



Published in final edited form as:

J Pediatr Adolesc Gynecol. 2019 August ; 32(4): 402–408. doi:10.1016/j.jpag.2019.01.007.

Health Care Provider Attitudes About the Safety of ‘Quick Start’ Initiation of Long-Acting Reversible Contraception for Adolescents

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Abstract

Study Objective: To identify characteristics associated with provider attitudes on the safety of ‘Quick Start’ initiation of long-acting reversible contraception (LARC) for adolescents.

Study Design, Setting, and Participants: We conducted a cross-sectional survey of providers in public-sector health centers and office-based physicians (n = 2,056) during 2013–2014.

Results: Overall, the prevalence of considering ‘Quick Start’ initiation of LARC for adolescents as safe was 70.9% for implants and 64.5% for intrauterine devices (IUDs). Among public-sector providers, those not trained in implant or IUD insertion had lower odds of perceiving the practice safe (aOR 0.32 95% CI 0.25–0.41 for implants; aOR 0.42 95% CI 0.32–0.55 for IUDs), whereas those practicing at health centers that did not receive Title X funding had lower odds of perceiving the practice safe for IUDs (aOR 0.77 95% CI 0.61–0.98). Among office-based physicians, lack of training in LARC insertion was associated with lower odds of perceiving ‘Quick Start’ initiation to be safe for IUDs (aOR 0.31 95% CI 0.12–0.77). Those specializing in adolescent medicine had higher odds of reporting ‘Quick Start’ initiation of LARC as safe (implants, aOR 2.21 95% CI 1.23–3.98; IUDs, aOR 3.37 95% CI 1.39–8.21) compared with obstetrician-gynecologists.

Conclusions: Approximately two-thirds of providers considered ‘Quick Start’ initiation of LARC for adolescents safe; however, there were differences by provider characteristics (e.g., Title X funding, training in LARC insertion, specialty). Targeted LARC insertion training and dissemination of evidence-based family planning guidance and implementation into facility and practice-level policies may increase access to ‘Quick Start’ initiation of LARC for adolescents.

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Findings from this manuscript were previously presented at the American Public Health Association Annual Meeting, Atlanta, GA, November 4–8, 2017.

Conflicts of Interest: None to disclose

Keywords

'Quick Start'; Same-day initiation; Long-acting reversible contraception (LARC); intrauterine devices (Cu-IUDs and LNG-IUDs); contraceptive implant; family planning guidance; adolescents; teens

Introduction

During 2011–2013, national estimates of long-acting reversible contraception use (i.e., LARC: intrauterine device [IUD], including levonorgestrel IUD [LNG-IUD] and copper IUD [Cu-IUD]; and contraceptive implant) among female adolescents aged 15–19 years were lower (3.2%), compared with young adults (20–24 years, 11.1%) at risk for unintended pregnancy.¹ During 2011–2015, 5.8% of female adolescents aged 15–19 years who had ever had sexual intercourse had ever used LARC, with 2.8% having used the IUD and 3.0% having used implants.² Lower rates of LARC use among adolescents may be attributed to high out-of-pocket costs, quality and content of contraceptive counseling, provider misconceptions about the appropriateness of LARC for adolescents, and lack of provider training on LARC insertion.^{3–6}

'Quick Start' initiation of LARC is an important strategy to reduce barriers to access. 'Quick Start,' or same-day initiation, eliminates unnecessary repeat visits by allowing same-day initiation of contraception if the provider is reasonably certain that the patient is not pregnant.⁷ Some studies suggest that policies and practices supporting 'Quick Start' of LARC are related to increased provision of these methods.^{8–10} The US Selected Practice Recommendations for Contraceptive Use (US SPR) recommends that IUDs and implants can be initiated at any time in women who are medically eligible, if it is reasonably certain that the woman (or adolescent) is not pregnant.¹¹ Most women can safely use IUDs and implants; there are few conditions for which LARC initiation is not recommended (e.g., women with current purulent cervicitis, pelvic inflammatory disease, chlamydial infection, or gonococcal infection should not initiate an IUD; women with breast cancer should not initiate implants or LNG IUDs).¹² For women who have already been tested for sexually transmitted infection (STI) according to recommendations,¹³ no further testing is required, and if STI screening is needed, it can be performed at the time of IUD insertion, which should not be delayed.¹¹ Further, 'Quick Start' initiation of LARC is supported by the American Academy of Pediatrics (AAP) and the American College of Obstetricians and Gynecologists (ACOG).^{14,15}

