



Original research article

# Obstetrician–gynecologist physicians’ beliefs about emergency contraception: a national survey<sup>☆</sup>

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## Abstract

**Background:** Although emergency contraception (EC) is available without a prescription, women still rely on doctors’ advice about its safety and effectiveness. Yet little is known about doctors’ beliefs and practices in this area.

**Study Design:** We surveyed 1800 US obstetrician–gynecologists. Criterion variables were doctors’ beliefs about EC’s effects on pregnancy rates, and patients’ sexual practices. We also asked which women are offered EC. Predictors were demographic, clinical and religious characteristics.

**Results:** Response rate was 66% (1154/1760). Most (89%) believe EC access lowers unintended pregnancy rates. Some believe women use other contraceptives less (27%), initiate sex at younger ages (12%) and have more sexual partners (15%). Half of physicians offer EC to all women (51%), while others offer it never (6%) or only after sexual assault (6%). Physicians critical of EC, males and religious physicians were more likely to offer it never or only after sexual assault (odds ratios 2.1–12).

**Conclusion:** Gender, religion and divergent beliefs about EC’s effects shape physicians’ beliefs and practices.

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**Keywords:** Emergency contraception; Post coital contraception; Levonorgestrel; Ethics; Religion

## 1. Introduction

Emergency contraception (EC), namely, levonorgestrel (Plan B), has incited controversy for years. In 2004, the Food and Drug Administration (FDA) denied an application for over-the-counter sales, a decision many criticized as based on politics rather than on scientific data [1,2]. In 2006, the FDA made the drug available without prescription for women 18 years and older, but kept it behind the pharmacy counter, simplifying access for some (but not all) women. However, reports emerged that some pharmacies refused to

stock the medicine [3], and some pharmacists refused to dispense it, potentially limiting patients’ access to the drug within the 72-h window of peak effectiveness [4,5].

Controversy surrounds many aspects of EC. Some patients and clinicians oppose all contraception [3]. Some worry that post coital levonorgestrel interferes with embryo implantation [6]. (Current evidence weighs against this [7], but its theoretical possibility frequently appears in medical literature [3,8–12].) Others caution that access to levonorgestrel may encourage patients to change their sexual behaviors [1,8,13–17] and limits clinicians’ opportunities to monitor and advise their sexually active patients [18]. Additionally, though clinical trials have demonstrated levonorgestrel’s efficacy, it is debated whether EC reduces unintended pregnancy and abortion rates in the general population [14,17,19].

Emergency contraceptives are now available to adults without a prescription, but physicians still play an important role. Minors (under 17 years) still require a prescription, and

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patients rely on physicians for medical information and advice. In the past decade, several studies have assessed physicians' beliefs and practices regarding EC [8,14–16,20,21], but to our knowledge all were initiated prior to the 2006 FDA decision making levonorgestrel available without a prescription and none provided in-depth characterization of which physicians favor or oppose EC. Here we surveyed obstetrician–gynecologist (Ob/Gyn) physicians to determine what demographic, clinical and personal characteristics (including religious characteristics) correlate with various beliefs and practices regarding EC.

## 2. Methods

From October 2008 until January 2009, confidential self-administered surveys were mailed to a stratified random sample consisting of 1800 general US Ob/Gyn physicians 65 years old or younger. The sample was generated from the American Medical Association Physician Masterfile — a database intended to include all practicing US physicians. The primary sample included 1215 physicians selected randomly. Additionally, to increase Muslim, Hindu and Jewish representation, we used validated ethnic surname lists to oversample physicians with typical Arabic ( $n=225$ ), South Asian ( $n=180$ ) and Jewish ( $n=180$ ) surnames [22–24]. Physicians received up to three separate mailings of the questionnaire; the first included a \$20 bill and the third offered an additional \$30 for participating. Physicians also received an advance letter and a postcard reminder after the first questionnaire mailing. All data were double keyed, cross-compared and corrected against the original questionnaire. The study was approved by the University of Chicago institutional review board.

