HHS Public Access

Author manuscript

Trauma Violence Abuse. Author manuscript; available in PMC 2023 November 25.

Published in final edited form as:

Trauma Violence Abuse. 2021 April ; 22(2): 413–421. doi:10.1177/1524838019882023.

Scoping Review of Access to Emergency Contraception for Sexual Assault Victims in Emergency Departments in the United States

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Abstract

Objective: We conducted a scoping review of the literature to assess the prevalence of hospital policies regarding emergency contraception (EC) and the frequency that U.S. emergency departments (EDs) provide EC to sexual assault survivors.

Study Design: We searched PubMed, Embase, the Cochrane Library, and CINAHL from inception to January 2019 for studies that assessed access to EC for sexual assault survivors in EDs. We included English-language studies that surveyed ED staff at U.S. hospitals and reported the weighted mean of the percentage of hospitals with an EC policy for sexual assault survivors and the percentage that provided EC counseling, offered or dispensed EC onsite. Secondary outcomes were rates of testing and prophylaxis for sexually transmitted infections (STIs) and HIV.

Results: From 390 articles retrieved, 14 studies met the inclusion criteria; all studies were published between 2000 and 2013. Eligible studies surveyed staff at 3,314 hospitals. Overall, 60% (weighted mean) of hospitals had a policy on EC, 75% provided EC counseling, 44% offered EC, and 62% had EC available to dispense onsite. Four studies reported secondary outcomes: 81% of hospitals provided STI testing, 84% provided STI prophylaxis, 64% provided HIV testing, and 53% provided HIV prophylaxis.

Conclusion: Existing literature demonstrates significant variability in EC policies and practices for sexual assault survivors in U.S. hospital EDs. Future research should assess whether EC access for survivors has improved in ED settings as well as evaluate persistent or new barriers to access.

Keywords

sexual assault; emergency contraception; women's health; access to health care; emergency medicine

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Presented at American College of Obstetricians & Gynecologists 2019 Conference, May 3–6, Nashville, TN. The content is solely the responsibility of the authors and does not necessarily represent the official views of the Society of Family Planning.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Nearly one in five women in the United States, or 25.5 million women, are current survivors of completed or attempted rape, making sexual assault a significant public health concern (Center for Disease Control, 2018). Sexual assault is associated with a multitude of adverse health consequences, including but not limited to mental and physical trauma, sexually transmitted infections (STIs), and unintended pregnancy (Alvarez et al., 2009; Holmes, Resnick, Kilpatrick, & Best, 1996; Johnson & Hellerstedt, 2002; Riggs, Houry, Long, Markovchick, & Feldhaus, 2000; Scott et al., 2018). The majority of rape victims are of reproductive age (aged 15–49) and thus at a significant risk of unintended pregnancy. One prior study reported that of reproductive-aged female rape survivors, up to 5.0% of rapes resulted in pregnancy (Holmes et al., 1996). Another study found that of 333,000 sexual assaults and rapes, 22,000 consequent pregnancies would have been preventable with appropriate and prompt prophylactic care with emergency contraception (EC; Holmes et al., 1996; Trussell, 2000).

EC is a proven effective prophylactic measure for significantly reducing the risk of unintended pregnancy after unprotected sexual intercourse. Sexual assault survivors are most commonly assessed and provided with postassault medical care in the emergency department (ED; Saltzman et al., 2007). Professional medical associations, as well as the U.S. Department of Justice's National Protocol for Medical Forensic Examinations, recommend EC provision for sexual assault survivors at risk of unintended pregnancy, in addition to prophylaxis for STIs (American College of Emergency Physicians, 2002; American College of Obstetricians & Gynecologists [ACOG], 2017; Emergency Nursing Association and International Association of Forensic Nurses, 2016; U.S. Department of Justice, Office on Violence Against Women, 2013). However, survivors' access to EC in EDs can vary owing to hospital policies, availability of staff with specialized training for sexual assault, and state mandates or laws that require physicians to offer EC to sexual assault survivors. Although this variability has been recognized, to date, little research has systematically assessed the evidence on the availability of EC in ED settings for sexual assault survivors.

