



### Research Article

## Access to Emergency Contraception for Sexual Assault Victims in Alabama

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### Abstract

**Objective:** We aimed to quantify how often EC is considered and offered to Sexual Assault (SA) survivors in Alabama Emergency Departments (EDs) and in addition, attempt to qualify any underlying cause(s) for the non-consideration and/or underutilization.

**Methods:** Data was obtained via two surveys. Our first survey, focusing on hospital policy, was mailed to hospital administrators at 105 eligible EDs in Alabama. Our second survey, assessing routine practice in SA and personal opinion regarding EC, was distributed to Emergency Medicine (EM) providers associated with an academic medical center in Alabama. Groups were compared using chi-squared tests.

**Results:** We received responses from 20 eligible hospital administrators; the majority of hospitals treated less than 50 survivors annually and regularly referred survivors to SANE centers for management. Only 6.2% of hospitals had a formalized hospital policy on survivor care. We received 61 physician survey responses. Less than half of physicians counseled about or prescribed EC to survivors. Reasons physicians did not counsel about or prescribe EC included 'lack of knowledge' (18%), 'standard of care, but forget' (12.3%), 'EC is managed by SANE' (11.5%) and 'religious or moral opposition' (9%).

**Conclusion:** Exploring factors that inform the underutilization of EC for SA survivors could improve statewide SA standard of care.

**Keywords:** Contraception; Emergency department; Emergency contraception; Sexual assault; Sexual violence

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### Introduction

Unwanted pregnancy as a result of sexual violence is a significant national public health concern. A study published by the American Journal of Obstetrics and Gynecology found that the five percent of rapes resulted in pregnancy among female survivors of reproductive age [1]. Another study that followed found that of the 333,000 sexual assaults and rapes reported, there was an estimated 25,000 consequent pregnancies, of which 22,000 could have been prevented by prompt prophylactic care [2]. Women with history of trauma or sexual violence including rape, are at risk for potential sequelae during pregnancy, including but not limited to rape trauma syndrome, a form of re-traumatization with routine obstetrical care or abortion procedures, difficult obstetrical courses, and poor perinatal outcomes [3-5]. Additional psychological sequelae including pregnancy denial or ambivalence as well as severe maternal maladaptation have also been documented in pregnancies associated with rape [6].

Some states have passed legislative mandates requiring physicians to offer Emergency Contraception (EC) to all Sexual Assault (SA) survivors; Alabama, however, despite reporting close to two thousand rapes per year, has no standardized state policy regarding pregnancy prevention for SA survivors [7]. As a result, there is significant variation in interpretation of standard of care for Alabama providers and health systems that may contribute to unintended pregnancies secondary to SA. Existing literature has examined SA prophylactic care in other states and regions [8-15]. However, in Alabama, where limited family planning exposure for training physicians or religious and cultural beliefs may play a role in attitudes towards contraception, little is known about hospital policies regarding SA prophylactic care or ED provider barriers to EC [16-18].

Here we present the outcomes of an Alabama statewide survey of ED administrators and physician providers regarding current site-specific ED practices for victims of SA as well as barriers to and beliefs about EC.

### Materials and Methods

This was a survey study of all hospitals in Alabama with an ED and all physicians who were current trainees, attending physicians or former trainees of the Emergency Medicine department of a teaching institution in Alabama. Institutional review board approval was obtained.

We identified hospitals in Alabama with an ED through the Alabama Hospital Association (ALHA) website directory. We excluded specialty hospitals (children's, psychiatric, rehabilitation, Veterans Affairs) and those that did not have EDs. Surveys were based on a previously validated survey used by Woodell et al., that was further developed and adapted for specific utilization in Alabama hospitals [15]. Both surveys were reviewed by hospital employees familiar with ED policies and researchers with survey expertise. Research Electronic Data Capture (REDCap) was used for survey administration and data collection.

For each included hospital, we identified a hospital administrator as listed on the ALHA website. A physical survey was mailed to the identified administrator at each hospital with the option to return the survey in a pre-paid envelope or to complete the survey directly on REDCap. Both the online and offline survey methods were anonymous. Each hospital was asked to self-identify as either a public/urban, rural, or private institution. In addition to focused questions regarding hospital-specific SA statistics and practice, if the respondent indicated that a formalized SA policy existed at their institution, we requested a copy to be attached to their return survey or uploaded securely to REDCap. Surveys were requested to be completed within six weeks.