### 2.1. Questionnaire

Primary criterion measures assessed physicians' beliefs about EC using the following items: compared to women who are similar but do not have access to emergency contraceptive pills, (a) women who have access to emergency contraceptive pills will have lower rates of unintended pregnancy; (b) women who have access to emergency contraceptive pills will be less likely to use other contraceptive methods; (c) giving women or girls access to emergency contraceptive pills will cause them to initiate sexual activity at a younger age than if they did not have access to emergency contraceptive pills; and (d) women who have access to emergency contraceptive pills will have, on average, more sexual partners. Response options ranged from strongly disagree to strongly agree. We also asked physicians: Which of the following best describes your practice with respect to post coital or emergency contraception? Do you offer it (a) to all women you believe are at risk of unplanned pregnancy, (b) only to women who tell you that they have had unprotected intercourse, (c) only to victims of sexual assault, (d) to nobody under any circumstances? For

multivariable analysis, practices were dichotomized according to whether the physician offered EC to all women (yes/no) or offered EC never/only for rape (yes/no).

Predictor variables included several religious characteristics. Religious affiliation was classified as none/no affiliation, Hindu, Jewish, Muslim, Catholic (includes Roman Catholic  $n=237$ , and Eastern Orthodox  $n=25$ ), Evangelical Protestant, non-Evangelical Protestant and other religion (includes nine Buddhists). Respondents were asked about the importance of their religion, with four response options ranging from 'not very important in my life' to 'the most important part of my life.' Attendance at religious services was categorized as never, once a month or less, and twice a month or more.

In addition to demographic data, we assessed several self-reported clinical characteristics: board certification, American College of Obstetrics and Gynecologists (ACOG) membership, working primarily in an academic medical center and the percentage of patients under 18 years.

### 2.2. Statistical analysis

Case weights were incorporated to account for the oversampling strategy and to correct for differences in response rate among the surname categories and between US vs. international medical school graduates. This method enabled us to generate estimates for the population of US Ob/Gyn physicians. We used the chi-square test to examine the associations between each predictor and each criterion measure, and then used multivariable logistic regression to test whether bivariate associations changed after adjustment for other relevant covariates. All analyses were conducted using the survey-design-adjusted commands of Stata SE statistical software (version 10.0; Stata Corp., College Station, TX, USA).

## 3. Results

The response rate was 66% (1154/1760) after excluding 40 potential respondents who were retired or had invalid addresses. The response rate varied by stratum: 68% (807/1188) in the primary sample, 54% (120/221) among those with Arabic surnames, 61% (107/175) among those with South Asian surnames and 68% (120/176) among those with Jewish surnames. Graduates of international medical schools were less likely to respond than graduates of US medical schools (58% vs. 68%,  $p=.001$ ). The response rate did not differ significantly by age, gender, region or board certification. Respondents' demographic characteristics are reported in Table 1.

Most Ob/Gyn physicians (89%) believe that women with access to EC will have fewer unintended pregnancies. Some physicians are concerned that women with access to EC will not use other contraceptives (27%), will initiate sexual activity at a younger age (12%) and will have more sexual partners (15%). Regarding clinical practices, just over half

Table 1  
Characteristics of the 1154 survey respondents<sup>a</sup>

Physician characteristics	Number	%
Sex		
Female	537	47
Male	617	53
Race <sup>b</sup>		
White, non-Hispanic	774	69
Black, non-Hispanic	67	6
Asian	202	18
Hispanic/Latino	64	6
Other	22	2
Age, years		
25–40	291	25
41–47	305	26
48–55	281	24
56–65	277	24
Region		
South	373	32
Midwest	249	22
Northeast	288	25
West	242	21
Immigration history		
Born in US	817	72
Born outside US	323	28
Medical school		
US medical graduate	932	81
International graduate	222	19
Board certification		
Certified	963	83
Not board certified	191	17
Religious affiliation		
No affiliation	119	11
Hindu	91	8
Jewish	160	14
Muslim	54	5
Catholic	262	23
Evangelical Protestant	91	8
Non-Evangelical Protestant	300	27
Other religion	48	4
Importance of religion in your life		
Not very important	272	24
Fairly important	321	28
Very important	385	34
The most important part	157	14
Attendance at religious services		
Never	123	11
Once/month or less	547	48
Twice/month or more	466	41