Although 'Quick Start' of LARC in women who are medically eligible is safe, few providers offer same-day initiation of IUDs to clients.^{9,16} For adolescents, providers may have concerns about LARC safety,^{17–19} including concerns related to the risk of STIs.²⁰ LARC methods are safe for adolescents,¹² and 'Quick Start' may be important for adolescents who might be unable to attend or are deterred by multiple visits. Little is known about provider attitudes toward 'Quick Start' initiation of LARC among adolescents. Because provider knowledge of the safety of LARC and 'Quick Start' initiation of these methods for adolescents may influence LARC provision practices, knowing provider attitudes and practices related to contraception for adolescents is key, particularly those supported by

evidence-based family planning guidance. The purpose of this analysis was to determine family planning provider attitudes on the safety of ‘Quick Start’ initiation of LARC for adolescents. Further, we aimed to identify provider characteristics associated with reporting ‘Quick Start’ initiation of implants and IUDs for adolescents as a safe practice.

Materials and Methods

We analyzed data from a health care provider survey designed to evaluate US family planning provider attitudes and practices related to the safety and provision of contraception for women with specific medical conditions or characteristics. We collected data for 12 months using a 33-item questionnaire mailed during 2013–2014 to a random sample of 2,000 office-based physicians and 4,000 public-sector health centers that provided family planning services (herein referred to as public-sector health centers). For each sampled public-sector health center, we asked that one provider complete the survey. We identified public-sector health centers from a Guttmacher Institute database of all publicly funded family planning centers nationwide,¹⁰ and office-based physicians from the American Medical Association (AMA) Masterfile containing information on AMA member and nonmember board-certified physicians.²¹ Providers were eligible to participate in the survey if they provided family planning services (i.e., any service related to postponing or preventing pregnancy) to women of reproductive age at least twice per week. The sampling design and survey methodology are described in detail elsewhere.²²

To assess provider attitudes on the safety of ‘Quick Start’ initiation, we used responses to the following question, “For each of the following contraceptive methods, how safe do you think it is to start [an adolescent] woman on the day of her visit regardless of the timing of her menses (‘Quick Start’) if you are reasonably certain she is not pregnant?” Providers were asked to answer regarding the ‘contraceptive implant’ and ‘intrauterine devices (Cu-IUD or LNG-IUD)’ for adolescents. We dichotomized provider responses into two groups: those reporting ‘Quick Start’ as safe, and those not reporting ‘Quick Start’ as safe (i.e., unsafe or don’t know). After excluding respondents not providing services to adolescents ($n = 4$) and providers who did not respond to questions about attitudes on the safety of ‘Quick Start’ initiation of LARC for adolescents, our analytic sample consisted of 1,967 providers for implants and 1,939 providers for IUDs.

Statistical Analysis

Data were weighted to account for nonresponse and sample selection probabilities to generate nationally representative estimates. Weighted data were analyzed in Stata 14.0 using the software’s survey functions to account for the complex sampling design. We estimated unweighted frequencies and weighted percentages of sample characteristics. We examined differences among provider perceptions of the safety of ‘Quick Start’ initiation of LARC for adolescents by sample characteristics using Rao Scott chi-square tests, appropriate to use when data are obtained from a complex survey. We then performed multivariable logistic regression to identify provider characteristics associated with considering ‘Quick Start’ initiation of LARC as safe for adolescents; models were run separately for public-sector providers and office-based physicians. Multivariable models