For our physician survey on opinions and experiences with EC, we anonymously surveyed EM physicians who are board-certified and have completed residency (attendings) and training physicians (resident physicians) at an urban, public university ED as well as recent former resident graduates of the program still working in Alabama. We also asked for unidentifiable demographic information (Table 1). We separately analyzed the results from the administrator survey and physician survey. We also analyzed responses from each survey by demographic information as pertinent. The groups were compared utilizing chi-squared test. All analyses were completed using Microsoft Excel.

Hospital Characteristic	N=20
<b>Type of hospital</b>	
Private	2 (10.0%)
Public	9 (45.0%)
Rural	9 (45.0%)
<b>Gender</b>	
Male	6 (30.0%)
Female	14 (70.0%)
<b>Survey respondent degree</b>	
RN	6 (30.0%)
MD	3 (15.0%)
MSN	5 (25.0%)
JD	1 (5.0%)
MBA	4 (20.0%)
Other	2 (10.0%)

Table 1: Hospital characteristics.

## Results

### Hospital administrator survey

#### Characteristics (Table 1)

We mailed surveys to a total of 105 hospital administrators of Alabama hospitals, after excluding 21 hospitals based on our criteria. We received responses from 20 hospital administrators that were responding on behalf of their institution (19.0% response rate). Of those, 9 self-identified as public hospitals, 9 as rural hospitals and 2 as private hospitals (Table 1). Survey respondents were hospital administrators with a broad range of backgrounds and roles (Table 1). Of the hospitals surveyed, 71% of hospitals only treated between 0-50 survivors per year, 48% referred survivors to other hospitals or crisis centers and 67% regularly referred survivors to local SANE centers.

SANE centers are secure facilities where survivors of sexual violence are evaluated and treated by staff with specialized training in trauma-informed healthcare and forensic evidence collection.

#### SANE access and training (Table 2)

While 24% of surveyed hospitals reported SANEs at their institution, only 14.3% had onsite SANEs available 24/7. Amongst hospital administrator respondents, 24% of hospitals sponsor no cost SANE training and 29% offer to reimburse staff for SANE training. An additional 57% of respondents noted that their institutions regularly provide physical space for outside vendors to provide SANE training for their staff.

#### Hospital policy (Table 2)

Overall, 62% of surveyed hospitals had a documented policy for care of the SA patient of which 19% included HIV/Sexually Transmitted Infection (STI) testing and/or antibiotic prophylaxis. In addition, 38% of respondents provided policies included a component of forensic evidence collection and 24% mentioned EC or had EC dispensed on site. Ten percent of surveyed hospitals had a physician referral policy for physicians who do not feel comfortable prescribing EC to refer to an outside institution or colleague who is comfortable prescribing.

#### Public vs. private vs. rural (Table 2)

Within the hospitals surveyed, we also compared policies and practices between public, private and rural hospitals. Three (33%) public hospitals surveyed estimated that they treated greater than 100 survivors per year; comparatively, none of the private or rural hospitals treated greater than 100 survivors per year. 67% of rural hospitals responded that they refer survivors to other hospitals compared to 50% of private hospitals and 33% of public hospitals. Private hospitals surveyed had the highest percentage of written policies on SA care (n=2; 100%) compared to rural hospitals (n=6; 66%) and public (n=5; 56%). However, no rural hospitals had any written language in their policies on EC whereas four public hospitals (44%) and one private hospital (50%) did. No differences among hospital types were found to be statistically significant (Table 2).

### Physician survey

#### Characteristics (Table 1)

For our single-institution physician practice-focused survey, we received responses from n= 61 physicians (37.2% response rate).

#### Practice behaviors (Table 3)

Amongst respondents, HIV/STI testing was considered standard by 85.3% of respondents, HIV and/or STI prophylaxis was considered standard by 82.0%, forensic evidence collection was considered standard by 78.7% and referral to a SANE center or other rape crisis center was considered standard by 95.1%. Regarding EC, counseling about EC was considered standard by 80.3%, offering/prescribing EC was considered standard by 70.5% and dispensing EC to survivors was standard for 32.8%.

