Original Article

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Examining the Implementation of the National Protocol for Sexual Assault Medical Forensic Examinations

Mel Langness, BA[1], Janine M. Zweig, MS, PhD[1], Emily Tiry, MPP[1], Erica Henderson, MA[1], Nicole Stahlmann, MN, RN, SANE-A, AFN-BC[2], and Sara Bastomski, MA, PhD[3]

ABSTRACT

The *National Protocol for Sexual Assault Medical Forensic Examinations, Adult/Adolescent, 2nd edition*, or SAFE Protocol, is a voluntary guide that assists local and state jurisdictions with their responses to sexual assault by institutionalizing best practices around survivor care and evidence collection, particularly for sexual assault nurse examiners (SANEs) completing medical forensic examinations. We examined the uptake of the SAFE Protocol in communities across the United States by analyzing data from a set of national surveys of forensic nursing programs and victim advocates within the same communities. We studied four implementation outcomes: the acceptability, adoption, reach, and sustainability of the SAFE Protocol. SANEs and advocates reported that stakeholders responding to sexual assault—including forensic nurses, advocates, law enforcement, and prosecutors—have high implementation of the Protocol, which indicates how important individual stakeholder engagement is in actively facilitating the adoption of it. However, when information from SANEs and advocates from the same community are compared, the extent to which the SAFE Protocol is reported to be implemented with fidelity across U.S. jurisdictions is mixed.

KEY WORDS:

Implementation theory; SAFE Protocol; SANE; sexual assault

Over the past few decades, advocates, policymakers, law enforcement, and prosecutors have worked to increase victim services and criminal legal system responses to sexual assault. The passage and reauthorizations of the Violence Against Women Act, the funding it has provided, and the pursuant *National Protocol for Sexual Assault Medical Forensic Examinations, Adult/Adolescent, 2nd edition* (Office on Violence Against Women [OVW], 2013), or SAFE Protocol, have fortified these efforts.

The SAFE Protocol (hereafter, the Protocol) is a voluntary guide for stakeholders—such as sexual assault nurse examiners (SANEs), victim advocates, law enforcement officers, and prosecutors—who respond to sexual assault in communities across the United States. The Protocol assists local and state jurisdictions by institutionalizing best practices around caring for survivors and evidence collection.[1] The current version of the Protocol includes guidelines on coordinating responses to sexual assault, conducting sexual assault medical forensic examinations (SAMFEs), collecting evidence, connecting with survivors, preparing for SANE

Author Affiliations: *[1]Urban Institute, [2]International Association of Forensic Nurses, and [3]Council of State Governments Justice Center Research Manager.*

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Correspondence: *Mel Langness, BA, Urban Institute, 500 L'Enfant Plaza SW, Washington, DC 20024. E-mail: mlangness@urban.org.*

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[1]The term "survivor" is used to describe a person who has experienced victimization. Throughout this document, we use the terms "survivor," "patient," and "victim" interchangeably in places where it is relevant to do so to describe people who have experienced sexual violence.

court testimony, and implementing victim-centered care. The OVW-funded SAFE Technical Assistance (TA) project, managed by the International Association of Forensic Nurses, has delivered training and TA on the Protocol to more than 15,000 people in forensic nursing (FN) and multidisciplinary sexual assault fields. Yet, little work to date has examined the extent to which local jurisdictions are operationalizing the Protocol.

This study examines how the Protocol is being implemented across the United States by analyzing data from a set of national surveys of FN programs and victim advocates within the same communities. We apply Proctor and colleagues' (2011) implementation research taxonomy to study four implementation outcomes: the acceptability, adoption, penetration (or reach), and sustainability of the Protocol.[2]

The Protocol is divided into three sections: overarching issues, operational issues, and the examination process. Overarching issues include coordinated team approaches, options for reporting to law enforcement, victim-centered care, informed consent, confidentiality, and payment for the SAMFE. The operational issues section outlines best practices for SANEs, facilities where SAMFEs are conducted, equipment and supply needs, the sexual assault evidence collection kit, timing considerations around evidence collection, and procedures to maintain evidence integrity. The examination process section of the Protocol provides guidelines for each step of the SAMFE process, including initial connection with survivors, proper incident and medical history documentation, best practices for photographic evidence collection, guidance on medical care and treatment during the examination, and preparation for court testimony (OVW, 2013). No national studies to date have examined the extent to which jurisdictions across the United States have implemented the Protocol.

