEs as compared to non-SANE medical providers. In this study, we compare rates of emergency contraception administration, toxicology kit use, reports to police at the time of examination, and mandatory child abuse reports among  $n = 3,969$  sexual assault cases treated by SANEs and non-SANE medical providers. Compared to cases treated by non-SANE medical providers, cases treated by SANEs were significantly more likely to have emergency contraception administered, less likely to have a toxicology kit collected, less likely to have a police report filed at the time of examination, and more likely to have a mandatory child abuse report filed. Observed patterns suggest that non-SANE medical providers may find it difficult to balance the needs of the criminal justice system with those of their patients, whereas SANEs provide a tailored, comprehensive first response. We discuss the importance of consistent, accurate documentation and clearly defined protocols in the medical forensic response to sexual assault patients.

## KEY WORDS:

Child abuse; emergency contraception; mandatory reporting; police report; sexual assault; sexual assault forensic examiner; sexual assault nurse examiner; toxicology kit

Sexual assault nurse examiners (SANEs) are specially trained and certified to provide expert, comprehensive, first-response medical forensic care to patients seeking

services after a sexual assault. First developed in the 1970s, SANE programs were intended to provide an improved response to sexual assault patients to overcome the many inadequacies in a typical emergency department response (see Office for Victims of Crime, 2016). Since that time, SANE programs have proliferated; the International Association of Forensic Nurses's (IAFN, 2020) directory of SANE programs includes nearly 1,000 listings for SANE programs in the United States. Prior research has demonstrated the positive impact of SANEs on patient, medical, forensic, legal, and community outcomes (see Shaw et al., 2017). Yet, there remains a dearth of literature that has compared directly SANE and non-SANE medical forensic care service provision and immediate postassault action. In this study, we relied on state records corresponding to collected adult

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sexual assault kits to compare directly how often emergency contraception is administered, toxicology kits are collected, police reports are filed, and child abuse reports are filed for patients treated by SANEs versus non-SANE medical providers. Before presenting the current study, we briefly review what is currently known about postassault medical forensic service provision and action among SANEs as compared to non-SANE medical providers.

Only a few studies have examined postassault medical forensic care service provision and action provided by SANEs in the United States, and only one of these has compared directly SANEs and non-SANE medical providers. The first study to examine SANE medical forensic care service provision and action was conducted by Ciancone and colleagues in the late 1990s (Ciancone et al., 2000). They invited the 92 known SANE programs in the United States that served adult and adolescent patients to complete a confidential survey. Surveys were mailed to contacts for each program and included 35 items that asked for information on nursing staff demographics, qualifications, and training; the organizational setting in which services were provided; patient demographics and volume; examination facilities and procedures; and legal issues and outcomes. Of the 62 programs that responded, almost all reported that they always offered pregnancy testing (97%), emergency contraception (97%), and prophylaxis for sexually transmitted infections (STIs; 90%). The majority of programs reported that toxicology and ethanol screening were selectively offered (75% and 65%, respectively), with about half of the programs reporting that human immunodeficiency virus (HIV) testing was never offered (54%). Almost half of the programs reported that STI testing was always offered (43%), whereas the other half reported that STI testing was selectively (37%) or never offered (20%). These relatively low rates of HIV and STI testing may be a result of concerns that such testing results could be used against patients if the case were to go forward in the criminal justice system. HIV and STI testing at the time of examination would not likely reveal infection or disease contracted during the assault, but instead preexisting infection and disease. Despite rape shield laws that limit the introduction of information about victim's prior sexual conduct or behavior at trial (see Office on Violence Against Women, 2013), many programs may have advised against routine testing at the time.