Survey Item	Private N=2	Public N=9	Rural N=9	p-value	Total* N=20
<b># of Sexual assault survivors treated per year</b>					
0-50	1 (50.0%)	6 (66.6%)	8 (88.8%)	0.38	15 (75.0%)
51-150	1 (50.0%)	1 (0.0%)	1 (11.1%)	0.45	4 (20.0%)
151 or more	0 (0.0%)	2 (22.2%)	0 (0.0%)	0.26	2 (10.0%)
<b>Regularly referral to other hospitals for care</b>	1 (50.0%)	3 (33.3%)	6 (66.6%)	0.37	10 (50.0%)
<b>Regular referral to SANE centers</b>	1 (50.0%)	6 (66.6%)	7 (77.7%)	0.71	14 (70.0%)
<b>Hospital has no-cost onsite SANE training</b>	1 (50.0%)	2 (22.2%)	2 (22.2%)	0.7	5 (25.0%)
<b>Hospital provides resources for SANE training provided by external partner/vendors</b>	1 (50.0%)	5 (55.5%)	6 (66.6%)	0.85	12 (60.0%)
<b>Hospital provides financial assistance for nurses who pay out of pocket to complete SANE training</b>	2 (100.0%)	2 (22.2%)	2 (22.2%)	0.08	6 (30.0%)
<b>SANEs that work onsite</b>	0 (0.0%)	4 (44.4%)	1 (11.1%)	0.18	5 (25.0%)
<b>SANEs available 24/7</b>	0 (0.0%)	3 (33.3%)	0 (0.0%)	0.12	3 (15.0%)
<b>Hospital Policy on Sexual Assault Care</b>	2 (100.0%)	6 (55.6%)	6 (66.6%)	0.62	13 (65.0%)
<b>Requires HIV/STI testing and/or prophylaxis</b>	1 (50.0%)	2 (22.2%)	1 (11.1%)	0.45	4 (20.0%)
<b>Requires offering to collect forensic evidence</b>	0 (0.0%)	5 (55.6%)	3 (33.3%)	0.3	8 (40.0%)
<b>Requires pregnancy test</b>	1 (50.0%)	5 (55.6%)	2 (22.2%)	0.34	8 (40.0%)
<b>Emergency contraception dispensed on-site</b>	1 (50.0%)	1 (11.1%)	0 (0.0%)	0.1	5 (25.0%)
<b>Referral policy** for physicians</b>	1 (50.0%)	1 (11.1%)	0 (0.0%)	0.1	0 (0.0%)

**Table 2:** Alabama hospital policies on sexual assault care.

\*\*Referral policy for physicians who do not feel comfortable prescribing emergency contraception for religious or other reasons.

Physician Characteristic	N = 61
<b>Hospital role identification</b>	
Attending	43 (70.5%)
Fellow	3 (4.9%)
Resident	12 (19.7%)
Missing	3 (4.9%)
<b>Board certification</b>	
Emergency medicine	56 (91.8%)
Other: pediatric EM	3 (4.9%)
Missing	2 (3.3%)
<b>Gender</b>	
Male	43 (70.5%)
Female	18 (29.5%)
<b>Age</b>	37.80 (27-71)**
<b>Number of years in practice</b>	8.13 (1-40)**
<b>Race/Ethnicity</b>	
White	58 (95.1%)
Black	2 (3.3%)
Other	1 (1.6%)

**Table 3:** Physician characteristics.

\*Respondents chose "all that apply"

\*\*Mean (Range)

In addition to what items they generally considered standard of care for SA survivor care, respondents were also asked about their own individual practice behaviors. 30% of physicians surveyed routinely transfer survivors to another hospital or SANE center. 48.8% of physicians very frequently (76-99% of the time) or always (100%) counseled survivors about EC. 27.9% of physicians very frequently or always prescribed and dispensed EC to survivors.

### Reasons for not prescribing EC (Table 4)

Of those who did not counsel or prescribe about EC 100% of the time, lack of knowledge was the most common reason (n=22; 18%), part of standard of care, but sometimes just forget was the second most common reason (n=15; 12.3%), followed by EC is primarily provided by SANE (n=14; 11.5%). Other reasons included lack of awareness (n=13; 10.7%), religious or moral opposition (n=11; 9.0%), patient preferences or patient declines (n=6; 4.9%), not indicated per physician because patient is on birth control or is otherwise sterile (n=3; 2.5%), hospital does not dispense/provide (n=2; 1.6%) and finally physician does not because EC is available over the counter (n=1; 0.8%). Of physicians who cited religious or moral opposition, 100% considered EC as a form of abortion.