The Protocol outlines the necessity for stakeholders responding to sexual assault in their communities to develop coordinated, culturally competent team approaches centered on victims' needs. Relationships between stakeholders may illuminate whether a community is adopting the Protocol. SANE programs can face several barriers to successful collaboration—including questions around jurisdiction boundaries, differences in objectives, and conflicts with other stakeholders (Cole & Logan, 2008; Patterson & Pennefather, 2014). Stakeholders outside SANE departments, such as police and victim advocates, face their own challenges with collaboration and Protocol adoption, such as having conflicting priorities in their work with survivors. Measuring more than one stakeholder's view on a community's sexual assault response is important, as each stakeholder has a different role with different goals, and some individuals may be prone to social desirability (i.e., reporting greater adoption of the Protocol than is evidenced in their jurisdiction). SANEs are likely to be the group most familiar with the Protocol as it is integral to the nature of their work. However, victim advocates also play a particularly crucial role in sexual assault response and represent critical perceptions of Protocol implementation for four reasons: (a) They, like SANEs, work with people independent of whether they report the assault to police, (b) they do not have a stake in the criminal justice process, (c) they are solely beholden to the survivor and their needs as well as their independent organizations, and (d) they may be most willing to be critical of the sexual assault response system because their primary role is to support victims' needs. SANEs and victim advocates are key stakeholders to study when examining the Protocol because much of the Protocol's guidance is directed toward their work and because of their positioning outside the formal justice system but still within the community response to sexual assault.

Implementation Theory and Analysis

Understanding the extent to which a given policy or procedure is *implemented*—and the steps it took to get there—is key to contextualizing studies of its intended effects. Proctor and colleagues assert it is critical to understand implementation *outcomes*, or the effects of "deliberate and purposive actions" to implement new policy or practice as the operative elements of study in implementation science (Proctor et al., 2011, p. 65). They identify eight implementation outcomes that are frequently assessed in implementation research in the health and behavioral sciences: acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, reach, and sustainability. We assess four of these outcomes. *Acceptability* represents the level to which stakeholders perceive a given practice change as agreeable and can be measured via stakeholders' knowledge of and familiarity with the practice being implemented (Proctor et al., 2011, p. 67). *Adoption* is considered practice "uptake," or the extent to which stakeholders are making changes to implement the provisions and can be measured by assessing the state of practice in a jurisdiction (Proctor et al., 2011). Political decisions affecting funding and bureaucratic requirements may especially affect this implementation outcome measure. *Reach* is defined by Proctor et al. as "the integration of a practice within a service setting and its subsystems" (Proctor et al., 2011, p. 70). The reach a given policy has can be reflected in the level of cross-stakeholder action related to it. *Sustainability* is the extent to which a new policy or procedure is institutionalized and part of a service setting's business-as-usual operations (Proctor et al., 2011, p.70).

To address the gap in knowledge about the extent to which the Protocol has been implemented across the United States, we asked the following five research questions. First, what is the extent of reported *acceptance, adoption,*

[2]We make an intentional choice to replace the outcome measure term "penetration" with the synonym "reach" to limit our use of potentially triggering language.

reach, and sustainability of Protocol provisions in local communities across the nation as perceived by SANE programs and their local partners, particularly victim advocates? Second, are these outcomes related when it comes to implementing Protocol provisions? Third, what is the relationship between SANE program characteristics, or individual SANE and victim advocates' characteristics, and the reported outcomes? Fourth, what is the level of agreement between SANE programs' and victim advocates' reported implementation levels of Protocol provisions in their jurisdiction? Finally, what is the relationship between SANE program characteristics, or individual SANE and victim advocates' characteristics, and Protocol implementation levels?

Methods

Design

Our wider study featured a mixed-methods, cross-sectional design, although we used only quantitative survey data for the purposes of this analysis. Knowing that different actors from within a single community might view the uptake of innovations differently, the aim of this study was to examine local Protocol implementation from the perspectives of two service providers within the same jurisdiction-based sexual assault response system: (a) SANE programs and (b) victim advocates from a nongovernmental, nonprofit sexual assault service provider.

Sample

We used the voluntary International Association of Forensic Nurses' National Forensic Nursing Program membership directory (as of August 2019) to identify SANE programs for the national survey. We examined the directory for duplicate entries and cleaned it by verifying the existence and contact information of the SANE programs via email and phone contacts. The main contact person for the survey was defined as the SANE coordinator if they were a practicing SANE.[3] If not, we asked for the most experienced SANE from the program to complete the survey.

The last section of the national SANE program's survey asked SANEs for a snowball sampling referral to a local nonprofit sexual assault service provider with whom they worked and who provided SAMFE accompaniment/advocacy. If a responding SANE did not provide such referral information, we conducted geographically based Internet searches to identify relevant local nonprofit sexual assault service providers in the SANE program's catchment area.