In order to address this gap, we conducted a scoping review of the literature on EC provision in EDs. Scoping reviews aim to map the current literature on a topic by including a broad range of studies, as well as identify key concepts and research gaps that can inform future studies. In this review, we addressed the following questions: What percentage of hospitals have policies on EC provision in EDs and providers with specialized sexual assault care training? How often do hospital staff report counseling survivors about and providing them with EC? How frequently do hospitals provide other related postassault sexual health care (e.g., testing for STIs).

Method

We searched PubMed, Embase, the Cochrane Library, and CINAHL from inception to January 2019. We included any English-language studies that examined the use of EC in EDs for rape and sexual assault. We used combinations of the following medical subject headings and key words to identify studies for inclusion: rape, sexual assault, contraception, medical, prophylaxis, survey, questionnaire, and mixed methods (Figure 1). We included

survey studies that fit the following criteria: (1) surveyed ED staff at U.S. hospitals and (2) reported the percentage of hospitals with a policy on EC for sexual assault survivors or the frequency with which survivors were counseled, offered, and received EC onsite. We excluded studies for which no manuscript was available.

Two reviewers (M.W. and A.K.) screened all article titles and abstracts to identify potentially eligible studies. They then independently evaluated the full manuscript text to determine whether the study met the inclusion criteria; references of included manuscripts were reviewed as well. For articles meeting the inclusion criteria, the two reviewers used a standardized form to independently abstract information on the primary outcomes: The percentage of hospitals with an EC provision policy and the frequency with which survivors were counseled, offered, and received EC. Both reviewers also independently abstracted data on the secondary outcomes: The percentage of hospitals that provided prophylaxis for STIs and HIV and offered STI and HIV testing. The interrater reliability between reviewers was 95%. The senior author (K.W.) resolved any discrepancies. We did not assess methodological limitations or risk of bias as these are not among the objectives of a scoping review, and there are limited resources for appraising the quality of survey studies (Munn et al., 2018; Protogerou & Hagger, 2019).

We calculated the 95% confidence intervals for all primary and secondary outcomes. We also calculated weighted averages of the percentages reported. All data were analyzed with Microsoft Excel, Version 16.25.

Results

Our search yielded 390 titles. We screened these titles for potentially relevant content and identified 73 abstracts for closer review (Figure 2). After reviewing abstracts, we selected 27 full-text manuscripts. We excluded studies with no outcomes of interest ($n = 5$), probability sample surveys that did not allow the reviewers to extrapolate relevant data ($n = 3$), pediatric-only studies ($n = 3$), review articles ($n = 1$), surveys directed to survivors not providers ($n = 1$), and surveys conducted at institutions without any on-site sexual assault care ($n = 1$). From the 13 studies included, we further examined 303 references cited and identified one additional study that met the inclusion criteria. Overall, we included a total of 14 studies (Bakhru, Mallinger, & Fox, 2010; Campbell et al., 2006; Espey et al., 2009; Harrison, 2005; Harrison et al., 2010; Patel, 2004; Patel, Panchal, Piotrowski, & Patel, 2008; Patel et al., 2012, 2013; Polis, Schaffer, & Harrison, 2005; Rosenberg, Demunter, & Liu 2003; Simons, 2000; Temin, Coles, Feldman, & Mehta, 2005; Woodell, Bowling, Moracco, & Reed, 2007).

Studies meeting the inclusion criteria surveyed attending physicians, nurse managers, nonspecific ED staff, and administrators at 3,314 hospitals (Table 1). The most common survey modality was telephone surveys (eight), followed by mystery client surveys (two). One of each of the following types of studies also were included mixed methods using a cross-sectional survey and in-depth qualitative interviews and surveys completed by mail, online, or in person. All included studies were published between 2000 and 2013. The studies also were regionally diverse with national sample studies (four); northeastern and

midwestern states such as Massachusetts, Pennsylvania, and Illinois (four); southeastern states such as Maryland, Virginia, Washington DC, North Carolina, and South Carolina (three); and western states such as California, Oregon, and New Mexico (three). Finally, six studies reported the percentage of surveyed hospitals with a religious affiliation. Polis et al. was the only study that surveyed 100% religious-affiliated hospitals (Catholic hospitals in California).