included covariates found to be statistically significant (0.05 alpha level) in bivariate analyses, in addition to variables selected *a priori* based on the literature (i.e., Title X funding and primary clinical focus for public-sector models; and region, provider gender, and proportion of female patients of reproductive age who receive family planning services for both public-sector and office-based physician models). For public-sector providers, primary clinical focus at the clinic was dichotomized as reproductive health (obstetrics/gynecology or family planning/reproductive health) or primary care (family medicine, adolescent health or pediatrics, or general health care) based on survey responses. Region of practice was determined by the clinic mailing address. We categorized states according to the US Census Bureau regions and US Territories according to the Health and Human Services regions.²³ Adjusted odds ratios (aORs) are reported with 95% confidence intervals (CIs). The CDC determined this project to be non-research, public health practice, and Institutional Review Board approval was not needed.

Results

Assuming that the proportion of eligible providers among those with unknown eligibility was the same as the proportion among those with known eligibility, our overall response rate was 51.2% (n = 2,087). Response rates varied by respondent type (66% for Title X funded clinics, 48% for non-Title X funded clinics, and 40% for office-based physicians).

Provider Characteristics

Table 1 presents sample characteristics among public-sector providers (n = 1,650) and office-based physicians (n = 406). Of public-sector providers, the majority practiced at health centers that receive Title X funding (52.5%), reported their primary clinical focus as reproductive health (54.8%), were advanced clinical practitioners (i.e., physician assistant, nurse practitioner, certified nurse midwife; 59.8%), and were trained in implant (50.9%) and IUD (62.6%) insertions. Most office-based physicians specialized in obstetrics and gynecology (60.6%), and were trained in implant (50.6%) and IUD (85.2%) insertions.

Overall, the prevalence of considering ‘Quick Start’ initiation of LARC for adolescents as safe was 70.9% for implants and 64.5% for IUDs (data not shown). Among public-sector providers, the prevalence of considering ‘Quick Start’ initiation of LARC for adolescents as safe was 66.2% for implants and 62.9% for IUDs. Among office-based physicians, 71.6% and 64.7% reported ‘Quick Start’ initiation of implants and IUDs safe, respectively.

Factors Associated with Considering ‘Quick Start’ Initiation of LARC as Safe for Adolescents Among Public-Sector Providers

Factors associated with provider attitudes on the safety of ‘Quick Start’ initiation of LARC for adolescents among public-sector providers are presented in Table 2. Providers who were not trained in LARC insertion had lower odds of reporting ‘Quick Start’ initiation of LARC as safe for adolescents, relative to trained providers (implants: aOR 0.32 95% CI 0.25–0.41; IUDs: aOR 0.42 95% CI 0.32–0.55). Relative to providers in Title X-funded clinics, those who practiced at health centers that did not receive Title X funding had lower odds of reporting ‘Quick Start’ initiation of IUDs as safe (aOR 0.77 95% CI 0.61–0.98), as did

providers who reported their primary clinical focus as primary care versus reproductive health (aOR 0.67 95% CI 0.52–0.85). Compared with physicians, nurses had lower odds of reporting ‘Quick Start’ initiation as safe for both implants (aOR 0.64 95% CI 0.43–0.96) and IUDs (aOR 0.63 95% CI 0.40–0.97). Having a moderate (25–49%) versus large (50%) proportion of female patients of reproductive age receiving family planning services was associated with lower odds of perceiving ‘Quick Start’ initiation of IUDs as safe (aOR 0.66 95% CI 0.49–0.88).