The national survey of SANE programs was sent to 598 verified programs, and representatives from 379 programs across 47 U.S. states completed the survey (a 63% response rate). We sent surveys to 365 victim advocates (corresponding sexual assault service providers were not identified for 14 SANE programs), and 261 completed the survey (a 72% response rate). Table 1 shows the characteristics of the responding SANE programs as well as individual SANE and victim advocate participants.

[3]A nurse or healthcare provider working in this space may be identified as any of the following titles: sexual assault nurse examiner (SANE), sexual assault forensic examiner (SAFE), forensic nurse examiner (FNE), and/or sexual assault examiner (SAE). This article employs the parenthetical abbreviations throughout for ease of reference.

Procedure

Surveys were sent to all SANEs and advocates that had valid contact information. Both surveys were conducted via Qualtrics online survey software. Respondents were sent initial emails explaining the goals of the study, their rights as participants, and individualized links to the online survey so that nonresponse could be monitored. The national survey of SANE programs was administered from October 2019 to August 2020, and corresponding victim advocate surveys were administered between December 2019 and August 2020. Nonresponders were contacted multiple times via email and personal phone contact to boost response rates.

Measures

This study assessed four implementation outcomes: *acceptance*, *adoption*, *reach*, and *sustainability*. Measures were identical for both the SANE and victim advocate respondents. *Acceptance* was operationalized by two constructs: knowledge (an individual-level measure) and familiarity (a community-level measure) of the Protocol provisions. Knowledge was assessed via a 25-item knowledge test consisting of both multiple-choice and true/false questions. Knowledge scores represent the percent correct of the nonmissing items for each participant. Familiarity was SANEs' and advocates' perceptions of the extent to which jurisdiction stakeholders were familiar with the Protocol provisions. We asked 10 questions about overarching elements of the Protocol, 10 questions about operational elements, and eight questions about the SAMFE. Response options were as follows: 1 = *very familiar*, 2 = *somewhat familiar*, 3 = *neutral*, 4 = *somewhat unfamiliar*, and 5 = *very unfamiliar* ("I don't know" was recoded as missing, for this and all measures). Response scales were reverse-coded such that a higher score indicated more familiarity. Each subsection received an average score based on the nonmissing items, and the total familiarity index is the sum of each subsection average, with a possible range of 3–15. Respondents who were missing at least one entire subsection were coded as missing the overall score.

Adoption was a community-level measure and was operationalized as SANEs' and advocates' perceptions of the extent to which jurisdiction stakeholders are implementing Protocol provisions. We asked 10 questions about overarching elements, 10 questions about operational elements, and eight questions about the SAMFE. Response options were as follows: 1 = *not at all*, 2 = *to a small extent*, 3 = *to some extent*, 4 = *to a moderate extent*, and 5 = *to a great extent*. Each subsection received an average score based on the nonmissing

TABLE 1. Sample Characteristics

	n	%
SANE programs		
Region (*n* = 379)		
Northeast	51	13.5
Midwest	120	31.7
South	139	36.7
West	69	18.2
Year established (*n* = 322)		
Before 2000	114	35.4
2000–2009	104	32.3
2010–2020	104	32.3
Sexual assault patients seen annually (*n* = 378)		
≤100	175	46.3
101–200	93	24.6
>200	110	29.1
Location of services (*n* = 377)		
Hospital	293	77.7
Community based	40	10.6
Other	44	11.7
Ever completely halted services (*n* = 359)		
Yes	24	6.7
No	335	93.3
SANEs		
Primary position or title (*n* = 377)		
SANE/SAFE/FNE/SAE.	50	13.3
SANE/SAFE program coordinator/ manager/director	190	50.4
Forensic nursing program coordinator/ manager/director	113	30.0
Other	24	6.4
Years of experience as a SANE/SAFE/FNE/SAE (*n* = 378)		
Less than 1	6	1.6
1–2	32	8.5
3–5	87	23.0
6–9	65	17.2
10 or more	188	49.7
Victim advocates		
Primary position or title (*n* = 257)		
Victim advocate	47	18.3
Advocacy program coordinator	110	42.8
Executive director	31	12.1
Other	69	26.8
Years of experience as a victim advocate (*n* = 257)		
Less than 1	9	3.5
1–2	33	12.8
3–5	78	30.4
6–9	45	17.5
10 or more	92	35.8

Note. SANE = sexual assault nurse examiner; SAFE = sexual assault forensic examiner; FNE = forensic nurse examiner; SAE = sexual assault examiner.

items, and the total adoption index is the sum of each subsection average (weighted evenly), with a possible range of 3–15. Respondents who were missing at least one entire subsection were coded as missing the overall score.