Of the 14 included studies, eight reported on hospital policies on EC (Table 1). Studies varied in how they assessed whether a hospital had a policy. For example, Espey, Rosenberg, Harrison, and Woodell asked whether there was a standard or written protocol for the care of sexual assault survivors and whether those policies included specific language regarding EC (Espey et al., 2009; Harrison et al., 2010; Rosenberg, Demunter, & Liu 2003; Woodell et al., 2007). Similarly, in three different studies, Patel asked survey respondents whether the hospital had a written treatment protocol for (1) general sexual assault treatment, (2) EC counseling for sexual assault victims, and (3) provision of EC for sexual assault victims (Patel, 2004; Patel et al., 2008, 2012, 2013). However, other studies were less specific, such as that by Bakhru, which asked physicians to self-report whether their institution had a protocol for general sexual assault care. Notably, that study found that, although 99% of respondents working at a hospital with a sexual assault protocol stated that they typically follow their policy, only 85% of respondents whose hospital protocol suggests or requires offering EC reported typically doing so (Bakhru et al., 2010). In the seven studies published after 2000, 52–83% of hospitals had a policy on EC; one study published in 2000 reported 28% of hospitals with an EC policy (overall weighted mean 60%).

Six studies reported data about whether hospitals had staff who were “specially trained” for sexual assault care, and authors’ definitions of this training also were quite varied. Three studies specifically asked hospitals about sexual assault nurse examiner (SANE) programs (Campbell et al., 2006; Harrison, 2005; Patel, 2004). One study asked physicians whether they had received specialized training for treatment of survivors (Bakhru et al., 2010), and Rosenberg, Demunter, and Liu (2003) asked hospitals whether “any staff received training in how to provide care to sexual assault victims.” Only Campbell et al’s (2006) study, which conducted both open-ended qualitative and quantitative interviews at SANE programs, further explored how providers were trained in EC counseling and specified that they provided “information on how emergency contraceptives work and affect a victim’s health” and “discuss options for dealing with pregnancy resulting from the sexual assault.” Overall, 22–100% of hospitals had such specialty staff. Similar variability was found among religiously affiliated hospitals, of which 13–100% of facilities had trained staff in survivor care. The one study that focused exclusively on religiously affiliated hospitals (Polis et al., 2005) did not report whether facilities had any staff trained in survivor care.

Seven included studies reported on counseling about EC. Patel (2004) included the most specific definition of EC counseling across all included studies. EC counseling was described as the following: (1) “routine counseling” offered to all female victims of sexual assault in the reproductive age; (2) “variable counseling” as based on physician discretion, history and physical, test results, or patient request; and finally (3) “not offered” as no patients counseled about EC. Harrison et al. (2010) asked how counseling

was communicated, and three hospitals reported using verbal communication and three disseminated written materials. Bakhru and Woodell asked respondents to state how often they provide EC counseling but did not define what EC counseling entailed (Bakhru et al., 2010; Woodell et al., 2007). Among all studies that reported on this outcome, regardless of how counseling was defined, 42–83% (weighted mean 75%) of hospitals provided EC counseling.

Seven studies reported on offering EC and seven reported on giving/offering EC onsite (Table 1). Of those seven included studies, 34–83% offered EC (weighted mean 44%) and 45–81% had EC available to dispense onsite (weighted mean 62%). In nationwide studies, the percentage of hospitals that counseled, offered, or provided EC onsite ranged from 35% to 66%, and there was similar variability in EC practices in studies that focused on northeastern and midwestern states (42–80%), southern states (50–74%), and western states (34–81%). In their study of religiously affiliated hospitals, Polis, Schaffer, and Harrison (2005) found that only 34% of these hospitals offered EC to sexual assault survivors. In regard to the effect of specialized training on the frequency of counseling and provision of EC, only one included study had data on both rates of specialized training and the EC practices: Bakhru's study found that sexual assault training in physicians was associated with an increased likelihood of counseling about or offering of EC to survivors (Bakhru et al., 2010).

Across the time period of included studies (2000–2013), there were no apparent temporal trends of indicating an increase in EC counseling or the provision. Additionally, few studies specifically assessed the role of legislative mandates on EC counseling and provision in the ED context. Espey et al. (2009) found that despite the passage of a 2003 New Mexico state law that required sexual assault victims be provided with EC information and medication, just over half of participating hospitals had any kind of sexual assault protocol and providers had quite variable practice patterns.

