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Louisiana and Mississippi Family Physicians' Contraception Counseling for Adolescents with a Focus on Intrauterine Contraception

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Abstract

Study Objective—The adolescent pregnancy rate in Louisiana (LA) and Mississippi (MS) is one of the highest in the United States. One approach to decrease that rate is to increase contraceptive use. We sought to characterize LA and MS family physicians' (FPs) contraception counseling for adolescents with a focus on the intrauterine contraceptive device (IUD).

Design, Setting, Participants, Interventions, and Main Outcome Measures—Online survey of resident and practicing physician members of the LA and MS Academy of FPs.

Results—Three hundred ninety-eight of 1616 invited FPs responded; 244 were included in our analysis. When counseling adolescents about contraception, respondents "frequently discussed" oral contraceptives and condoms 87.5% and 83.8% of the time, respectively. Newer and more highly effective contraceptives such as the ring, patch, IUD, and implant were "frequently discussed" only 31.7%–39.3% of the time. In the previous 6 months, 44% of respondents ever discussed an IUD with an adolescent. Respondents were more likely to have discussed IUDs if they learned IUD insertion during residency, had on-site access to IUD inserters, believed they were competent and/or comfortable with IUD counseling. In 5 clinical scenarios asking whether the respondent would recommend an IUD to a 17- or a 27-year-old patient (in all scenarios patients were eligible for an IUD), respondents were restrictive overall and significantly fewer would recommend an IUD for the adolescent.

Conclusion—Our results suggest that there are missed opportunities for full-scope contraception counseling by LA and MS FPs. When these FPs counsel adolescents about contraception they less frequently discuss newer methods and more highly effective methods. Additionally many LA and MS FPs use overly restrictive eligibility criteria when considering IUDs.

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Keywords

Contraception counseling; Primary care counseling; Adolescent; Intrauterine device; Family physician

Introduction

Whereas the United States adolescent pregnancy rate is at a 20-year nadir,¹ the rate of decline in Louisiana (LA) and Mississippi (MS) is slower than in the United States overall.² The adolescent pregnancy rate in LA and MS remains one of the highest in the United States.³ If this trend continues, we can expect an increased disparity in the pregnancy rate of LA and MS adolescents compared with US adolescents. One approach to decreasing adolescent pregnancy is to increase contraception use, especially use of highly effective contraception such as the intrauterine contraceptive device (IUD).⁴

Contraception counseling from a health care professional is often the first step in the process of contraception choice. Contraception counseling in the primary care setting is associated with increased contraception use.⁵ The issue of contraception counseling and recommendation might be particularly salient for the IUD because evidence supporting the IUD's superior efficacy and safety for use in adolescents and nulliparous women is relatively recent.⁶ In fact, a number of studies have shown that some clinicians use overly restrictive criteria to assess for IUD eligibility^{7–11} thus limiting IUD access.

Issues around access to full-scope contraception is particularly relevant in MS because the state does not accept federal Medicaid expansion funds, resulting in fewer women with access to the contraception coverage mandated under the Affordable Care Act. In LA, the state government curtailed Medicaid reimbursement to Planned Parenthood, further limiting contraception access points.¹² Many types of clinicians, including family physicians (FPs), provide contraception for adolescents. FPs might counsel about and prescribe or insert all contraceptives including IUDs and implants. In LA and MS there are approximately 2000 licensed FPs and 800 obstetrician-gynecologists, making FPs an especially critical contraception access point in these states. Yet, there are no published data about LA and MS FPs' clinical practices with contraception.

Thus, we sought to: (1) characterize LA and MS FPs contraceptive counseling for adolescents; (2) determine the degree to which LA and MS FPs recommendations for an IUD align with current IUD eligibility criteria; and (3) ascertain modifiable factors that differentiate LA and MS FPs who do or do not counsel adolescents about IUDs. On the basis of previous research,^{10,13} we hypothesized that having IUD insertion training, knowledge of professional guidelines regarding adolescent's use of IUDs, currently inserting IUDs, or having access to an IUD inserter as well as perceived comfort and competence in counseling about IUDs would be associated with counseling adolescents about IUDs.

Materials and Methods

This study was granted exempt status by the institutional review boards of Louisiana State University Health Sciences Center, New Orleans, LA and the Albert Einstein College of Medicine, Bronx, New York.