Reach was a community-level measure and was operationalized as SANEs' and advocates' perceptions of the extent to which jurisdiction stakeholders are assisting with the implementation of Protocol provisions. We asked about 10 specific stakeholder types: state Violence Against Women Act administrators, prosecutors, community-based victim services, system-based victim advocates, the state sexual assault coalition, non-SANE healthcare providers, local healthcare facility administrators, law enforcement agencies, crime laboratories, and SANEs. Response options ranged from 1 to 4 from "do not assist (1)" to "fully assist (4)." The reach index is the average of the nonmissing responses.

Sustainability was a community-level measure and was operationalized as the SANEs' and advocates' reports of the extent to which the jurisdiction had administrative policies in place to codify provisions of the Protocol. We asked respondents about 23 possible policies (e.g., elements of care, timeframes for collecting evidence, options for reporting to law enforcement, payment practices, victim confidentiality). Response options were 1 = *yes* and 2 = *no*. The sustainability index is the sum of all the yes responses and can range from 0 to 23.

Finally, we created a composite score to measure overall implementation. To create the composite score, we standardized all the above measures and calculated the average standardized score.

Results

Table 2 addresses Research Question 1 and shows the distribution of the implementation outcomes for SANEs and advocates. Overall, the distributions of the scores were similar for SANEs and advocates, with SANEs having the same or slightly higher mean and median scores for all measures except reach. Scores were also relatively high overall, with the median score for both SANEs and advocates being close to the top possible score for all measures except sustainability. For example, half of SANEs and advocates correctly answered more than 80% of knowledge questions, and half of SANEs scored at least 14 of 15 points for familiarity and half of advocates scored at least 13 of 15 points on that outcome.

TABLE 2. Distribution of Implementation Outcome Scores

	SANEs				
	N	**Mean**	**Median**	**Min**	**Max**
Acceptability: knowledge	379	0.80	0.80	0.60	1.00
Acceptability: familiarity	335	13.32	14.00	3.00	15.00
Adoption	296	13.52	14.00	3.00	15.00
Reach	339	3.20	3.00	1.00	4.00
Sustainability	379	11.11	13.00	0.00	23.00
	Advocates				
	N	**Mean**	**Median**	**Min**	**Max**
Acceptability: knowledge	261	0.79	0.80	0.56	0.96
Acceptability: familiarity	219	12.67	13.00	3.00	15.00
Adoption	196	13.25	14.00	5.00	15.00
Reach	216	3.35	3.00	1.00	4.00
Sustainability	261	10.03	12.00	0.00	23.00

SANE = sexual assault nurse examiner; Min = minimum; Max = maximum.

Next, we asked the extent to which implementation outcomes are related to one another and answered this by examining the correlation among the scores within each respondent group to address Research Question 2. These results are shown in Table 3. Except for the correlations among adoption with familiarity (0.55 for SANEs and 0.53 for advocates), reach with familiarity (0.34 for SANEs and 0.25 for advocates), and reach with adoption (0.30 for SANEs and 0.44 for advocates), implementation outcomes were unrelated as evidenced by low or negligible correlations.

Tables 4 and 5 answer Research Question 3 and show the relationships between the five implementation outcomes and individual and program characteristics for SANEs and advocates, respectively. To maintain a sufficient sample size, we included the responses with complete data for each model separately (i.e., the sample size varies across models). For SANEs (see Table 4), FN program coordinators/managers/directors and respondents from programs in the South had higher knowledge scores, whereas those with other roles (i.e., not SANEs, SANE coordinators, or FN program coordinators) had lower familiarity scores. Respondents in programs that were established between 2000 and 2009 scored 0.769 points higher on adoption than programs established before 2000, and respondents in programs that needed to

TABLE 3. Correlations Among Implementation Scores

	SANEs (*n* = 272)				
	Acceptability: knowledge	**Acceptability: familiarity**	**Adoption**	**Reach**	**Sustainability**
Acceptability: knowledge	1.00				
Acceptability: familiarity	0.11*	1.00			
Adoption	0.14**	0.55***	1.00		
Reach	0.13**	0.34***	0.30***	1.00	
Sustainability	−0.01	0.16**	0.20**	0.04	1.00
	Advocates (*n* = 165)				
	Acceptability: knowledge	**Acceptability: familiarity**	**Adoption**	**Reach**	**Sustainability**
Acceptability: knowledge	1.00				
Acceptability: familiarity	−0.01	1.00			
Adoption	−0.01	0.53***	1.00		
Reach	−0.04	0.25**	0.44***	1.00	
Sustainability	−0.16*	0.12	0.19**	0.21*	1.00

SANE = sexual assault nurse examiner.
*$p < 0.10$, **$p < 0.05$, ***$p < 0.001$.