<sup>a</sup> Numbers do not sum to 1154 because not all respondents answered all the questions. The mean age of respondents was 47.8 years, SD 9.2, range 26–65. Percentages are not survey design adjusted and reflect the percent response within the study sample.

<sup>b</sup> Race and ethnic group were reported by physicians on the survey.

(51%) of Ob/Gyns offer EC to all women who they believe are at risk of unplanned pregnancy. A third (37%) offer it only to women who report having unprotected intercourse, and some never offer it (6%) or offer it only to victims of sexual assault (6%) (Table 2).

The belief that EC lowers unintended pregnancy rates was less common among doctors who were male (87% vs. 91% of females, OR 0.6, 95% CI 0.4–1.0). It was also less

common among religious doctors, such as those who attend services twice a month or more (84% vs. 95% of doctors who never attend, OR 0.3, 95% CI 0.1–0.7) (Table 3).

As seen in Table 3, male physicians, religious physicians and those who immigrated to the United States were all more likely to believe access to EC displaces use of other contraceptives, causes earlier sexual activity and increases the number of sexual partners. For example, male physicians were more than twice as likely as females (17% vs. 7%, OR 2.3, 95% CI 1.4–3.8) to believe that access to EC causes earlier initiation of sexual activity. Physicians who attended religious services frequently were more than four times as likely as those who never attended (22% vs. 7%, OR 4.1, 95% CI 1.9–9.1) to believe that access leads to more sexual partners. And immigrant physicians were more likely than those born in the US to believe EC displaces other contraceptives (39% vs. 25%, OR 2.0, 95% CI 1.3–3.1).

Board-certified physicians were slightly less likely to believe that access to EC causes early initiation of sexual activity (12% vs. 15% of doctors who were not board certified, OR 0.6, 95% CI 0.3–1.0). Doctors in the west were less likely than those in the south to believe that access leads to earlier sexual activity (8% vs. 16%, OR 0.4, 95% CI 0.2–0.8) or displaces use of other contraceptives (18% vs. 32%, OR 0.5, 95% CI 0.3–0.8) (Table 3).

Physicians' beliefs about EC were associated with their willingness to offer it. For instance, doctors who believe access to EC encourages women to have sex with more

Table 2

Obstetrician/gynecologists' beliefs about how access to emergency contraceptive pills will affect sexual behaviors and reproductive outcomes, and physicians' clinical practices regarding emergency contraception

Criterion variables	No.	% <sup>a</sup>
Compared to women who are similar but do not have access to emergency contraceptives		
Women who have access to emergency contraceptives will have lower rates of unintended pregnancy. (agree)	1028	89
Women who have access to emergency contraceptives will be less likely to use other contraceptive methods. (agree)	325	27
Giving women or girls access to emergency contraceptives will cause them to initiate sexual activity at a younger age than if they did not have access to emergency contraceptives. (agree)	156	12
Women who have access to emergency contraceptives will have, on average, more sexual partners. (agree)	180	15
Physician's practice with respect to post coital or emergency contraception		
Emergency contraception is offered to all women who the physician believes are at risk of unplanned pregnancy.	595	51
Emergency contraception is offered only to women who say they have had unprotected intercourse.	423	37
Emergency contraception is offered only to victims of sexual assault.	56	6
Emergency contraception is offered to nobody under any circumstance.	59	6

<sup>a</sup> Population estimates account for the survey design. Percentages reflect weighted results.