In the early 2000s, Campbell and colleagues substantiated these rates with a larger, national random sample (Campbell et al., 2006). After identifying 288 hospital- and community-based SANE programs, a random sample of 144 programs was invited to participate in their study. Some of these programs were found to not exist, others only served children, and still others declined to participate, resulting in a final sample of 110 programs. Research team members conducted telephone interviews with each program director and asked about the program's history, goals, and operations;

nursing staff training, demographics, and experiences; community relationships; examination facilities and procedures; and interactions with the criminal justice system. The nurses were asked how consistently their programs provided a set of medical and emotional care services. At least 70% of the programs reported providing the following services to every patient: forensic evidence collection, information on care of injuries; information on STIs and HIV, STI prophylaxis, information on the risk of pregnancy, pregnancy testing, information on emergency contraception, referrals to other resources in the community, and postexamination assistance (e.g., facilities for taking a shower). Like Ciancone and colleagues' earlier study, Campbell et al. (2006) found that STI and HIV testing was significantly less likely to be offered. Respondents explained that such testing was not routinely provided out of concerns the findings could "hurt [the] court case" (p. 387).

The rates of medical forensic care service provision provided by these two studies suggest that SANEs provide far more comprehensive and tailored service than what has been documented in studies of the traditional emergency department response to sexual assault patients (e.g., see Amey & Bishai, 2002). However, only one study to date has compared directly postassault medical service provision by SANEs and non-SANE medical providers. Crandall and Helitzer (2003) compared services provided to sexual assault patients treated 2 years prior to the start of a SANE program (1994–1996) to services provided in the 4 years afterward (1996–1999) in the same health center. Under SANE care, they found higher rates of pregnancy testing (88% vs. 79%), emergency contraception administration (87% vs. 66%), and STI prophylaxis (97% vs. 89%), as compared to service provision prior to the start of the SANE program. Though, it is worth noting that this particular health center had higher than typical service delivery rates, even in the absence of SANE. For example, the rate of emergency contraception administration before SANE was 66%, compared to typical emergency department administration rates ranging from 20% to 38% (see Shaw et al., 2017). Thus, it is difficult to know if these same improvements might be observed in other settings upon implementing SANE care.

The limited literature on the impact of SANE on postassault medical forensic service provision and action is likely due in part to the intensive methods required to carry out such empirical investigations. Comparing medical forensic service provision and action taken among SANEs and non-SANE medical providers requires access to records that document such service provision and action for both types of providers. Oftentimes, the only place such information is systematically recorded is in protected patient medical records. If successful in establishing the appropriate safeguards and approval to gain access to such records, the researcher would also need to identify records from both providers that are similar enough to allow for such comparisons to

be made. This may require accessing records from the same setting from before and after a SANE program was established, as done by Crandall and Helitzer (2003), or by employing methods to match cases across settings. An alternative option is to identify alternative data sets or administrative records that include information on variables related to medical forensic service provision and action. Of course, such data sets likely do not include the full array of medical services provided nor action taken. However, making use of such available data is still worthwhile, as it can build upon the existing literature. The current study contributes to this literature by providing a comparison of postassault medical forensic service provision and action among SANEs and non-SANE medical providers, specifically, differences in emergency contraception administration, use of toxicology kits, reports to police at the time of the medical forensic examination, and child abuse reports. These specific variables or outcomes were selected as they relate to the medical (i.e., emergency contraception administration) or forensic (i.e., use of toxicology kits, report to police, child abuse report) aspects of the encounter and are included in an existing state database developed and maintained by a state safety agency in Massachusetts.

## The Current Study

Massachusetts state statute requires medical providers to provide information to a state safety agency on all cases of rape and sexual assault in which the victim sought medical care, whether or not the case was reported to police (MGL c.112, § 12A1/2). Medical providers fulfill this requirement by completing an anonymous Provider Sexual Crime Reporting (PSCR) form. PSCR forms collect unidentifiable information on the patient (e.g., patient gender, race, age), assailant (e.g., number of assailants, relation to patient), and assault (e.g., weapons used, acts described by patient). After the medical provider completes the PSCR form, they fax it to a state safety agency who maintains a master database of all PSCR information received from across the Commonwealth. The PSCR form is routinely reviewed and updated, and the state safety agency has maintained this database since August 1999.