TABLE 4. Regression of SANE Implementation Scores on Site Characteristics

	Acceptability: knowledge	Acceptability: familiarity	Adoption	Reach	Sustainability
	β	β	β	β	β
	(Std. err.)	(Std. err.)	(Std. err.)	(Std. err.)	(Std. err.)
Primary role					
SANE/SAFE/FNE/SAE	Ref.	Ref.	Ref.	Ref.	Ref.
SANE/SAFE program coordinator/manager/director	−0.00693	−0.448	−0.0780	−0.261*	1.454
	(0.013)	(0.440)	(0.433)	(0.145)	(1.163)
Forensic nursing program coordinator/manager/director	0.0352**	−0.235	0.300	−0.255*	0.796
	(0.014)	(0.465)	(0.455)	(0.154)	(1.257)
Other	−0.00348	−1.745**	−1.132*	−0.620**	1.429
	(0.021)	(0.670)	(0.678)	(0.218)	(1.853)
Years of experience					
Less than 1	Ref.	Ref.	Ref.	Ref.	Ref.
1–2	0.0136	−1.040	−1.028	−0.435	2.629
	(0.043)	(1.596)	(1.411)	(0.437)	(3.853)
3–5	0.0576	−0.980	−1.820	−0.502	2.438
	(0.041)	(1.552)	(1.378)	(0.419)	(3.690)
6–9	0.0554	−1.790	−2.233	−0.530	4.194
	(0.041)	(1.557)	(1.375)	(0.419)	(3.697)
10 or more	0.0614	−0.683	−1.755	−0.540	2.977
	(0.041)	(1.551)	(1.373)	(0.418)	(3.686)
Year established					
Before 2000	Ref.	Ref.	Ref.	Ref.	Ref.
2000–2009	0.00553	0.345	0.769**	0.216**	0.182
	(0.010)	(0.319)	(0.299)	(0.105)	(0.891)
2010–2020	0.00370	−0.0494	0.140	0.0945	0.311
	(0.011)	(0.360)	(0.339)	(0.118)	(0.999)
Region					
Northeast	Ref.	Ref.	Ref.	Ref.	Ref.
Midwest	0.0236*	−0.214	−0.275	−0.168	−2.355**
	(0.013)	(0.414)	(0.403)	(0.137)	(1.188)
South	0.0331**	−0.0427	−0.566	−0.432**	−1.294
	(0.013)	(0.417)	(0.403)	(0.138)	(1.189)
West	0.0212	−0.250	−0.748*	−0.222	−0.174
	(0.015)	(0.472)	(0.444)	(0.154)	(1.337)
Sexual assault patients seen annually					
≤100	Ref.	Ref.	Ref.	Ref.	Ref.
101–200	0.00449	−0.221	0.0712	0.129	1.410
	(0.010)	(0.322)	(0.303)	(0.106)	(0.894)
>200	−0.00550	−0.284	0.0585	0.167	2.221**
	(0.010)	(0.324)	(0.308)	(0.106)	(0.907)

(continues)

TABLE 4. Regression of SANE Implementation Scores on Site Characteristics, Continued

	Acceptability: knowledge	Acceptability: familiarity	Adoption	Reach	Sustainability
	β	β	β	β	β
	(Std. err.)	(Std. err.)	(Std. err.)	(Std. err.)	(Std. err.)
Location of services					
Hospital	Ref.	Ref.	Ref.	Ref.	Ref.
Community based	−0.00397	0.197	0.492	0.0803	2.083*
	(0.013)	(0.430)	(0.395)	(0.139)	(1.199)
Other	−0.00666	−0.842*	0.441	0.137	0.326
	(0.013)	(0.433)	(0.419)	(0.146)	(1.180)
Ever completely halted services					
No	Ref.	Ref.	Ref.	Ref.	Ref.
Yes	0.00980	−0.693	−1.473**	−0.210	−2.209
	(0.016)	(0.552)	(0.521)	(0.177)	(1.455)
Constant	0.719***	15.03***	15.52***	4.011***	7.133*
	(0.044)	(1.609)	(1.438)	(0.448)	(3.938)
Observations	310	281	248	284	310
R^2	0.141	0.099	0.110	0.097	0.088

SANE = sexual assault nurse examiner; Std. err. = standard error; Ref. = reference; SAFE = sexual assault forensic examiner; FNE = forensic nurse examiner; SAE = sexual assault examiner.
*$p < 0.10$, **$p < 0.05$, ***$p < 0.001$.

halt services at some point scored about 1.5 points lower on adoption than programs that had not halted services. Respondents in other roles and in programs in the South scored lower than SANE respondents on reach, whereas respondents in programs established between 2000 and 2009 scored higher. Finally, respondents in programs in the Midwest scored 2.36 points lower than those in programs in the Northeast on sustainability, and respondents in programs that see over 200 patients per year scored 2.221 points higher than those in programs that see less than 100 patients per year.