Table 3  
Obstetrician–gynecologists' beliefs about emergency contraception, by demographic and religious characteristics<sup>a</sup>

Physician characteristics	No. of respondents (N=1154)	Emergency contraception lowers unintended pregnancy rate (agree)			Emergency contraception is used instead of other contraception (agree)			Emergency contraception encourages sex at a younger age (agree)			Emergency contraception encourages sex with more partners (agree)		
		%	p	Odds ratio (95% CI)	%	p	Odds ratio (95% CI)	%	p	Odds ratio (95% CI)	%	p	Odds ratio (95% CI)
<b>Sex<sup>b</sup></b>													
Female	535	91	.06	1.0	22	<.001	1.0	7	<.001	1.0	11	<.001	1.0
Male	612	87		0.6 (0.4–1.0)	32		1.8 (1.3–2.5)	17		2.3 (1.4–3.8)	19		1.7 (1.1–2.7)
<b>Region<sup>b</sup></b>													
South	372	86	.07	1.0	32	.002	1.0	16	.03	1.0	18	.03	1.0
Midwest	248	88		1.0 (0.5–1.7)	32		1.1 (0.7–1.7)	14		1.1 (0.6–1.8)	18		1.2 (0.7–1.9)
Northeast	286	93		1.6 (0.8–3.1)	26		0.8 (0.5–1.2)	9		0.5 (0.3–1.0)	12		0.7 (0.4–1.1)
West	241	90		1.0 (0.6–1.8)	18		0.5 (0.3–0.8)	8		0.4 (0.2–0.8)	11		0.6 (0.3–1.1)
<b>Board certification<sup>b</sup></b>													
No	191	88	.74	1.0	26	.75	1.0	15	.22	1.0	15	.85	1.0
Yes	958	89		1.6 (0.9–3.0)	28		1.0 (0.6–1.6)	12		0.6 (0.3–1.0)	15		0.9 (0.5–1.5)
<b>Immigration history<sup>b</sup></b>													
Born in US	815	88	.12	1.0	25	<.001	1.0	10	<.001	1.0	13	.003	1.0
Born outside US	321	92		1.3 (0.7–2.5)	39		2.0 (1.3–3.1)	23		3.0 (1.8–5.0)	21		1.9 (1.1–3.4)
<b>Religious affiliation<sup>c</sup></b>													
No affiliation	119	94	<.001	1.0	16	<.001	1.0	3	<.001	1.0	3	<.001	1.0
Hindu	89	91		0.3 (0.1–1.4)	39		1.9 (0.7–4.9)	19		4.6 (1.3–17)	19		5.1 (1.4–19)
Jewish	159	99		4.8 (1.4–16)	19		1.2 (0.6–2.5)	6		2.6 (0.6–11)	8		2.3 (0.7–8.3)
Muslim	54	92		0.5 (0.1–2.2)	37		1.6 (0.6–4.3)	31		8.0 (1.9–34)	32		8.9 (2.4–33)
Catholic	260	87		0.4 (0.2–1.1)	29		1.9 (1.0–3.5)	13		5.0 (1.5–17)	17		5.7 (1.9–17)
Evangelical Protestant	91	76		0.2 (0.1–0.6)	44		4.0 (2.0–8.1)	27		15 (4.1–53)	33		14 (4.3–42)
Non-Evangelical Protestant	299	88		0.6 (0.2–1.4)	28		2.1 (1.1–3.8)	12		5.4 (1.6–18)	13		4.5 (1.5–13)
Other religion	48	95		1.1 (0.2–5.8)	19		1.3 (0.5–3.4)	9		3.9 (0.8–19)	14		5.2 (1.4–20)
<b>Importance of religion<sup>c</sup></b>													
Not very important	272	95	<.001	1.0	17	<.001	1.0	5	<.001	1.0	5	<.001	1.0
Fairly	318	93		0.8 (0.4–1.8)	27		1.6 (1.0–2.6)	10		1.9 (0.9–4.0)	11		2.1 (1.0–4.2)
Very	384	86		0.4 (0.2–0.7)	30		2.1 (1.3–3.2)	15		3.3 (1.6–6.9)	19		4.4 (2.3–8.4)
Most important thing	155	77		0.2 (0.1–0.4)	43		3.6 (2.1–6.1)	28		8.5 (3.9–19)	32		9.6 (4.7–19)
<b>Attend services<sup>c</sup></b>													
Never	123	95	<.001	1.0	16	<.001	1.0	4	<.001	1.0	7	<.001	1.0
1/month or less	542	92		0.6 (0.2–1.4)	23		1.5 (0.9–2.7)	9		2.5 (1.0–6.2)	9		1.4 (0.6–3.2)
2/month or more	464	84		0.3 (0.1–0.7)	35		2.8 (1.5–5.0)	18		5.0 (2.0–13)	22		4.1 (1.9–9.1)