### Attendings vs. residents

Among the physicians surveyed, we found that attending physicians were more likely to counsel about emergency contraception compared to resident physicians (p<0.01). Resident physicians were more likely to routinely transfer survivors to another hospital or to SANE centers (p<0.05). Attending and resident physicians were found to have significantly different primary reasons for not counseling, prescribing or dispensing EC to SA survivors (p<0.01). For example, resident physicians were more likely to consider religious or moral opposition as one of their primary reasons (n=6; 16.6%) compared to attendings (n=5; 5.8%) and also more likely to cite lack of knowledge (n=12; 33.3%) compared to attendings (n=10; 11.6%) (Table 5).

Survey Item	Attending N=43	Resident N=18	P value	Male N=43	Female N=18	P value	Total N=61
<b>Which of the following items are standard of care for sexual assault survivors?*</b>							
HIV/STI testing	36 (83.7%)	16 (88.9%)	0.6	39 (90.7%)	13 (72.2%)	0.06	52 (85.3%)
HIV/STI prophylaxis	37 (86.0%)	13 (72.2%)	0.2	35 (81.4%)	15 (83.3%)	0.86	50 (82.0%)
Forensic evidence collection	35 (81.4%)	13 (72.2%)	0.43	33 (76.7%)	15 (83.3%)	0.56	48 (78.7%)
Referral to SANE/crisis center	41 (95.4%)	17 (94.4%)	0.88	41 (95.3%)	17 (94.4%)	0.88	58 (95.1%)
Counsel about EC	35 (81.4%)	14 (77.8%)	0.75	35 (81.4%)	14 (77.8%)	0.75	49 (80.3%)
Offer/Prescribe EC	33 (76.7%)	10 (55.6%)	0.1	29 (67.4%)	14 (77.8%)	0.42	43 (70.5%)
Dispense EC	16 (37.2%)	4 (22.2%)	0.26	12 (27.9%)	8 (44.4%)	0.21	20 (32.8%)
<b>Routinely transfer survivors to another hospital or SANE center</b>	30 (69.8%)	17 (94.4%)	0.04	37 (86.1%)	10 (55.6%)	< 0.01	47 (77.0%)
<b>Counsel survivors about Emergency contraception very frequently (76-99%) OR always (100%)</b>	21 (48.8%)	2 (11.1%)	< 0.01	15 (34.9%)	11 (61.1%)	0.06	23 (37.7%)
<b>Prescribe &amp; dispense emergency contraception to survivors very frequently (76-99%) OR always (100%)</b>	12 (27.9%)	2 (11.1%)	0.15	7 (38.9%)	5 (27.8%)	0.30	14 (23.0%)

**Table 4:** Physician practices regarding sexual assault care\*.

\*Physicians included: current attendings, fellows and residents who work as Emergency Medicine physicians at a large university hospital in Alabama and also includes past residents of the residency program who were interviewed about their practice while at the institution.