Study Design and Participants

All LA and MS Academy of Family Physicians (2 separate organizations) resident and practicing physician members were invited to participate in this survey. Potential participants were sent a recruitment e-mail containing a link to our anonymous online survey. Nonresponders were contacted up to 5 times.

Physicians were excluded if: (1) they worked fewer than 2 outpatient sessions weekly; (2) had no female adolescents in their clinical panel; or (3) had not discussed any contraception option with a female adolescent patient in the previous 6 months. Because of their limited clinical experience, first-year residents were also excluded. Responders were eligible for a random drawing of a \$50 Amazon gift card.

Survey

Our survey was formed on the basis of a study conducted with primary care providers in the Bronx, New York.^{10,13} The survey was piloted with Louisiana State University faculty FPs and modified accordingly. The final survey defined an adolescent as “18 years or younger” and contained questions in the following 5 areas:

Demographic Characteristics, Training, and Knowledge—Included were gender, whether current resident, year residency training was completed, IUD insertion training, and knowledge of IUD eligibility guidelines.

Current Clinical Practice—We asked about practice location, time spent in clinical care, proportion of care with female adolescents, presence of any practice mandate restricting contraception prescription, whether the respondent inserts IUDs or has access to another clinician on-site who inserts IUDs, and whether in the previous 6 months the respondent had inserted an IUD for a patient 18 years of age or younger.

Contraception Counseling—We assessed which contraceptives respondents frequently counseled about by asking: “During a typical office visit conversation with a female adolescent about contraception, how frequently do you discuss [type of contraceptive]” for 10 contraception methods. Responses categories were very infrequently, somewhat infrequently, somewhat frequently, or very frequently. For analysis purposes responses were collapsed into “frequently” and “infrequently.”

Use of Up-to-Date IUD Eligibility Criteria—We assessed use of current IUD eligibility criteria by presenting 5 patient scenarios with varying pregnancy and sexually transmitted infection (STI) histories. On the basis of professional medical organization guidelines all patients in the scenarios were eligible for an IUD.^{6,14} To isolate the effect of a patient’s age,

each scenario was presented identically with a 27-year-old patient and with a 17-year-old patient.

IUD Counseling—To measure recent IUD counseling, we asked: “In the past 6 months approximately how frequently have you discussed an IUD as a contraception option for a patient 18 years of age or younger?” We selected a 6-month time frame to maximize respondents’ description of their current practice pattern. Response categories were: never, 1%–10%, 11%–25%, 26%–50%, 51%–75%, 76%–90% and >90% of the time. Because we were examining factors associated with ever counseling, for analysis purposes we collapsed the response categories into “never” and “ever” with “ever” defined as any response category other than “never.”

We asked about perceived competency in: (1) counseling about, and (2) managing expected side effects with the IUD. For each question, respondents answered “very competent,” “somewhat competent,” “somewhat incompetent,” or “very incompetent.” Responses were dichotomized into “competent” and “incompetent” for analysis. Additionally, we asked whether a respondent was comfortable or uncomfortable recommending an IUD for an adolescent.

Statistical Analyses

Our a priori analysis approach was to combine LA and MS responses. To assess the comparability of responses from the 2 states, we compared LA and MS respondent’s demographic characteristics using χ^2 tests and analysis of variance. Because we found no significant difference between the states, all analyses are presented with the state data combined.

We then examined frequencies and compared respondents who ever vs never counseled adolescents about an IUD in the previous 6 months. We identified variables that were significantly different in the 2 groups using χ^2 test and analysis of variance. All statistical tests were 2-tailed at a significant level of 0.05. Analyses and variable transformations were conducted using IBM SPSS version 21 (IBM Corp, Armonk, NY).

Results

Between November 2013 and January 2014 we invited 1020 members of the Louisiana Academy of Family Practitioners to answer our survey; from October 2014 to February 2015 we invited 631 members of the Mississippi Academy of Family Practitioners. Overall, 398 FPs responded (278 from LA; 120 from MS), 15 opted-out and 20 invitations were undeliverable for a response rate of 24.6% (398 of 1616). Two-hundred forty-four respondents met eligibility criteria and completed the survey. Reasons for ineligibility included: first-year resident status ($n = 25$), fewer than 2 half days of clinical care per week ($n = 67$), clinical panel did not include female adolescents ($n = 16$), and/or no contraception discussion with an adolescent in the previous 6 months ($n = 47$). Sixteen respondents had multiple reasons for ineligibility. Fifteen people started the survey but did not answer the eligibility questions, they too were excluded. No significant demographic differences existed between eligible and ineligible respondents.