Relevant to the current study, the medical provider indicates on the PSCR form if they are a SANE or a non-SANE medical provider. The PSCR form is routinely reviewed and updated. In earlier versions of the PSCR form, the medical provider indicated only if they were a SANE or a non-SANE. In more recent versions of the PSCR form, the medical provider provides more specificity on their qualifications (e.g., if they are a SANE trained by the state department of public health or IAFN). The medical provider also provides information related to the case status at the time of examination and on specific services and actions the medical provider may or may not have taken. This includes if

emergency contraception was administered to the patient and if the provider collected a toxicology kit in cases of suspected drug-facilitated sexual assault. This also includes if the sexual assault was reported to police at the time of examination. Although it cannot be assumed that the medical provider took action to assist in filing the report, medical providers can play a role in connecting the patient with the police. Finally, the medical provider documents on the PSCR form if they made any of a set of state-mandated reports. This includes an elder abuse report, in which medical providers are to report to state elder services suspected elder abuse for patients 60 years old or older (MGL c.19A); a child abuse report, in which medical providers are to report to state child protective services suspected child abuse for patients under 18 years of age (MGL c.119, § 51A); and a disabled persons report, in which medical providers are to report suspected abuse of a person with disabilities who is between 18 and 59 years of age to the state protection agency for people with disabilities (MGL c.19C).

By using data from this existing state database, we examined if this set of postassault services and actions taken by the medical provider varied based on whether the medical provider was a SANE or a non-SANE provider. In this study, we examined only the relationship between the medical provider type (SANE vs. non-SANE) and emergency contraception administration, toxicology kit use, report to police at the time of examination, and child abuse reports. We excluded elder abuse reports and disabled persons reports from our analysis, as the number of cases with this information missing (9.8% and 14.2%, respectively) far exceeded the number of cases that had these reports completed (1.3% and 3.5%, respectively). Based on prior literature (Campbell et al., 2006; Ciancone et al., 2000; Crandall & Helitzer, 2003) and best practice recommendations (Office on Violence Against Women, 2013), we developed four hypotheses:

Hypothesis 1: There would be *higher rates* of emergency contraception administration among cases treated by SANEs as compared to non-SANE providers, as SANEs are expected to more consistently discuss the probability of pregnancy and treatment options with patients.

Hypothesis 2: There would be *lower rates* of toxicology kits used by SANEs compared to non-SANE providers, as SANEs are expected to have a better understanding of when toxicology screening is appropriate and know that routine testing is not recommended.

Hypothesis 3: There would be *lower rates* of reports to police at the time of examination among cases treated by SANEs as compared to those treated by non-SANE providers, as SANEs are expected to understand and explain to patients their rights to medical care regardless of whether they report to police, present reporting to police as one option, and support the patient's decision to file a report or not.

Hypothesis 4: There would be *higher rates* of mandatory child abuse reports to state child protective services among SANEs as compared to non-SANE medical providers, as SANEs in

the focal state understand their obligation to file a child abuse report for all minors whereas non-SANE providers may exercise greater discretion in deciding to file a report.

## Methods

### Context

The current study utilized PSCR form data from the state safety agency in Massachusetts. Massachusetts is unique in that they have a centralized, statewide SANE program managed through the state department of public health. At the time these data were collected by responding medical providers and faxed to the state safety agency, the state SANE program was providing in-person SANE care at close to 30 hospitals across the state. The state was divided into six regions for SANE service delivery. A set of on-call SANEs would respond to SANE hospitals in their region after a patient presented for postassault care. In addition to the state SANE program responding to select hospitals across the Commonwealth, some individual nurses practicing in Massachusetts had SANE-A certification through IAFN to treat adult and adolescent patients. Thus, this study is not an evaluation of the state SANE program, specific hospitals in Massachusetts, or SANE-A nurses. It is a comparison of postassault medical forensic service provision and action provided by all SANEs and non-SANE medical providers working across all hospitals in Massachusetts from 2011 to 2015.

### Sample

This study utilized data from the state safety agency in Massachusetts. The Boston College Institutional Review Board determined use of these data for research to be exempt from institutional review board review given the nature of the data. These data were originally collected to examine sexual assault kit handling and submission rates in the focal state (Shaw et al., 2020) and were repurposed for this study. The sample consisted of PSCR data for all PSCR forms received by the state safety agency that met the following criteria: (a) the PSCR data corresponded to adult<sup>1</sup> sexual assault kits completed by medical providers in Massachusetts; (b) the medical forensic examination, including the collection of the sexual assault kit, took place between January 1, 2011, and December 31, 2015; (c) the corresponding sexual assault occurred within a single city in Massachusetts; (d) the PSCR form indicated that a sexual assault kit was completed or did not explicitly indicate that a sexual assault kit was *not* completed; and (e) the PSCR form indicated if the medical forensic examination was completed by a SANE

or a non-SANE medical provider (i.e., this information was *not* missing). The PSCR form is routinely reviewed and updated. Data in this study were collected using forms from 2009 to 2014. The sample size for analysis was  $n = 3,969$ .