Fewer studies reported on the secondary outcomes related to STI and HIV testing and treatment (Table 2). Overall, across the studies, 81–92% of hospitals were reported providing STI prophylaxis (weighted mean 84%), 38–90% providing STI testing (weighted mean 81%), 14–69% providing HIV postexposure prophylaxis (weighted mean 64%), and 11–81% providing HIV testing (weighted mean 53%). In all studies that reported secondary outcomes, the percentage of hospitals that counseled, offered, or dispensed EC was lower than the percentage of hospitals that provided STI prophylaxis.

Discussion

In this scoping review of the literature on U.S. hospital ED policies and practices for EC for sexual assault survivors, we found considerable variability in policies and practices for EC for sexual assault survivors based on the studies we systematically identified. Additionally, counseling about EC was more common than the actual provision of EC, and survivors of sexual assault appeared to have greater access to STI prophylaxis than EC. However, all of the included studies were published between 2000 and 2013, and this temporal gap in evidence from the end of the last study period (2010) to the present year (2019) makes it

difficult to know whether services are now more consistently available to survivors seeking hospital-based care. Although we did not find an increase in the percentage of hospitals with policies or counseling, offering and providing EC in the time range of included studies, this may have changed as over the last decade.

There are reasons to believe that EC access in ED settings may be more widely available; studies from our review suggest that there may be facilitating factors such as “specialty training” that can influence EC provision rates (Bakhru et al., 2010). The adoption of professional medical association guidelines and other protocols related to the provision of EC may not have had sufficient time to significantly influence practice at the time the studies were conducted, and some were issued after these studies were published. There may, however, still be variation in care according to a survivor’s location and source for care. For example, some states, such as California, require EDs to provide information about and dispense EC upon request, while several other states do not have policies that expand access to EC for survivors of sexual assault and even have laws that exclude EC from contraceptive coverage mandates (California Legislative Information, 2018; Guttmacher Institute, 2018). Furthermore, studies have shown that regardless of state mandates, religious-affiliated hospitals have generally decreased access and counseling for EC for sexual assault survivors (Bucar & Nolan, 1999; Harrison, 2005; Nunn, Miller, Lapert, & Ellertson, 2003; Polis et al., 2005; Smugar, Spina, & Mertz, 2000). Given the unknown status of sexual assault survivor access to EC in the last 9 years, there is need for future studies that capture more recent landscapes of sexual assault care. These studies should examine whether state-level policies have affected sexual assault survivors’ access to EC and what the barriers there are in translating legislation to practice and prescribing behaviors (Evans, Snooks, Howson, & Davies, 2013; Fowler et al., 2015; Malekinejad, Horvath, Snyder, & Brindis, 2018; Martin, Norcott, Khalid, & O’Connell, 2017). These findings could inform future state- and hospital-level policies, which would, in turn, help more sexual assault survivors gain access to the essential service of EC.

Additionally, our scoping review identified a need to clarify key concepts and outcomes in future research. The studies we reviewed did not consistently define critical components of care, such as the presence of a hospital policy, trained staff, and counseling, and some studies lacked specificity in how these outcomes were assessed. Use of nuanced and consistent definitions that align more closely with professional guidelines and protocols would provide more meaningful evaluations of the care available to survivors. Our review also suggests there is a need for more detailed explorations of the processes of care in ED settings. For example, how are hospital protocols encouraged and enforced, what training is available to other ED providers who work in facilities without SANEs, and what are the barriers and access points to specialized training for comprehensive trauma-informed sexual assault medical and forensic care. If later studies confirm that sexual assault survivors have greater access to STI prophylaxis than EC, the reasons for these differences, including the role of provider training on or experience with contraceptive counseling, attitudes regarding the acceptability of contraception (e.g., religious beliefs), and inclusion of EC on hospital formularies, would be useful to explore. Finally, future studies of EC provision in hospitals may benefit from cognitive interviews to test the interpretation of questions, aim

to standardize survey methodology, and assess the level of training and experience of target respondents.