<sup>a</sup> Population estimates account for the survey design. Percentages reflect weighted results.

<sup>b</sup> Multivariable odds ratios adjust for sex, race, immigration history, board certification, age, region, religious affiliation, importance of religion and attendance at services.

<sup>c</sup> Multivariable odds ratios adjust for sex, race, immigration history, board certification, age and region.

partners were less likely to offer it to all women at risk of unplanned pregnancy (29% vs. 55% who disagree, OR 0.4, 95% CI 0.3–0.6) (Table 4).

Doctors were more likely to offer EC to all women at risk of unplanned pregnancy if they were in the northeast (61%, OR 1.7, 95% CI 1.1–2.5) or west (59%, OR 1.7, 95% CI 1.1–2.5) compared to those in the south (42%, referent). The same was true for those who considered religion not very important in their lives (64% vs. 31% of doctors who consider religion “most important,” OR 3.4, 95% CI 2.1–5.6) or who said they never attend services (65% vs. 41% of doctors who attend twice a month or more, OR 2.3, 95% CI 1.4–3.6) (Table 4).

Conversely, males were more likely to say they offer EC never or only to victims of sexual assault (15% vs. 8% of females, OR 2.1, 95% CI 1.2–3.5). The same was true for doctors who consider religion the most important part of their lives (36% vs. 3% of those who indicate religion is not very important, OR 17, 95% CI 7.6–40) or who attend services frequently (21% vs. 5% of those who never attend, OR 4.2, 95% CI 1.6–11) (Table 4).

Of note, among doctors who offer EC never or only for sexual assault, 38% say more than 10% of their weekly patients are under 18 years old. Ninety-three percent are ACOG members. These rates do not differ significantly from those found among other physicians (in either bivariate or

Table 4

Obstetrician/gynecologists' practices regarding emergency contraception, by beliefs about emergency contraception, demographic characteristics and religious characteristics<sup>a</sup>