Reason	Attending N=43	Resident N=18	P value	Male N=43	Female N=18	P value	Total N=61
<b>Most OR second-most important reason*</b>							
Part of standard of care, but forget	10 (11.6%)	5 (13.9%)	< 0.01	12 (14.0%)	3 (8.3%)	0.1	15 (12.3%)
Religious/Moral opposition	5 (5.8%)	6 (16.6%)		8 (9.3%)	3 (8.3%)		11 (9.0%)
Lack of knowledge	10 (11.6%)	12 (33.3%)		18 (20.9%)	4 (11.1%)		22 (18.0%)
Lack of awareness	8 (9.3%)	5 (13.9%)		12 (14.0%)	1 (2.8%)		13 (10.7%)
Missing	23 (26.7%)	4 (11.1%)		17 (19.8%)	10 (27.8%)		27 (22.1%)
Other: _____	30 (34.9%)	4 (11.1%)		19 (22.1%)	15 (41.7%)		34 (27.9%)
<b>SANE does this</b>						14 (11.5%)	
<b>Patient preference/declines</b>						6 (4.9%)	
<b>Hospital does not Dispense/provide</b>						2 (1.6%)	
<b>Not indicated**</b>						3 (2.5%)	
<b>EC is available over the counter</b>						1 (0.8%)	
<b>Other: Missing</b>						7 (5.7%)	
<b>Most important reason</b>							
Part of standard of care, but forget	6 (14.0%)	4 (22.2%)	< 0.05	8 (18.6%)	2 (11.1%)	0.5	10 (16.4%)
Religious/moral opposition	3 (7.0%)	4 (22.2%)		4 (9.3%)	3 (16.7%)		7 (11.5%)
Lack of knowledge	4 (9.3%)	6 (33.3%)		9 (20.9%)	1 (5.6%)		10 (16.4%)
Lack of awareness	3 (7.0%)	1 (5.6%)		3 (7.0%)	1 (5.6%)		4 (6.6%)
Other: _____	20 (46.5%)	2 (11.1%)		13 (30.2%)	9 (5.0%)		22 (36.1%)
Missing	7 (16.3%)	1 (5.6%)		6 (14.0%)	2 (11.1%)		8 (13.1%)
<b>Second most important reason</b>							
Part of standard of care, but forget	4 (9.3%)	6 (33.3%)	0.15	4 (9.3%)	1 (5.6%)	0.09	5 (8.2%)
Religious/moral opposition	2 (4.7%)	1 (5.6%)		4 (9.3%)	0 (0.0%)		4 (6.6%)
Lack of knowledge	6 (14.0%)	2 (11.1%)		9 (20.9%)	3 (16.7%)		12 (19.7%)
Lack of awareness	5 (11.6%)	4 (22.2%)			0 (0.0%)		9 (14.8%)
Other: _____	10 (23.3%)	2 (11.1%)		6 (14.0%)	6 (33.3%)		12 (19.7%)
Missing	16 (37.2%)	3 (16.7%)		11 (25.6%)	8 (44.4%)		19 (31.1%)

**Table 5:** Physician reasons for not counseling, prescribing or dispensing emergency contraception to sexual assault survivors.

\*Respondents were asked to list their most and second most important reasons. The frequencies listed under "Most OR Second Most" are a combined frequency and the calculations have been adjusted to reflect this (for example N=61 physicians, frequency for Most OR Second Most utilizes a N=122 given there are 122 total responses).

\*\*Physician listed that emergency contraception not indicated because patient sterile, on birth control or there was condom use during assault.

## Male vs. females

Male physicians were significantly more likely to routinely transfer survivors to another hospital or SANE center ( $p < 0.01$ ). Female physicians responded that they counseled survivors about EC very frequently or always compared to male physicians; this difference, however, was not found to be statistically significant ( $p = 0.06$ ). There were no other significant differences between EC prescribing and dispensing practices in regard to SA care when comparing responses of male and female physicians.

## Discussion

Our findings demonstrate that less than ten percent of Alabama hospitals have a formalized policy with regards to EC for SA survivors. The vast majority of hospitals surveyed only treated between 0-50 survivors a year and a similar proportion regularly referred their survivors for care at specialized SANE facilities. While comprehensive ED management of SA patients is important, it may be that such small numbers of SA patient presentations to smaller, rural ED's may make it more reasonable for these hospitals to refer or transfer to specialty care following medical stabilization. This would be consistent with routine or expected transfer of other medical conditions requiring subspecialty care or expertise not routinely available at all smaller or rural ED's. The infrequency of SA patient presentation may contribute to lack of policy standardization for this population. Presumably in the event of lack of policy or protocol, SA patient management is deferred to the managing ED physician.

Amongst ED physicians however, even those at larger, public facilities with reported SA patient management protocols, less than 30% of physicians very frequently or always discuss and/or prescribe EC for survivors. Common reasons that were attributed to not prescribing EC included lack of knowledge, knowing that it is standard of care but forgetting, and referral of EC to management by SANE. The results from our Alabama-focused study were largely in line with the data from other published state-focused studies. Prior studies in Pennsylvania, Illinois and North Carolina have similarly found that there is significant underutilization of EC for SA survivors in EDs [11,12,15]. Patel's study found that in the state of Pennsylvania, only 42% of all hospitals routinely offer EC counseling and 16% of the hospitals did not offer any counseling at all regarding EC [11]. In EDs in Illinois, Patel found that while two out of three provide STI management, only two out of five provided any counseling/provision of EC [12]. Woodell found that of EDs in North Carolina, just over 50% provided survivors with EC without exception [15]. In Patel's nationwide survey of hospital policy, it was found that among 582 EDs surveyed in the US, only 60.3% provided EC care [13]. In another study focused on physician practice conducted at an emergency physician conference, 8.4% of ED residents and attendings from around the nation responded that they would not prescribe post-coital contraception in cases of rape [9].