As noted above, a limitation of our review is the lack of studies published after 2013. This may be due to increased access to EC over the counter, the growth of SANE programs, and the presence of SANEs in EDs, as well as shifts in the focus of the literatures on sexual assault and EC. Indeed, a brief examination of recent publications on sexual assault reveals a greater focus on risk factors, prevention, and the utilization and efficacy of SANEs who are often based in specific SANE or rape crisis centers outside of EDs (ACOG, 2009; 2015, 2017; Bird, Gilmore, George, & Lewis, 2016; Fok & Blumenthal, 2016; Mellins et al., 2017; Montanari Vergallo, Zaami, Di Luca, & Marinelli, 2017; Shen, Che, Showell, Chen, & Cheng, 2017; Vrees, 2017; Wright, Zounlome, & Whiston, 2018), whereas the EC literature has focused on general access and the mechanisms of action and efficacy of EC. Additionally, our scoping review included articles with diverse study designs, and the response rates ranged from poor to average. Although not among the objectives of a scoping review, the significant heterogeneity in study designs and definitions of outcomes precluded a meta-analysis.

Finally, the studies we included focused on surveying providers about the care provided to female patients and an important cohort of voices was absent from the existing literature: sexual assault survivors, themselves. Surveys and qualitative assessments should ask survivors about whether they were counseled about the risk of pregnancy, informed of their rights to care (depending on state mandates), counseled about the options for prophylactic measures, and advised about the options for prescription of EC at the time of care or being counseled to buy their own EC over-the-counter after discharge and their overall experience of care regarding EC (Cleland, Bass, Doci, & Foster, 2016). Juxtaposing such results to reported physician practices and the targeted reach of specific policies would be an important component to capturing a more holistic perspective on EC in survivor care. Studies also should continue to explore differences in accessibility to EC based on factors of socioeconomic class, race, insurance status, medical literacy, cultural acceptability of unintended pregnancy, or knowledge of when or where to seek help (Bryant, Nakagawa, Gregorich, & Kuppermann, 2010; Elibiary & Youmans, 2007; Jackson, Schwarz, Freedman, & Darney, 2000; Lind, Godfrey, Rankin, & Handler, 2014; Ward, Roncancio, & Berenson, 2010) and aim to be inclusive of the experiences of gender nonconforming and trans patients who present to the ED who also may be at risk of pregnancy from sexual assault.

Conclusion

Sexual assault survivors should be able to consistently access the full range of prophylactic care to prevent pregnancy and STI/HIV transmission, regardless of the state or hospital in which they seek care and obtain services. Renewed research efforts are needed to identify initiatives that have improved access since the publication of the reported studies as well as persisting or new barriers to care. This research will allow health-care providers and systems, community stakeholders, and policy makers to implement evidence-based solutions to increasing access to EC for sexual assault survivors (Table 3).

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Michelle J Wang is supported by the Society of Family Planning Trainee Grant under award number SFPRF11-T10.

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Implications of Review for Practice, Policy, and Research Implications

- Our findings demonstrated significant variability in policies and practices for EC for sexual assault survivors across U.S. hospital EDs based on existing literature, all published between 2000 and 2013
- Further research is needed that identifies both initiatives that have improved EC access for survivors since the publication of the reported studies and persistent or new barriers to access

ProQuest Search Strategy:	PubMed Search Strategy:	CINAHL Strategies:
ab(rape OR "sexual assault") AND ab(contracept* OR SANE OR medical* OR prophylaxis) AND (survey* OR questionnaire* OR "mixed methods" OR qualitative) AND la.exact("English")Limits applied (Narrowed by: Location: US; Full Text; Source Type: Dissertations & Theses, Scholarly Journals)	((rape[Title/Abstract] OR "sexual assault"[Title/Abstract]) OR "Rape"[Mesh]) AND (contracept*[Title/Abstract])	TX (sexual assault OR rape) AND TX contraception (Narrowed by: Full Text, English Language, Exclude Medline records, Peer Reviewed, USA)

Figure 1.
Example database search strategies.