Beliefs about emergency contraception, and religious characteristics	No. of respondents (N=1154)	Doctor offers emergency contraception to all women believed at risk of unplanned pregnancy			Doctor offers emergency contraception never or only to victims of sexual assault		
		%	p	Odds ratio (95% CI)	%	p	Odds ratio (95% CI)
It lowers unintended pregnancy rate <sup>b</sup>							
Agree	1013	55	<.001	1.0	7	<.001	1.0
Disagree	117	23		0.3 (0.2–0.5)	45		9.0 (5.2–16)
Is used instead of other contraception <sup>b</sup>							
Agree	321	34	<.001	0.5 (0.3–0.7)	26	<.001	4.6 (2.8–7.7)
Disagree	809	58		1.0	6		1.0
It encourages sex at a younger age <sup>b</sup>							
Agree	153	32		0.5 (0.3–0.7)	37	<.001	5.6 (3.0–10)
Disagree	975	54		1.0	8		1.0
It encourages sex with more partners <sup>b</sup>							
Agree	177	29	<.001	0.4 (0.3–0.6)	35	<.001	5.1 (2.9–8.8)
Disagree	950	55		1.0	7		1.0
Sex <sup>b</sup>							
Female	524	57	<.001	1.0	8	<.001	1.0
Male	609	46		0.6 (0.4–0.8)	15		2.1 (1.2–3.5)
Region <sup>b</sup>							
South	366	42	<.001	1.0	16	<.001	1.0
Midwest	244	48		1.2 (0.8–1.8)	15		1.2 (0.7–2.3)
Northeast	283	61		1.7 (1.1–2.5)	4		0.4 (0.2–0.9)
West	238	59		1.7 (1.1–2.5)	8		0.5 (0.3–1.1)
Religious affiliation <sup>c</sup>							
No affiliation	118	66	<.001	1.0	3	<.001	1.0
Hindu	89	50		0.3 (0.1–0.8)	2		2.1 (0.3–15)
Jewish	159	62		0.9 (0.5–1.6)	1		0.3 (0.3–2.8)
Muslim	53	56		0.6 (0.2–1.5)	15		11 (1.8–70)
Catholic	256	48		0.5 (0.3–0.8)	13		4.2 (1.2–14)
Evangelical Protestant	90	31		0.3 (0.2–0.5)	34		11 (3.5–37)
Non-Evangelical Protestant	293	48		0.6 (0.3–0.9)	11		3.3 (1.0–10)
Other religion	48	64		0.7 (0.3–1.5)	6		3.0 (0.5–17)
Importance of religion <sup>c</sup>							
Not very important	270	64	<.001	3.4 (2.1–5.6)	3	<.001	1.0
Fairly important	312	52		2.2 (1.3–3.5)	6		1.6 (0.6–4.1)
Very important	380	49		2.0 (1.3–3.2)	12		3.7 (1.6–8.7)
Most important	152	31		1.0	36		17 (7.6–40)
Attend services <sup>c</sup>							
Never	120	65	<.001	2.3 (1.4–3.6)	5	<.001	1.0
1/month or less	540	58		1.9 (1.4–2.5)	4		0.8 (0.3–2.2)
2/month or more	455	41		1.0	21		4.2 (1.6–11)

<sup>a</sup> Population estimates account for the survey design. Percentages reflect weighted results.

<sup>b</sup> Multivariable odds ratios adjust for sex, race, immigration history, board certification, age, region, religious affiliation, importance of religion and attendance at services.

<sup>c</sup> Multivariable odds ratios adjust for sex, race, immigration history, board certification, age and region.

multivariable analysis). These physicians are somewhat less likely to work in academic medical centers (14% vs. 27%,  $p=.005$ ), but this difference does not remain significant after adjustment for other covariates.

#### 4. Discussion

In this national survey of Ob/Gyn physicians, the great majority (89%) believe women with access to EC will have fewer unintended pregnancies, while a sizeable minority believe access to EC causes women to use other contra-

ceptives less diligently, to initiate sexual activity at a younger age and to have more sexual partners. Males, immigrants and religious physicians were more likely to endorse these criticisms of EC. Doctors were more likely to offer EC to all eligible women if the doctors were female, practiced in the northeast or west, or were nonreligious. Male and religious physicians were more likely never to offer EC or to offer it only after sexual assault.

Strengths of the study include its nationally representative sampling strategy, its incorporation of immigrant and religious minority groups, an excellent response rate and a large number of respondents. Many of the sentiments

reported here have existed within society for some time, but they have never before been quantified in a national sample of Ob/Gyn physicians.

This study has limitations. The focus on Ob/Gyns limits our ability to generalize our findings to other kinds of physicians. Differences among specialties are known to exist — for instance, Ob/Gyn physicians are more likely to promote EC access than are family and general medicine physicians [20]. The survey questions were fairly nonspecific, providing a sketch of physicians' tendencies but leaving unanswered questions about how physicians would respond to specific (more detailed) situations. Additionally, nonrespondents may differ from respondents in ways that biased the findings, and self-reports are imperfect indicators of actual practices.