### Measures

#### *Type of Medical Provider*

On the PSCR, medical providers indicate whether or not the medical forensic examination was completed by a SANE using a checkbox format. The PSCR form is routinely updated, and several different versions of the PSCR were used for the data in the study. On earlier versions of the PSCR, only two checkbox options were provided to indicate if the examination was completed by a SANE: (a) yes and (b) no. On the more recent PSCR form used in this sample, three checkbox options were provided: (a) MA SANE (indicating that the examination was completed by a Massachusetts SANE), (b) SANE-A (indicating that the examination was completed by a SANE that was trained and certified to treat adult and adolescent patients by the IAFN), and (c) other (indicating that the examination was completed by someone other than an MA SANE or SANE-A). For analysis, a binary variable was created for the type of medical provider indicating if a SANE (yes [older version of PSCR]; MA SANE and SANE-A [newer version of PSCR]) or a non-SANE (no [older version of PSCR]; other [new version of PSCR]) completed the examination. Cases with no checkbox checked to indicate the type of medical provider did not meet the inclusion criteria for this study and were excluded.

#### *Emergency Contraception Administration*

Medical providers indicate if emergency contraception was administered to the patient using a checkbox format. On earlier versions of the PSCR, only two checkbox options were provided to indicate if emergency contraception was provided: (a) yes and (b) no. On more recent versions of the PSCR, four checkbox options were provided: (a) yes, (b) not indicated, (c) declined, or (d) not offered. So all cases could be examined in this analysis; a binary variable was created for emergency contraception, indicating if emergency contraception was administered (yes) or not (no [older version of PSCR]; not indicated, declined, and not offered [newer version of PSCR]). Cases with no checkbox checked were excluded from the analysis on the relationship between medical provider type (SANE vs. non-SANE) and emergency contraception administration ( $n = 365$  missing, 10% of 3,648 cases with female victims).

#### *Toxicology Kit*

Medical providers indicate on the PSCR whether or not a toxicology kit was collected. Two checkbox options are provided: (a) yes and (b) no. Cases with no checkbox checked were excluded from the analysis on the relationship between

<sup>1</sup>Massachusetts has both adult and pediatric sexual assault kits, with the former used primarily in cases involving adolescent and adult victims 12 years or older and the latter used primarily in cases involving children under the age of 12 years old. PSCR forms for the adult and pediatric sexual assault kits collect very different information; thus, the current study is limited to only the adult sexual assault kits.

medical provider type (SANE vs. non-SANE) and use of a toxicology kit ( $n = 165$  missing, 4.2% of 3,969 cases).

### Report to Police at the Time of Examination

Medical providers indicate on the PSCR whether or not the assault was reported to the police at the time of examination. Two checkbox options are provided: (a) yes and (b) no. The medical provider is also prompted to write-in the name of the police department to which the report was made. For this analysis, cases in which no checkbox was checked but the name of a police department was provided were recoded as “yes.” Cases with no checkbox checked and without any information on a police department were excluded from the analysis on the relationship between medical provider type (SANE vs. non-SANE) and a report to police at the time of examination ( $n = 79$  missing, 2.0% of 3,969 cases).

### Child Abuse Report

Medical providers indicate on the PSCR whether or not they made a child abuse report to the state child protective services agency at the time of examination. Two checkbox options are provided: (a) yes and (b) no. Cases with no checkbox checked were excluded from the analysis on the relationships between medical provider type (SANE vs. non-SANE) and child abuse report ( $n = 46$ , 6.5% of 706 cases with minor patients).