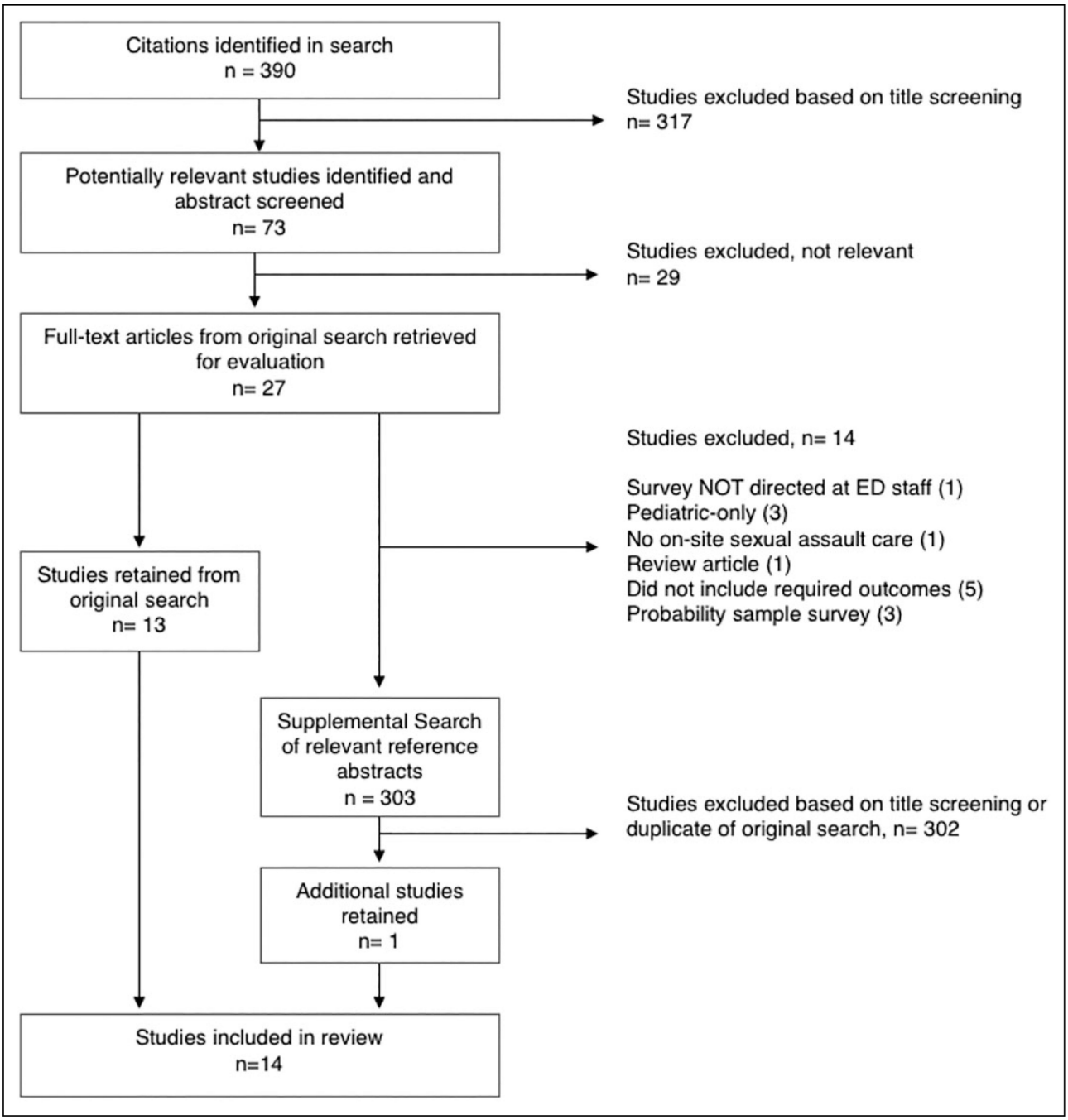

Figure 2.
Flow diagram of studies included in the systematic review.

Table 1.

Studies on Emergency Contraception for Sexual Assault Victims in the United States.