Compared with the LA sample as a whole, LA respondents were more likely to be a resident (37% of respondents vs 15% of invitees) or practice in a rural setting (31% vs 10%), and less likely to practice in an urban setting (30% vs 48%). MS respondents compared with the MS invitees were more likely to be a resident (15% of respondents vs 10% of invitees). There was no difference according to gender in either state.

Respondent Demographic Characteristics, Training, and Current Clinical Practice

Respondents were predominately male (61.7%) practicing, non-resident physicians (77.5%). Just over half (53.3%) provided outpatient care 8 or more half-days per week. Regarding IUD experience, 47.5% inserted an IUD during residency; 37% of those who inserted an IUD during residency did so for 10 or more patients. Forty percent either currently insert IUDs or have someone else at their site who inserts. Less than one-quarter of respondents (23.1%) reported familiarity with any professional guidelines concerning adolescent's use of IUDs. In the previous 6 months, 44% discussed an IUD with an adolescent patient. Of those who discussed an IUD with an adolescent, only 7 (4.9%) had inserted an IUD for an adolescent during that time. Respondent demographic characteristics, training, and current clinical practice are summarized in Table 1.

Contraception Counseling

Figure 1 depicts the percent of respondents who, during a typical office visit conversation with a female adolescent about contraception “frequently discussed” each contraceptive option. Respondents most “frequently discussed” oral contraceptives (87.5%), condoms (83.8%), depot medroxyprogesterone acetate (73.6%), abstinence (70.8%), and dual protection (66%). In contrast, relatively newer contraceptives—the ring and patch—as well as more highly effective methods—IUD and implant—were “frequently discussed” only 31.7%–39.3% of the time.

Use of Up-to-Date IUD Eligibility Criteria

Figure 2 shows the percent of respondents who would recommend an IUD for a 17- or 27-year-old patient in 5 separate clinical scenarios. In all of our scenarios significantly fewer respondents would recommend an IUD to the 17- vs the 27-year-old patient. The highest proportion of respondents (75.7%) would recommend an IUD for a 27-year-old patient with a child and no STI history. In contrast, 66.1% would recommend an IUD to the same patient if she were 17 years old. The lowest proportion of respondents (12.9%) would recommend an IUD to a 17-year-old with a child and a history of pelvic inflammatory disease 1 year earlier. Although still statistically significant, age did not make as much of an absolute difference in this scenario; 16.7% would recommend an IUD for this patient if she were 27 years old.

Factors Associated with Counseling Adolescents About IUDs in the Previous 6 Months

In the previous 6 months, 44% of respondents had ever discussed IUDs with a patient 18 years old or younger. In bivariate analysis comparing respondents who ever vs never discussed IUDs with an adolescent in the previous 6 months, we found significant between group differences in all but 2 of the variables we examined regarding IUD training,

knowledge, access, counseling competency, and comfort in recommending an IUD. The only 2 variables that did not differ in our bivariate analysis were number of IUDs inserted during residency and knowledge of an IUD insertion referral site if IUD insertion was unavailable at the respondents' site. Factors associated with counseling adolescents about IUDs in the previous 6 months are summarized in Table 2.

Discussion

Our results suggest that, despite working in states with high rates of adolescent pregnancy, there are missed opportunities for full-scope contraception counseling by LA and MS FPs. When these FPs counsel adolescents about contraception they less frequently discuss newer methods and more highly effective methods. The factors that seem to affect the frequency of discussing IUDs include insertion training in residency, knowledge of IUD eligibility guidelines, access to inserters, and perceived competency in counseling and managing expected side effects. Additionally it appears that many LA and MS FPs use overly restrictive eligibility criteria when recommending IUDs for adults and adolescents. Taken together, our results suggest the need to improve LA and MS FPs knowledge of and comfort with full-scope contraception counseling and eligibility criteria, to increase training during residency especially with IUD insertion and removal, and to improve access to IUD insertion and removal at family medicine sites.