### Data Analysis

Descriptive analyses provide the number of cases treated by SANEs versus non-SANE medical providers, as well as rates of emergency contraception administration, use of toxicology kits, report to police at the time of examination, and child abuse report. Chi-square tests of independence were used to examine significant associations between the medical provider type (i.e., SANEs vs. non-SANE medical providers) and each of the four postassault actions. Cases missing information on the variable of interest for each chi-square test were excluded from that chi-square test. For example, in examining rates of emergency contraception administration between SANEs and non-SANE medical

providers, cases missing information on if emergency contraception was administered were excluded. In addition, only cases with female patients were included when comparing emergency contraception administration ( $n = 3,684$  cases with female patients), and only cases with minor patients were included when comparing child abuse reports ( $n = 706$  cases with patients under 18 years old). As such, the sample size for each chi-square test varies. All analyses were conducted in SPSS 26.

### Results

Nearly 92% of the cases in the sample involved female patients ( $n = 3,648$ ). The remaining cases involved male patients ( $n = 180$ , 4.5%), transgender patients ( $n = 61$ , 1.5%), or the information on gender was missing ( $n = 80$ , 2.0%). It is important to note, though, that checkbox options to indicate a transgender patient were not included on the PSCR form until 2012. Patient age was provided for nearly all cases ( $n = 62$ , 1.6% missing) and ranged from 6 to 99 years old, with a mean age of 27 years old ( $SD = 12.33$ ). Based on the race recorded by the medical provider using provided checkbox options, 64% of the patients in the sample were White ( $n = 2,544$ ), 15% were Latino ( $n = 589$ ), 12% were Black ( $n = 485$ ), 2% were Asian or Pacific Islander ( $n = 92$ ), and 0.4% were American Indian or Alaska Native ( $n = 17$ ). Another 4% ( $n = 153$ ) of patients were recorded as “other,” with additional detail written in on the form. Race information was missing for 2% of the cases ( $n = 89$ ). It is important to note that all sample demographic information is based on what was recorded by the medical provider on the PSCR form and may or may not align with how a patient would self-identify their race or gender. Of the  $n = 3,969$  cases included in the sample, 75% were treated by SANEs ( $n = 2,956$ ).

In Table 1, we present the chi-square results of our analysis of the relationship between medical provider type and emergency contraception administration, toxicology kit use, report to police at the time of examination, and child abuse reports. All four of these relationships were statistically

**TABLE 1. Results of Chi-Square Analysis Examining the Relationship Between Medical Provider Type and Postassault Actions**

Postassault action	SANE	Non-SANE	Pearson $\chi^2$
Emergency contraception administered (female patients only)	65.0% ( $n = 1,643$ )	52.9% ( $n = 400$ )	$\chi^2(1, N = 3,283) = 36.294, p < 0.001$
Toxicology kit used	26.5% ( $n = 767$ )	39.4% ( $n = 357$ )	$\chi^2(1, N = 3,804) = 55.906, p < 0.001$
Report to police at time of examination	68.2% ( $n = 1,992$ )	77.4% ( $n = 752$ )	$\chi^2(1, N = 3,890) = 29.698, p < 0.001$
Child abuse report, minor (under 18 years old) patients only	85.8% ( $n = 460$ )	64.5% ( $n = 80$ )	$\chi^2(1, N = 660) = 30.726, p < 0.001$

Note. SANE = sexual assault nurse examiner.

significant. Female patients treated by a SANE were significantly more likely to be administered emergency contraception (65%), as compared to patients treated by a non-SANE medical provider (52.9%),  $\chi^2(1, N = 3,283) = 36.294, p < 0.001$ . Patients under the age of 18 years old who were treated by a SANE were also significantly more likely to have a child abuse report filed with the state child protective services agency (85.8%), as compared to patients under the age of 18 years old who were treated by a non-SANE medical provider (64.5%),  $\chi^2(1, N = 660) = 30.726, p < 0.001$ . Patients treated by a SANE were less likely than those treated by a non-SANE medical provider to have a toxicology kit administered (26.5% compared to 39.4%),  $\chi^2(1, N = 3,804) = 55.906, p < 0.001$ , and to make a report to police at the time of examination (68.2% compared to 77.4%),  $\chi^2(1, N = 3,890) = 29.698, p < 0.001$ .