Factors Associated with Considering ‘Quick Start’ Initiation of LARC as Safe for Adolescents Among Office-Based Physicians

Table 3 shows the factors associated with perceiving ‘Quick Start’ initiation of LARC as safe among office-based physicians. Compared with physicians who specialized in obstetrics and gynecology, providers who specialized in adolescent medicine had higher odds of reporting ‘Quick Start’ initiation of LARC as safe (implant: aOR 2.21 95% CI 1.23–3.98; IUD: 3.37 95% CI 1.39–8.21). In addition, providers not trained compared with those trained in IUD insertion had lower odds of reporting ‘Quick Start’ initiation of IUDs as safe for adolescents (aOR 0.31 95% CI 0.12–0.77). Compared with providers who had a large (50%) proportion of female patients of reproductive age receiving family planning services, providers with a small (1–24%) proportion had lower odds of perceiving ‘Quick Start’ initiation of implants as safe (aOR 0.44 95% CI 0.20–0.97).

Discussion

In our analysis, approximately two-thirds of providers considered ‘Quick Start’ initiation of LARC for adolescents as safe. Among both public-sector providers and office-based physicians there was variation in reporting ‘Quick Start’ of LARC for adolescents as safe by provider, practice, and clinic characteristics, which may indicate opportunities for targeted trainings or adaption of same-day initiation guidance into protocols.

Across provider groups, those not trained in implant or IUD insertion less frequently reported ‘Quick Start’ initiation of LARC for adolescents as safe. Hands-on clinical insertion training of implants and IUDs likely includes education about eligible candidates for LARC methods and when they can be safely initiated.^{24,25} For women starting LARC methods, the US SPR guidelines state that the benefits of starting at the time of the initial health care visit likely exceed any risks, and providers should consider starting a method at any time, when reasonably certain the patient is not pregnant.¹¹ ACOG and AAP also support the safety of LARC for adolescents and recommend ‘Quick Start’ initiation for most adolescents.^{14,15} Nonetheless, despite existing evidence that receipt of didactic and insertion training is more commonly received among obstetrician-gynecologists than clinicians with other specialties (e.g., adolescent medicine, pediatrics, family medicine),²⁶ we found obstetrician-gynecologists had lower odds of considering ‘Quick Start’ initiation of LARC as safe for adolescents compared with adolescent medicine providers. These data may suggest that although obstetrician-gynecologists are more often trained in LARC insertion, more specific training on the safety of ‘Quick Start’ initiation of LARC methods for adolescents may be needed. Offering LARC insertion training in medical residencies and

continuing education opportunities for practicing clinicians may improve provider LARC insertion competencies.

Public-sector providers who reported their primary clinical focus as primary care had lower odds of reporting 'Quick Start' initiation of IUD as safe for adolescents than those who reported reproductive health. These findings parallel data on the availability and provision of IUDs in publicly funded health centers, with reproductive health-focused clinics being more likely than primary care-focused clinics to provide IUDs to adolescents.¹⁰ Similarly, public-sector providers that practiced in clinics that did not receive Title X funding had lower odds of reporting 'Quick Start' initiation of IUDs as safe, compared with providers who practiced in Title X-funded clinics; this difference was observed for attitudes on 'Quick Start' of implants for adolescents, but was not statistically significant. In a qualitative study of structural barriers to LARC provision at community health centers, no LARC providers reported that they routinely performed same-day insertions, often because of scheduling challenges, shorter appointment times, provider's knowledge and comfort with contraceptive counseling, protocol to schedule pre-insertion counseling visits, and required STI testing before insertions, which may not be necessary.²⁷ Further, provider-level variability in contraceptive counseling was influenced by the focus of the community health center, where providers at primary care-focused clinics addressed routine preventive care and disease management concerns in one visit.²⁷ These findings may suggest challenges to providing family planning in the context of providing the breadth of primary care services. Developing and implementing targeted training and protocols for primary care clinics may address these challenges.