For advocates (see Table 5), we found no patterns in individual or program characteristics associated with knowledge or familiarity scores. For adoption, only individual characteristics were associated with higher scores—0.982 points higher for respondents in other roles compared with victim advocates and 2.280 points higher for respondents with 6–9 years of experience compared with those with less than 1 year. Primary role was also associated with reach—"executive director" tended to score higher on reach than "victim advocate" respondents. However, respondents associated with programs that see over 200 patients per year scored lower on reach than those associated with smaller programs. Finally, years of experience had a strong association with respondents' ratings of sustainability—respondents with more than 1 year of experience scored higher on sustainability.

Table 6 summarizes answers to Research Question 4 by displaying the patterns of agreement between SANEs and advocates based on the composite implementation score. In total, only 123 pairs of SANEs and advocates had no missing data across all implementation outcomes and could be included in this analysis. Individually, 79 SANEs (64%) and 64 advocates (52%) rated the implementation in their jurisdiction highly (high implementation was defined as a composite implementation score above the mean for each group); when comparing if both respondents agree on high implementation within their jurisdiction, only 37 pairs (or 30% of total pairs) agreed their community has high implementation of the Protocol. The most common situation was that SANEs and advocates did not agree on the level of implementation (56% of pairs).

Table 7 describes the results of a multinomial logistic regression to assess whether any program and individual characteristics are associated with patterns of agreement between SANEs and advocates on the extent of Protocol implementation in their jurisdiction (i.e., SANEs and advocates agree on high implementation, agree on low implementation, or are mixed). No clear theme to the findings emerged, and only individual characteristics were significantly associated with patterns of agreement.

Discussion

The current study examines the SAFE Protocol across four implementation outcomes: *acceptance* (as measured by knowledge and familiarity), *adoption*, *reach*, and *sustainability*.

TABLE 5. Regression of Advocate Implementation Scores on Site Characteristics

	Acceptability: knowledge	Acceptability: familiarity	Adoption	Reach	Sustainability
	β	β	β	β	β
	(Std. err.)	(Std. err.)	(Std. err.)	(Std. err.)	(Std. err.)
Primary role					
Victim advocate	Ref.	Ref.	Ref.	Ref.	Ref.
Advocacy program coordinator	0.0163	−0.0725	0.783*	0.0270	−0.582
	(0.015)	(0.562)	(0.446)	(0.147)	(1.351)
Executive director	0.0132	−0.553	1.025*	0.429**	−1.112
	(0.020)	(0.761)	(0.579)	(0.198)	(1.835)
Other	0.00212	−0.198	0.982**	0.388**	−1.801
	(0.016)	(0.608)	(0.488)	(0.159)	(1.464)
Years of experience					
Less than 1	Ref.	Ref.	Ref.	Ref.	Ref.
1–2	0.0449	−0.100	1.719	0.350	8.222**
	(0.030)	(1.393)	(1.169)	(0.331)	(2.698)
3–5	0.0519*	0.461	1.422	0.223	6.695**
	(0.028)	(1.358)	(1.138)	(0.314)	(2.528)
6–9	0.0561*	0.976	2.280**	0.562*	6.763**
	(0.029)	(1.397)	(1.151)	(0.319)	(2.605)
10 or more	0.0495*	0.785	1.476	0.221	7.076**
	(0.028)	(1.362)	(1.139)	(0.312)	(2.522)
Year established					
Before 2000	Ref.	Ref.	Ref.	Ref.	Ref.
2000–2009	−0.00162	0.0438	−0.318	−0.211*	0.616
	(0.013)	(0.480)	(0.367)	(0.126)	(1.143)
2010–2020	−0.0127	0.166	−0.595	−0.249*	0.113
	(0.013)	(0.488)	(0.390)	(0.130)	(1.153)
Region					
Northeast	Ref.	Ref.	Ref.	Ref.	Ref.
Midwest	0.0164	−0.535	0.0850	−0.0851	−2.174
	(0.016)	(0.612)	(0.470)	(0.157)	(1.448)
South	0.0224	0.487	0.497	0.0175	−0.226
	(0.016)	(0.588)	(0.469)	(0.152)	(1.427)
West	−0.0122	0.131	0.837	0.0277	1.584
	(0.018)	(0.685)	(0.519)	(0.177)	(1.666)
Sexual assault patients seen annually					
≤100	Ref.	Ref.	Ref.	Ref.	Ref.
101–200	−0.0115	−0.967*	−0.333	−0.165	−0.0927
	(0.013)	(0.496)	(0.379)	(0.131)	(1.169)
>200	−0.0207	−0.465	−0.359	−0.258**	−0.133
	(0.013)	(0.486)	(0.384)	(0.128)	(1.152)
Location of services					