Religious-affiliated hospitals around the nation tend to generally have decreased access and counseling for EC for survivors [8,14,19]. One study found that across 619 staff members interviewed at hospitals across the United States, 42% of non-Catholic hospitals and 55% of Catholic hospitals said that they do not dispense EC, even in cases of SA [8]. Furthermore, another study conducted in California found that of 45 Catholic hospitals in California 66% of staff stated that their hospital would not provide EC under any circumstance

(including rape) and of those hospitals that would not dispense EC, fewer than half provided referrals [14]. In a similar finding, another study found that some Catholic hospitals have policies that prohibit any discussion of EC with rape survivors, while in others, the survivor learned about EC treatment only by asking [19]. There have not, however, previously been many studies examining physician and healthcare attitudes towards EC in Alabama. According to the Pew Research Center's Religious Landscape Study, Alabama is tied as first for the most religious state in the United States [16]. In 2004, 11 nurses in public health clinics resigned rather than administer EC, citing that they considered the drug to be the equivalent of abortion and against their beliefs [17,18]. Our study confirmed these findings in the existing literature as multiple physician providers cited religious opposition as a reason for not counseling and prescribing of EC for survivors of SA. We also found that of those who cited religious opposition as a primary or secondary reason to not prescribe, that 100% believe that EC is a form of abortion.

Our study was limited by moderate response rates of 19.0% for our hospital administrator survey and 37.2% for our physician survey. Additionally, our results may have been affected by response bias. Administrators and physicians who opted to respond to the survey after reading the study aims could have been more likely to have a policy in place at their institution or more likely to counsel and prescribe EC compared to those who did not. Our physician survey was limited to recruited physicians from our own institution, which is a large academic center with significant funding, resources and protocols in place. Many of these physicians are accustomed to referral to the local SANE center for standardized comprehensive care of survivors. Because of local SANE availability, physicians may be less familiar with SA survivor management in the ED since they may not interface with survivors for an extended period of time or participate directly in their care except to ensure medical stabilization and subsequently arrange transfer. Conversely, at rural and private hospitals that do not have such standardized protocols and where there are also very low access rates to SANE resources, those physicians may be truer first line providers for assault survivors. Thus, a survey of all physicians or specifically of rural ED physicians could potentially have different practice behaviors and also different reasons for why EC was not counseled, prescribed or dispensed.

Future studies focused on both Alabama practice and policy or similarly state or national focused studies may consider further targeting hospital administrators with similar training (i.e., chief medical officer of the ED) as this may allow for more uniform interpretation of the questions. In addition, it may be helpful to expand upon what is entailed in "counseling" in regard to EC for survivors of SA and to further explore whether this training is a robust part of the training curriculum for resident physicians across various specialties that may interface with SA survivors in their work.

## Conclusion

The current study demonstrates that the majority of surveyed hospitals in the state of Alabama do not have any written standardized policy with regard to the management of the SA patient; those that do have a wide range of protocols in regard to the care of survivors. Furthermore, our study demonstrates a significant underutilization of and lack of knowledge about EC as a resource for survivors of SA. Future studies should continue to explore what determinants play a

part in the underutilization of EC and the lack of consistent hospital and practice policies for SA survivors in the state of Alabama and in other regions around the country.

## Conflicts of Interest

The authors have no financial disclosures to declare and no conflicts of interest to report.

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## Key Points

- Unwanted pregnancy as a result of sexual violence is a significant national public health concern
- In Alabama, where limited family planning exposure for training physicians or religious and cultural beliefs may play a role in attitudes towards contraception, little is known about hospital policies regarding SA prophylactic care or ED provider barriers to EC
- We found that many of the surveyed Alabama hospitals either do not have formal policies or have very variable protocols in regard to treating sexual assault survivors
- Less than half of the physicians surveyed at the only urban, academic, Level I trauma center in the state, always counsel survivors about EC; even less always provide EC to survivors

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