Many prior studies and essays have advanced the notion that access to EC will decrease unintended pregnancies [10,17,25–27]. Indeed, this argument was at the center of the decision to make EC available over the counter. This belief is understandable given EC's effectiveness in clinical trials [1,7,19,27]. Jones et al. [28] even estimated that EC prevented 47,000 abortions (a 43% reduction) between 1994 and 2000, based on data from a 2001–2002 Alan Guttmacher Institute survey of 10,683 women having abortions.

Somewhat paradoxically, however, recent studies have not demonstrated that increasing access to EC changes outcomes at the population level [12,14]. A 2000–2002 survey of British women ( $n=21,596$ ) found that they did not use EC more frequently after it became available without prescription, suggesting “over the counter availability is... unlikely to have affected unwanted pregnancies” [17]. Similarly, a systematic review of 23 studies, spanning 10 countries and reporting data between 1998 and 2006, found that greater access to EC did not reduce unintended pregnancies or abortions at the population level [19]. These recent findings make it surprising that nine of 10 Ob/Gyn physicians believe EC reduce unplanned pregnancy rates; they may have somewhat unrealistic views of EC's effectiveness.

Our results largely agree with earlier opinion surveys on the topic of whether increased access to EC will increase sexual risk-taking (less use of other contraceptives, initiating sex at a younger age, having more sexual partners) [8,14,15,20].

Given the drug's purpose, there is certainly an intuitive link between using EC and having sexual risk factors. Research shows that patients often list contraceptive nonuse as their reason for seeking EC [16,29] (43% in one study, while 39% reported contraceptive failure [21]). Likewise, other studies have noted correlations between EC use and having more sexual partners [16,21,30], as well as younger age at first sexual intercourse [21,31]. However, rigorous studies have not supported the conclusion that greater access *causes* greater risk-taking [1,2,17,19]. For instance, a prospective randomized controlled study of 2117 sexually active women assigned to receive either advance provision of EC, pharmacy access or access only through a clinic

(control) found that women with greater access did not change or decrease their contraceptive use, did not have more unprotected intercourse and did not have more sexual partners than controls [13]. Similarly, Sander et al. [29] followed 718 women for 1 year, looking for a temporal relationship between EC use and subsequent risk factors (e.g., sex at risk for pregnancy, time to sexually transmitted infection), and concluded that EC use does not predict subsequent pregnancy or infection risk. Together, these studies suggest access to EC is but one of many factors that shape patients' sexual behaviors.

Six percent of Ob/Gyn physicians offer EC only after sexual assault, and another 6% never offer it. This is reminiscent of earlier data showing that EC provision is nonuniform, even for sexual assault victims [8,20,25,26,32]. While nonprescription availability makes adult women less dependent on a physician's prescription than in years past, studies repeatedly show that some women do not know about EC [15,33,34], and even well-informed patients still rely on their physician's advice.

Religion's influence may follow from EC's proximity to the abortion debates. The medical literature often notes that EC is not an abortifacient because it has no effect after implantation, which the ACOG defines as the beginning of pregnancy [3,6,8,11,34]. Yet, many Americans believe that pregnancy begins with fertilization [9], and the prescribing information on the Plan B package insert [35], as well as several recent articles, continues to mention the possibility that levonorgestrel interferes with implantation [9,10,12].

Evidence supporting an effect on implantation is lacking. An early study reported that levonorgestrel caused some endometrial effects [36], but more recent investigations have observed no endometrial changes, or at least none that are likely to affect implantation [37–39]. Yet, while no studies have convincingly demonstrated that levonorgestrel actually impairs implantation, neither have they eliminated that possibility. Indeed, controversy is sustained in part by the “logical difficulty — some would say the impossibility — of proving the lack of existence of any particular mechanism” [7].

In conclusion, we found that Ob/Gyn physicians have a variety of beliefs and practices, and these are not the product of data alone. Medical evidence regarding EC is interpreted through a lens shaped by gender, religion and culture.

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