Because of the popularity of oral contraceptive pills and condoms we were not surprised they were the 2 most "frequently discussed" contraceptives. We were struck, however, that the most highly effective methods, the IUD and implant, were "frequently discussed" only one-third of the time. In fact, our respondents discussed the relatively newer contraceptives including the ring, patch, IUDs, and implant comparatively infrequently, implying limitations on contraceptive choice. Because LA and MS also have disproportionately high adolescent STI rates,¹⁵ condom use or dual protection is important for many women. Our finding that during contraception counseling condoms were "frequently discussed" 83.8% of the time and dual protection just 66% of the time reflects room for improvement with these methods as well.

A number of factors appear to contribute to this limited scope of contraception counseling. It is possible that some FPs discuss abstinence to the exclusion of other methods and/or have personal objection to contraception. Other respondents might be unfamiliar with all contraceptive methods or unaware of which women can safely use a method. The US Centers for Disease Control and Prevention has published the Medical Eligibility Criteria for Contraceptive Use (MEC)¹⁴ and the US Selected Practice Recommendations for Contraceptive Use (SPR),¹⁶ comprehensive clinical guides for contraceptive eligibility, initiation, and use. The missed opportunities for fuller-scope contraception counseling point to the need for continued efforts toward implementation and dissemination of the MEC and SPR in primary care. No published studies have tested ways to increase primary care physicians' use of the MEC and/or SPR. We suggest future research on this topic.

In terms of clinician perception of IUD eligibility specifically, as in other studies of pediatricians,^{17,18} obstetrician-gynecologists,^{7,9,19} and FPs,⁷⁻¹¹ our respondents too were

overly restrictive with their clinical practices in recommending an IUD for eligible patients. To our knowledge, our study is the first to investigate this issue specifically comparing adolescents vs adults in the same clinical scenario. In all of our scenarios, significantly fewer respondents would recommend an IUD for the adolescent although all of the patients presented in the scenarios were eligible for an IUD.^{6,14} At best only 75% of respondents would recommend the IUD in a given scenario—a 27-year-old with a child and no STI history. Although very few respondents inserted an IUD for an adolescent in the previous 6 months, 40.9% of respondents either insert IUDs themselves or someone in their clinic inserts the device. For those who did not report on-site insertion available, virtually all knew of a referral site for insertion. At first glance this appears reassuring. However, because of potential limitations on contraception coverage in these states, we do not know the ways in which system's access issues and physical distances affects women's ability to get an IUD at the referral site.

Our study has several limitations. This is a descriptive analysis of a cross-sectional survey with a convenience sample. Thus, results must be viewed within the temporal limitations of our methodology and lack of power to ascertain between group differences. Although our response rate is in line with published provider surveys,¹⁸ it limits our ability to make conclusive statements regarding LA and MS FP practices and beliefs. The response rate might reflect relative disinterest in adolescent contraception provision or relevance among our sampling frame. Additionally, at the time we conducted our survey only 84% of MS and 72% of LA FPs were members of their state FP academies. Another limitation is that we did not ask all respondents if they had inserted an IUD for any patient in the previous 6 months; we only asked this question of respondents who had discussed IUDs with a teen in the past 6 months. If a respondent had not discussed IUDs with adolescents in the past 6 months, they were only asked if anyone at their clinical site inserts IUDs. Thus, we do not have a comprehensive picture of the proportion of respondents who currently insert IUDs in LA and MS, just a sense of the percent of respondents who report access to an IUD inserter.

Notwithstanding these limitations, findings from this study of LA and MS FPs' clinical practice with contraception and adolescents suggest that many LA and MS FPs do not routinely provide full-scope contraceptive counseling for adolescents. The FPs who responded were more likely to counsel about commonly used methods and not the newer and/or more highly effective contraceptive methods. Additionally, our respondents were using overly restrictive IUD eligibility criteria, especially for adolescents. Respondents were significantly less likely to recommend an IUD to an adolescent compared with an adult woman with the same pregnancy and STI history. Our results suggest a need for interventions to support change in LA and MS FPs practices around contraception counseling to improve contraception access. As 1 component, we suggest intensive dissemination and implementation of the MEC, SPR, and other up-to-date IUD eligibility guidelines into FPs practice and increased IUD insertion availability at family medicine clinical sites. Ultimately, expanding the range of available contraceptive options will require a multifaceted approach at the individual, clinic, and policy level.