(continues)

TABLE 5. Regression of Advocate Implementation Scores on Site Characteristics, Continued

	Acceptability: knowledge	Acceptability: familiarity	Adoption	Reach	Sustainability
	β	β	β	β	β
	(Std. err.)	(Std. err.)	(Std. err.)	(Std. err.)	(Std. err.)
Hospital	Ref.	Ref.	Ref.	Ref.	Ref.
Community based	−0.00486	0.680	0.538	0.0742	0.235
	(0.017)	(0.646)	(0.487)	(0.161)	(1.528)
Other	−0.0164	−0.0804	0.497	−0.0345	1.687
	(0.016)	(0.600)	(0.494)	(0.161)	(1.471)
Ever completely halted services					
No	Ref.	Ref.	Ref.	Ref.	Ref.
Yes	0.00548	0.0577	0.613	0.325	0.736
	(0.022)	(0.805)	(0.646)	(0.215)	(1.980)
Constant	0.737***	12.65***	11.01***	3.169***	4.265
	(0.032)	(1.437)	(1.189)	(0.346)	(2.922)
Observations	214	178	159	171	214
R^2	0.091	0.074	0.136	0.167	0.099

Std. err. = standard error; Ref. = reference.
*$p < 0.10$, **$p < 0.05$, ***$p < 0.001$.

Apart from sustainability, both SANEs and advocates reported a promising picture of Protocol implementation in their jurisdictions by rating these individual outcomes highly. However, when we examined if SANEs and advocates from the same community had agreement about levels of implementation, just under one third of pairs agreed that their jurisdiction had high implementation of the Protocol. Thus, the current study advances our understanding of Protocol implementation, showing individuals may be knowledgeable about the Protocol and perceive high levels of implementation, but evidence about the extent to which the Protocol is implemented with fidelity across jurisdictions in the United States is mixed. Furthermore, the most poorly rated implementation outcome signals a continuing concern about the sustainability of the uptake of Protocol provisions in communities similar to concerns around the sustainability of SANE programs (Maier, 2011, 2012).

TABLE 6. Composite Implementation Score Agreement Between SANEs and Advocates

	SANEs		
Advocates	Low composite score	High composite score	Total
Low composite score	17	42	59
	13.8%	34.1%	48.0%
High composite score	27	37	64
	22.0%	30.0%	52.0%
Total	44	79	123
	35.8%	64.2%	100.0%

SANE = sexual assault nurse examiner.

In addition, we tested four of Proctor and colleagues' (2011) eight implementation outcomes and found that they are largely unrelated. As such, perhaps these outcomes should not be considered sequenced or interacting "steps" toward implementation for SANE programs. Although we found some relationship between familiarity and reach, familiarity and adoption, and reach and adoption, these concepts were largely unrelated to the *knowledge* SANEs and advocates had about the Protocol and the *sustainability* of communities' uptake of it. When it comes to the Protocol, *acceptance* should not be used to predict *sustainability*, and higher levels of knowledge generally do not mean anything about the extent to which the policy will be adopted.

Furthermore, the relationships found between individual characteristics with implementation outcomes may be indicative of the circumstances surrounding Protocol implementation in individual jurisdictions. For example, high individual SANE scores on the Protocol knowledge test but low levels of reported reach in Southern states suggest that SANEs working in the South might be extremely knowledgeable and active in their engagement with the Protocol, but they may not have significant stakeholder support in implementing the Protocol across their jurisdictions.