Among public-sector providers, nurses had the lowest frequency of considering 'Quick Start' initiation of LARC for adolescents as safe. As nurses constitute a large and critical part of the health care workforce who often provide contraceptive counseling, particularly in the public sector,²⁸ training nurses on best practices in contraceptive counseling and family planning provision may increase awareness about the safety and effectiveness of LARC methods for adolescents and 'Quick Start' initiation. An intervention for integrating LARC counseling into routine contraceptive care showed a significant increase in LARC counseling, along with a significant increase in LARC uptake and a significant reduction in unintended pregnancy rates.²⁹ Targeted efforts to disseminate family planning guidance^{11,12} to provider groups and training all clinic staff on best contraceptive practices (including 'Quick Start') may increase counseling on same-day initiation of LARC methods.

Overall, the majority of providers in our sample considered 'Quick Start' initiation of LARC safe for adolescents. Although these data are encouraging, facility and practice-level barriers may inhibit provision of LARC. In one study, facility policies permitting same-day LARC initiation were the most significant predictor of LARC placements by advanced practice registered nurses during the past year.⁸ In an analysis of survey data collected from 1,221 fellows of the American College of Obstetricians and Gynecologists, only 13.1% of providers reported offering same-day IUD insertion, and those who offered same-day IUD insertion provided significantly more IUDs during the previous year than those who required multiple clinic visits.⁹ From a survey of generalist pediatricians in the Massachusetts Pediatric Society, 10.6% recommended IUD as a preferred choice of contraception for

adolescents.³⁰ These data suggest that although providers may understand that LARC methods and ‘Quick Start’ initiation of these methods are safe for adolescents, providers may hesitate to counsel adolescents on LARC as a contraceptive option if they are restricted by practice policies, which may influence ‘Quick Start’ provision of LARC to adolescents.

A few limitations should be considered when interpreting our findings. Data were self-reported and may be subject to social desirability bias. Second, the survey question that ascertained attitudes about the safety of ‘Quick Start’ of IUDs asked about IUDs generally; thus, we were unable to determine if providers had differential concerns for different IUD types (copper or hormonal). In addition, the survey question did not differentiate between nulliparous and parous adolescents; although IUDs are safe for all adolescents, regardless of parity,¹² some providers may have concerns about the safety of IUDs for nulliparous adolescents. Finally, the survey did not collect data on ‘Quick Start’ provision of LARC to adolescents.

Despite these limitations, these data provide estimates of attitudes on safety of ‘Quick Start’ initiation of LARC for adolescents among a national sample of both public-sector providers and office-based physicians and highlight some areas for trainings and interventions. Addressing provider concerns regarding LARC safety is critical, given the evidence on the influence of provider perceptions and counseling on patient decision making.³¹ Unnecessary repeat visits can yield significant consequences for contraceptive access, particularly for vulnerable populations, including adolescents. Delaying insertion of LARC may result in decreased motivation and uptake of contraception, increasing the risk of an unintended pregnancy.³²

Conclusions

Although the practice of ‘Quick Start’ of LARC for those who are medically eligible and the safety of LARC for adolescents is supported by US family planning guidance and professional organizations, only two-thirds of providers reported that they consider ‘Quick Start’ of LARC safe for adolescents. Targeted education, LARC insertion and removal training, and dissemination of US family planning guidance to health care providers, program managers, and policy makers in public-sector clinics and private physician offices may increase access to ‘Quick Start’ of LARC for adolescents.

Funding sources:

This project was supported in part by an appointment to the Research Participation Program at the Centers for Disease Control and Prevention administered by the Oak Ridge Institute for Science and Education through an interagency agreement between the U.S. Department of Energy and the Centers for Disease Control and Prevention.

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Table 1.