Author, Year (Reference Number)	Survey Type	Number of Hospitals	Survey Participant Type	Location	Religious-Affiliated Hospitals (% of *N*)	Hospital Policy on EC (*N* = 9)	Specially Trained Staff[a] (% of *N*)	Counsels about EC (*N* = 7)	Offered EC (*N* = 7)	Given or Offered EC Onsite (*N* = 7)
Bakhru, Mallinger, and Fox (2010)	Web	98	ED attending physicians	Maryland, Virginia, DC	13	71 (62–80)	45	—	83 (76–90)	—
Campbell et al. (2006)	Telephone	110	SANE	National (sample)	—	—	100	73 (65–81)	—	66 (56–74)
Espey et al. (2009)	In-person	33	RN, MD, and hospital clerks	New Mexico	—	52 (35–69)	—	—	61 (44–78)	45 (28–62)
Harrison (2005)	Mystery client	1212	ED staff nonspecific	National (sample)	49.3	—	—	—	35 (32–38)	
Harrison et al. (2010)	Mixed methods[b]	16	ED staff nonspecific and ED hospital administrators	South Carolina	—	56 (32–80)	50	63 (39–87)	56 (32–80)	50 (26–74)
Patel et al. (2013)	Telephone	582	ED staff[c]	National (sample)	—	60 (56–64)	—	78 (75–81)	—	—
Patel, Panchal, Piotrowski, and Patel (2008)	Telephone	156	Charge nurse or other designated respondent	Illinois	—	70 (63–77)	22.4	74 (68–81)	60 (52–67)	59 (51–67)
Patel (2004)	Telephone	125	Administrative RN or SANE trained RN[d]	Pennsylvania	13.5	—	—	42 (38–46)	—	—
Patel et al. (2012)	Telephone	583	ED staff[c]	National (sample)	—	60 (56–64)	—	78 (75–81)	—	66 (62–70)
Polis, Schaffer, & Harrison, 2005	Mystery client	45	Triage RN or telephone clerk	California	100	—	—	—	34 (20–48)	—
Rosenberg, Demunter, and Liu (2003)	Telephone	54	Nurse manager or charge nurse[d]	Oregon	40.7	52 (39–65)	55.6	—	71 (59–83)	81 (70–92)
Simons (2000)	Telephone	125	RN or MDs	Pennsylvania	—	28 (20–36)	—	—	—	—
Temin, Coles, Feldman, and Mehta (2005)	Telephone	72	RN or MDs	Massachusetts	12.5		—		80 (71–89)	
Woodell, Bowling, Moracco, & Reed, 2007	Mailed	103	ED staff nonspecific[e]	North Carolina	—	83 (76–90)	51	83 (76–90)	—	74 (66–83)
Weighted mean (%)	—	—	—	—	—	60	—	75	44	62

Note. EC = emergency contraception; ED = emergency departments; STI = sexually transmitted infection.

[a] Specially trained staff had received specialized sexual assault–focused training, which includes but is not limited to rape crisis training and sexual assault nurse examiner (SANE) training.

[b] Mixed methods included qualitative interview with Rape Crisis Agency, survey of ED staff, and survey of hospital ED administrators. ED staff survey results data were extracted for this systematic review.

[c] Includes nurse, charge nurse, nurse manager, sexual assault forensic examiner nurse, ER supervisor, ER director.

[d] Other RNs and MD in ED were interviewed if others were not available.

[e] Includes directors of emergency departments, nurse managers, directors of nursing, registered nurses, SANEs, SANE coordinators, clinical directors, medical directors of ED, and ED managers—Data not reported.

Table 2.

Percentage of Hospitals Reporting on Availability of Sexually Transmitted Infection Testing and Prophylaxis for Sexual Assault Victims in Emergency Departments in the United States.[a]

First Author, Year (Reference Number)	STI Testing (*N* = 3)	STI Prophylaxis (*N* = 5)	HIV Testing (*N* = 3)	HIV Prophylaxis (*N* = 4)
Bakhru, Mallinger, and Fox (2010)	—	89 (83–95)	—	45 (35–55)
Campbell et al. (2006)	38 (29–47)	82 (75–89)	11 (5–17)	14 (8–20)
Patel, Panchal, Piotrowski, and Patel (2008)	90 (85–95)	81 (75–88)	39 (31–47)	28 (25–32)
Patel et al. (2013)	86 (83–89)	82 (79–85)	81 (78–84)	69 (66–73)
Patel (2004)	—	92 (88–97)	—	—
Weighted mean (%)	81	84	64	53

[a]Values expressed as % (95% confidence interval).

Table 3.

Critical Findings of Review.

Critical Findings	• We conducted a scoping review to assess the percentage of hospitals with policies regarding EC and the frequency with which U.S. EDs provide EC to sexual assault survivors.
	• In eight of the nine studies, 52–83% of hospitals had a policy on EC; study published in 2000 reported 28% of hospitals with an EC policy.
	• Additionally, 42–83% of hospitals provided EC counseling, 34–83% offered EC, and 45–81% had EC available to dispense onsite.
	• Overall, 81–92% provided STI prophylaxis, 38–90% provided STI testing, 14—69% provided HIV prophylaxis, and 11–81% provided HIV testing.