Despite these contributions, the current study is subject to some limitations. First, although examining Protocol

TABLE 7. Multinomial Logistic Regression of Combined Implementation Category on Site Characteristics

	Composite score	
	HH vs. mixed	LL vs. mixed
	β	β
	(Std. err.)	(Std. err.)
Primary role: SANE		
SANE/SAFE/FNE/SAE	Ref.	Ref.
SANE/SAFE program coordinator/manager/director	−2.711*	−3.486**
	(1.385)	(1.493)
Forensic nursing program coordinator/manager/director	−1.911	−3.424**
	(1.399)	(1.558)
Other	−2.246	−3.273*
	(1.676)	(1.946)
Years of experience: SANE		
Less than 6	Ref.	Ref.
6–9	1.116	0.571
	(1.108)	(1.433)
10 or more	1.517	1.256
	(0.938)	(1.227)
Primary role: advocate		
Victim advocate	Ref.	Ref.
Advocacy program coordinator	−0.277	−0.176
	(0.833)	(0.995)
Executive director	1.972	1.140
	(1.234)	(1.514)
Other	1.694*	0.199
	(0.979)	(1.319)
Years of experience: advocate		
Less than 6	Ref.	Ref.
6–9	1.931**	0.893
	(0.803)	(1.084)
10 or more	−0.0574	−1.028
	(0.687)	(1.009)
Year established		
Before 2000	Ref.	Ref.
2000–2009	−0.682	−1.321
	(0.656)	(0.955)
2010–2020	−0.458	1.035
	(0.881)	(0.963)

(continues)

TABLE 7. Multinomial Logistic Regression of Combined Implementation Category on Site Characteristics, Continued

	Composite score	
	HH vs. mixed	LL vs. mixed
	β	β
	(Std. err.)	(Std. err.)
Region		
Northeast	Ref.	Ref.
Midwest	0.183	−0.438
	(0.940)	(1.064)
South	−0.459	−1.520
	(0.888)	(1.136)
West	−0.252	−1.225
	(0.881)	(1.125)
Sexual assault patients seen annually		
≤100	Ref.	Ref.
101–200	0.284	1.150
	(0.710)	(1.013)
>200	−0.510	0.748
	(0.748)	(1.013)
Location of services		
Hospital	Ref.	Ref.
Community based	0.447	0.236
	(0.873)	(1.104)
Other	1.736*	1.473
	(0.979)	(1.270)
Ever completely halted services		
No	Ref.	Ref.
Yes	−0.343	−0.272
	(1.297)	(1.319)
Constant	−0.265	1.042
	(1.930)	(2.208)
Observations	106	

HH = High-High composite scores; LL = Low-Low composite scores; SANE = sexual assault nurse examiner; Std. err. = standard error; Ref. = reference; SAFE = sexual assault forensic examiner; FNE = forensic nurse examiner; SAE = sexual assault examiner.

*$p < 0.10$, **$p < 0.05$, ***$p < 0.001$.

implementation using input from two responders in a single jurisdiction is innovative, it still only reflects the input from two stakeholders in the sexual assault response system. Although complex to conduct at a national level, it would be helpful to examine implementation from a wider swath of stakeholders to fully understand Protocol implementation. Second, missing data across measures led the team to rely

on only 123 pairs of SANEs and advocates to answer Research Questions 4 and 5, representing just one third of the total sample of SANEs. Finally, we designed the measures for this study along with input from a seven-member advisory panel of expert practitioners and researchers, and although we still think that measuring knowledge is important to establishing some implementation outcomes, perceptions around other implementation outcomes may be less useful. Perhaps measures that attempt to assess *actual implementation* rather than *perceptions* of implementation may be better suited for such analyses. In addition, although difficult to do on a national scale, researcher direct observation of Protocol provisions within communities may be another way to assess implementation outcomes without relying on stakeholder perception.

Conclusion and Implications for Clinical Practice

Policymakers and practitioners should understand that SAFE Protocol implementation is a holistic and multidisciplinary exercise wherein independent implementation outcomes, such as acceptance or reach of the Protocol, require their own management to materialize. Simply ensuring all stakeholders are aware of the Protocol is not a reliable measure of how well it will be operationalized in a given community. Future training and TA for SANEs, victim advocates, and justice system actors alike should have an intentional focus on how to address barriers to adoption and sustainability, in addition to conveying knowledge about the Protocol. Furthermore, future training and evaluations of the Protocol should focus on the fidelity of the implementation of its provisions to ensure quality implementation in addition to reach and sustainability. SANEs seeking to improve their FN services should examine the extent to which they are implementing and modeling best practice, as outlined in the Protocol, such as showcasing effective communication and collaboration with all actors, conducting quality SAMFEs, and applying the knowledge necessary to maintain evidence integrity. SANE programs may further consider the importance of securing funding for targeted efforts to not only implement the Protocol but also provide appropriate training and education among all actors in a sexual assault response network to ensure quality survivor care.

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