## Discussion

In this study, we found support for all four of our hypotheses. As compared to cases treated by non-SANE medical providers, cases treated by SANEs were significantly more likely to have emergency contraception administered to female patients (65% vs. 53%), less likely to have a toxicology kit collected (27% vs. 39%), less likely to have a police report filed at the time of examination (68% vs. 77%), and more likely to have a mandatory child abuse report filed for minor victims (86% vs. 65%). That all of our hypotheses were supported suggests that SANEs are operating as intended to provide expert, comprehensive, tailored first-response medical forensic care to sexual assault survivors.

Of course, these rates of postassault services and action should be interpreted with caution, as they are based on existing records that we repurposed to answer our focal research questions. As is always the case with existing records, it can be difficult to know the full context of a given case, which may impact the variables of interest. In this study, we examined and compared rates of emergency contraception administration among female patients treated by SANEs and non-SANE medical providers. We limited our examination of emergency contraception administration to cases involving female patients, as emergency contraception is only indicated for individuals capable of becoming pregnant. However, our use of “female” as an indication of an individual who could become pregnant was not without its flaws. Included in this subsample were prepubescent and postmenopausal patients for which emergency contraception would not be indicated and should not be administered. Also included in this subsample were transgender women who were accurately marked as “female” in their documentation in correspondence with their gender identity but who may not be capable of becoming pregnant. Transgender men, marked as “male” in correspondence with their gender identity, who may be capable of becoming

pregnant and thus indicating emergency contraception, were excluded. This important nuance means that the rates of emergency contraception reported herein may be lower than if we were to only examine rates of administration among individuals capable of becoming pregnant and for whom emergency contraception would be indicated.

In addition, when working with existing records, recorded information may be inaccurate or may be missing altogether. This is particularly relevant for the current study. Because SANEs receive extensive training in the care of sexual assault patients and are more familiar with the necessary documentation to complete in providing postassault care, they may be more likely to consistently and accurately complete said documentation as compared to non-SANE medical providers. In addition, and for the same reasons, SANEs may be more likely to fax the required documentation into the state safety agency as compared to non-SANE medical providers. If a form was not received by the state safety agency or if information was missing on the variables of interest in the current study, the case was not included in our analysis. Thus, the rate differences between SANEs and non-SANE medical providers may be even more pronounced than what is reported herein. It is also important to bear in mind that the sample examined in the current study only includes those cases in which the patient consented to the collection of a sexual assault kit. Postassault service provision and action may look different for patients who seek postassault medical care, but who decline a sexual assault kit.

Still, based on the patterns observed in these data, it seems as though non-SANE medical providers may be focusing more on the needs of the criminal justice system, as indicated by higher rates of toxicology kit use and reports to police at the time of examination. Without critical training, non-SANE providers may find it difficult to balance the needs of the criminal justice system to secure potential evidence of a crime, with the medical and emotional needs of the patient in front of them. Non-SANE medical providers may believe a toxicology kit can help bolster a potential criminal case and collect it from patients even when it is not indicated. They may also mistakenly think that a report to police is required or strongly encouraged for all cases, even if it is not in full alignment with the wishes of the victim. On the other hand, SANEs are trained to honor their role as medical providers first, charged with responding to the needs of the patient in front of them. They are trained to provide a range of options and services that best meet the needs of their patient while being sure not to compromise a potential criminal justice response. This is reflected in the relatively lower rates of toxicology kit use, as SANEs may be more intentional with their collection of the toxicology kit, using it only when indicated; lower rates of police reports at the time of examination, as SANEs make clear to the patient that they may choose though are not required to report to police, and

higher rates of emergency contraception administration, as SANEs make an effort to offer this service consistently when indicated. SANEs' familiarity and compliance with clearly established protocols also explains the higher rates of mandated child abuse reports.