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Fig. 1.

In the past 6 months, percentage of Louisiana and Mississippi family physicians who frequently discussed the following method with a female adolescent in a typical office visit conversation about contraception. IUD, intrauterine contraceptive device.

Fig. 2.

Use of current IUD eligibility criteria: percent of Louisiana and Mississippi family physician respondents who would recommend an IUD for a 27- or 17-year-old female patient with the presented history. * $P < .001$; ** $P = .003$. IUD, intrauterine contraceptive device; STI, sexually transmitted infection; PID, pelvic inflammatory disease.

Table 1

Louisiana and Mississippi Family Physician Respondent's Demographic Characteristics, Training, and Current Practice (N = 244)

Characteristic	Value
Female sex	93 (38.1)
Currently in residency training	55 (22.5)
If not a current resident, median number of years since residency completed (range) *	16 (45-0)
Currently works with residents on a regular basis *	46 (27.2)
Inserted an IUD during residency	116 (47.5)
If inserted an IUD during residency, number of IUDs inserted	
1-4	46 (39.7)
5-9	27 (23.3)
10-14	15 (12.9)
15	28 (24.1)
Current practice location	
Urban	70 (28.8)
Suburban	81 (33.3)
Rural	92 (37.9)
Number of weekly half days of outpatient care	
2-4	79 (32.4)
5-7	35 (14.3)
8	130 (53.3)
Proportion of outpatient visits with female adolescents	
1%-4%	88 (36.1)
5%-10%	108 (44.3)
11%	48 (19.7)
Current outpatient clinical site(s) has...	
Religious affiliation	28 (13.0)
Hospital or practice mandates restricting contraception prescription	16 (7.2)
Self or someone else on-site inserts IUDs	106 (40.9)
If on-site IUD insertion unavailable, knows of referral site †	124 (89.9)
Aware of professional guidelines about adolescents' use of IUDs	55 (23.1)
Inserted an IUD in an adolescent within the past 6 months ‡	7 (4.9)
Counseled an adolescent about the IUD within the past 6 months	136 (44.0)

IUD, intrauterine contraceptive device

Data are presented as n (%) except where otherwise specified. Denominator used to calculate each percent reflects the actual number of responses to each question.

* Question asked only of nonresidents.

† Question asked only of subset who do not insert IUDs and no one at their site inserts IUDs.

‡ Question asked only of subset who counseled an adolescent about an IUD in the previous 6 months.

Table 2

Factors Associated with Louisiana and Mississippi Family Physicians Counseling Adolescent About IUDs Within the past 6 Months

	Within in the past 6 months, respondent has.....				<i>P</i>
	Counseled an Adolescent About the IUD (N _T = 136)		Not Counseled an Adolescent About the IUD (N _T = 107)		
	n*	%*	n*	%*	
Training and knowledge factors					
Inserted IUD during residency	79	58.1	37	34.6	<.001
If yes, number of IUDs inserted					
1–4	27	34.2	19	51.4	.317
5–9	19	24.1	8	21.6	
10–14	12	15.2	3	8.1	
15	21	26.6	7	18.9	
Aware of professional guidelines about adolescents' use of IUDs	43	32.3	12	11.4	<.001
Access to inserter factors					
Self or someone else at site inserts IUDs	66	54.5	28	28.3	<.001
If on-site IUD insertion not available, knows of IUD insertion referral site [†]	58	92.1	66	88.0	.617
Competency and comfort counseling factors					
Feels very or somewhat competent counseling about IUDs	121	89.6	64	61.0	<.001
Feels very or somewhat competent managing expected IUD side effect	96	71.7	48	46.6	.002
Are you comfortable, uncomfortable or would never recommend an IUD for an adolescent?					
Comfortable	84	63.6	18	17.1	<.001
Uncomfortable	45	34.1	62	59.0	
Would never recommend	3	2.3	25	23.8	

IUD, intrauterine contraceptive device

* Each column percent in this table are reflects the (varying) number of respondent who answered that question.

[†] Asked only of those respondents who indicated that on-site insertion not available. Percent reflects total responded (n = 63) in the ever counseled and n = 75 in the never counseled categories.