Sample Characteristics, US Health Care Providers Providing Family Planning Services

Characteristics	Public-Sector Providers ^c (n = 1,650)		Office-Based Physicians (n = 406)	
	n ^a	% ^{a,b}	n ^a	% ^{a,b}
Title X funding				
Yes	1,052	52.5	-	-
No	598	47.5	-	-
Primary clinical focus^d				
Reproductive health	968	54.8	-	-
Primary care	673	44.6	-	-
Provider occupation				
Physician	336	24.3	402	100.0
Advanced clinical practitioner ^e	1,008	59.8	-	-
Nurse	278	14.1	-	-
Provider specialty				
Obstetrics and gynecology	-	-	265	60.6
Family medicine	-	-	62	39.0
Adolescent medicine	-	-	79	0.34
Gender				
Male	143	10.3	173	43.0
Female	1,496	89.1	232	56.4
Region				
Northeast	224	14.3	79	15.8
Midwest	305	18.8	86	24.2
South/Mid-Atlantic	660	37.2	137	33.6
West	461	29.7	104	26.4
Trained in implant insertion				
Yes	853	50.9	228	50.6
No	721	44.3	165	45.5
Trained in LNG-IUD or Cu-IUD insertion				
Yes	1,025	62.6	312	85.2
No	583	34.7	88	13.5
Proportion of female patients of reproductive age who receive family planning services^f				
1–24%	165	11.9	59	19.5
25–49%	264	17.8	107	26.6
50%	1,192	68.4	237	52.4
Attitudes on the safety of ‘Quick Start’^g initiation of contraceptive implant for adolescents				
Safe	1,099	66.2	304	71.6

Characteristics	Public-Sector Providers ^c (n = 1,650)		Office-Based Physicians (n = 406)	
	n ^a	% ^{a,b}	n ^a	% ^{a,b}
Unsafe or Don't Know	470	28.8	94	26.5
Attitudes on the safety of 'Quick Start' initiation of IUDs for adolescents				
Safe	1,043	62.9	275	64.7
Unsafe or Don't Know	525	32.0	123	33.3

Cu-IUD, copper intrauterine device; LNG-IUD, levonorgestrel intrauterine device.

^aUnweighted frequencies and weighted column percentages displayed.

^bColumn percentages may not add to 100% due to missing data.

^cIncludes Title-X and non-Title X providers.

^dPrimary clinical focus at the clinic (reproductive health [obstetrics/gynecology or family planning/reproductive health] or primary care [family medicine, adolescent health or pediatrics, or general health care]).

^eIncludes physician assistant, nurse practitioner, certified nurse midwife.

^fFamily planning service is defined as any service related to postponing or preventing pregnancy. This may include a medical examination related to provision of a method, contraceptive counseling, method prescription, or supply visits. A patient may receive a family planning service even if the primary purpose of the visit is not for contraception.

^g'Quick Start' is defined as the immediate provision of contraception on the day of a woman's visit, if reasonably certain she is not pregnant.

Table 2: Perception of ‘Quick Start’ Initiation of LARC as Safe for Adolescents by Selected Characteristics, Public-Sector Providers^b

Characteristics	Contraceptive Implant			IUD		
	n ^a	% ^a	aOR ^f (95% CI)	n ^a	% ^a	aOR ^f (95% CI)
Title X funding						
Yes	714	71.2	<i>ref</i>	670	68.1	<i>ref</i>
No	385	68.0	0.80 (0.62–1.02)	356	64.1	0.77 (0.61–0.98)*
Primary clinical focus^c						
Reproductive health	699	75.3	<i>ref</i>	665	73.5	<i>ref</i>
Primary care	398	62.7	0.84 (0.65–1.09)	360	57.4	0.67 (0.52–0.85)*
Provider occupation						
Physician	234	72.4	<i>ref</i>	219	69.7	<i>ref</i>
Advanced clinical practitioner ^d	720	73.0	0.81 (0.59–1.12)	681	69.8	0.83 (0.60–1.15)
Nurse	129	50.0	0.64 (0.43–0.96)*	113	44.9	0.63 (0.40–0.97)*
Trained in implant insertion						
Yes	683	82.7	<i>ref</i>	-	-	-
No	377	54.3	0.32 (0.25–0.41)*	-	-	-
Trained in LNG-IUD or Cu-IUD insertion						
Yes	-	-	-	753	76.5	<i>ref</i>
No	-	-	-	256	46.8	0.42 (0.32–0.55)*
Proportion of female patients of reproductive age who receive family planning services^e						
1–24%	93	61.0	0.88 (0.61–1.26)	80	55.2	0.75 (0.51–1.09)
25–49%	155	61.2	0.76 (0.57–1.03)	138	55.7	0.66 (0.49–0.88)*
50%	836	73.3	<i>ref</i>	797	71.1	<i>ref</i>