It is important to note, though, that the comparatively lower rates of a report to police at the time of examination observed among cases treated by SANEs as compared to non-SANE medical providers may also be a result of our specific study sample and data source. Regarding the sample, the current study's sample only included cases in which a sexual assault kit was collected. SANEs know very well that a patient may choose to have a kit collected even if they choose not to report to police. Non-SANE medical providers may not be quite as familiar with patients' rights for a full medical forensic examination, complete with the collection of a sexual assault kit, regardless of whether they report to police. Even if they are aware of this patient right, they may still see the collection of a sexual assault kit and report to the police as tightly linked. If a patient states they did not report to the police, non-SANE medical providers may be more likely to not offer or even discourage the collection of a sexual assault kit. Such cases, in which a kit was not collected, then, would not appear in this sample, thus inflating the rate of non-SANE cases in this sample with a report to police at the time of examination. Regarding the data source, we relied completely on existing records. As has already been discussed, SANEs and non-SANE medical providers may differ in how they complete the PSCR based on their training and experience completing this required documentation. It is likely that SANEs are more consistent and conservative in regard to when they indicate on the form that there was a report to police made at the time of examination. SANEs only check the box to indicate a report was made if a report to police was made prior to the SANE arriving on-scene, or if the police arrived on-scene and took a report before the SANE completed their care of the patient. If the patient indicated they planned to report at a later time but did not make a report to police by the time the SANE finished their work with the patient, the SANE indicated on the form that no police report was filed at the time of examination. It is possible that non-SANE medical providers are less consistent and conservative in their documentation, again potentially inflating the rate of non-SANE cases in this sample with a report to police at the time of examination.

Finally, it is important to note that the differential rates observed among SANEs and non-SANE medical providers in this study may not be generalizable to or as pronounced as what might be observed in other locales. The focal state in this study is unique in its level of commitment to a centralized and coordinated response to sexual assault. This commitment is evidenced through the use of a statewide database on sexual assault medical forensic care service provision and a statewide SANE program operated out of the

state department of public health. In addition, each year, the statewide SANE program provides training for non-SANE medical providers on how to respond to sexual assault patients. The statewide SANE program consistently offers education and support to hospitals as they develop protocols related to serving sexual assault patients. As a result, patients treated by non-SANE medical providers in this state may receive an improved postassault medical response as compared to non-SANE medical providers treated elsewhere.

### Implications for Clinical Practice

Although each hypothesis in the study was supported and the overall patterns of service provision and action among SANEs and non-SANE medical providers were expected, these findings provide insight into how the medical system response may be improved for all sexual assault patients. First, this invaluable study was made possible because of the state database that exists in the focal state. Without that database, it would have been incredibly challenging to provide insight into patterns in SANE and non-SANE postassault service provision and care across an entire state. However, we were not able to include some cases in our analysis as they were missing information on the variables of interest. This calls attention to the importance of consistent, accurate, and complete documentation in medical encounters. Even when said information is thought not to inform acute service provision in the moment, such information can later be used to examine and evaluate service provision. In relying upon such records, if something was not written down, it did not happen. It is important that SANEs and non-SANE medical providers alike are supported to complete consistent, accurate, and complete documentation. This might mean providing additional time for medical providers to close out an encounter before moving on to the next patient.

Second, clear protocols should be developed (when and where they do not already exist) and made available to SANEs and non-SANE medical providers to guide their treatment of sexual assault patients. These data show an improved response to sexual assault patients when they are treated by a SANE as compared to a non-SANE medical provider, likely a result of extensive training and familiarity with best practice protocols in sexual assault response. Although it is not feasible to expect all medical providers to train and be certified as SANEs, it is feasible to provide access to and basic training on the conditions under which a toxicology kit should be used and a mandated child abuse report should be filed, and on how to present options to patients regarding filing a police report and receiving emergency contraception. SANEs may be able to play a key role in developing and delivering this basic training to their non-SANE colleagues, with adequate compensation and support.

## Conclusion

SANEs have long been considered a best practice in attending to the myriad needs of sexual assault survivors. This study provides empirical evidence of the positive impact of SANEs on postassault medical forensic service provision as compared to services provided by non-SANE medical providers. Our findings compliment and affirm what has been documented in prior literature: SANEs are specialists who are uniquely qualified to provide optimal care for sexual assault patients, providing a markedly improved response as compared to what is provided by non-SANE medical providers. All sexual assault patients, across all communities, should have access to SANE care.

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