aOR, adjusted odds ratio; CI, confidence interval; Cu-IUD, copper intrauterine device; IUD, intrauterine device; LNG-IUD, levonorgestrel intrauterine device.

^aUnweighted frequencies and weighted percentages displayed.

^bIncludes Title-X and non-Title X providers.

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^cPrimary clinical focus at the clinic (reproductive health [obstetrics/gynecology or family planning/reproductive health] or primary care [family medicine, adolescent health or pediatrics, or general health care]).

^dIncludes physician assistant, nurse practitioner, certified nurse midwife.

^eFamily planning service is defined as any service related to postponing or preventing pregnancy. This may include a medical examination related to provision of a method, contraceptive counseling, method prescription, or supply visits. A patient may receive a family planning service even if the primary purpose of the visit is not for contraception.

^fAdjusted for implant insertion training, provider occupation and variables selected *a priori* including Title X funding, primary clinical focus, region, provider gender and proportion of female patients of reproductive age receiving family planning services.

^gAdjusted for IUD insertion training, provider occupation, and variables selected *a priori* including Title X funding status, primary clinical focus, region, provider gender and proportion of female patients of reproductive age who receive family planning services.

* $P < 0.05$

Table 3: Perception of 'Quick Start' Initiation of LARC as Safe for Adolescents by Selected Characteristics, Office-Based Physicians

Physician specialty	Characteristics	Contraceptive Implant			IUD		
		Safe	aOR ^c (95% CI)	Safe	aOR ^d (95% CI)		
		<i>a</i> n	<i>a</i> %	<i>a</i> n	<i>a</i> %		
Obstetrics and gynecology	Family medicine	196	74.8	<i>ref</i>	180	68.7	<i>ref</i>
	Adolescent medicine	42	70.0	1.39 (0.68–2.82)	37	61.7	1.26 (0.65–2.44)
		66	86.8	2.21 (1.23–3.98)*	57	76.0	3.37 (1.39–8.21)*
Trained in implant insertion							
	Yes	182	77.7	<i>ref</i>	-	-	-
	No	114	69.5	0.67 (0.36–1.28)	-	-	-
Trained in LNG-IUD or Cu-IUD insertion							
	Yes	-	-	-	216	69.7	<i>ref</i>
	No	-	-	-	55	43.0	0.31 (0.12–0.77)*
Proportion of female patients of reproductive age who receive family planning services^b							
	1–24%	40	61.1	0.44 (0.20–0.97)*	38	54.1	0.62 (0.28–1.35)
	25–49%	75	72.3	0.64 (0.32–1.26)	68	70.3	1.09 (0.57–2.10)
	50%	187	78.3	<i>ref</i>	166	68.6	<i>ref</i>

aOR, adjusted odds ratio; CI, confidence interval; Cu-IUD, copper intrauterine device; LNG-IUD, levonorgestrel intrauterine device.

^aUnweighted frequencies and weighted percentages displayed.

^bFamily planning service is defined as any service related to postponing or preventing pregnancy. This may include a medical examination related to provision of a method, contraceptive counseling, method prescription, or supply visits. A patient may receive a family planning service even if the primary purpose of the visit is not for contraception.

^cAdjusted for implant insertion training and variables selected *a priori* including physician specialty, region, provider gender and proportion of female patients of reproductive age who receive family planning services.

^dAdjusted for IUD insertion training and variables selected *a priori* including physician specialty, region, provider gender and proportion of female patients of reproductive age who receive family planning services.

* $P < 0.05$