Contraceptive and LARC Services for Teens and Young Adults in Publicly Funded Facilities in the US

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Introduction

Unintended pregnancy among teens and young adults in the United States remains a public health concern, with more than 1.7 million unintended pregnancies reported among women aged 15–24 years in 2006 [1]. Although the proportion of unintended pregnancies among teens aged 15–19 years is high at 82%, it has remained stable over time; in contrast, the proportion of unintended pregnancies among young adults aged 20–24 years increased from 59% in 2001 to 64% in 2006 [1]. Compared to older women of reproductive age, teens aged 15-19 and young adults aged 20-24 have the highest proportions of contraceptive nonuse [2]. A significant portion of unintended pregnancies (43%) results from incorrect or inconsistent use of contraception [3,4], which is more likely to occur with user-dependent methods (e.g., oral contraceptive pills, condoms) than with methods that require less user involvement (e.g., intrauterine devices (IUDs), implants). Among U.S. teens and young adults using contraception, pills are the most common primary method, followed by condoms; proportionately, fewer older women rely on these methods [2].

Increased use of reversible, nonuser-dependent methods that are long-acting and highly effective [5] could significantly reduce the rate of unintended pregnancy among young women. These methods, known as long-acting reversible contraceptives or LARCs, include IUDs and implants. Until recently, LARC methods were viewed as primarily appropriate for women later in their reproductive years. That assumption is now changing, as LARCs have been shown to be safe, effective, and acceptable for teens and young adults, including those with no children [6-8]. Although use has increased substantially since 2002, including among those aged 15–19 and 20–24 years, current use of LARCs remains low among U.S. women overall (9%) [9] and teens have the lowest LARC usage rates (4%) of any age group [10].

Although practice guidelines are changing to reflect the demonstrated safety and efficacy of LARC methods for teens and young adults, including those with no children [11-13], approximately one-third to one-half of providers, including obstetrician gynecologists, family medicine physicians, physician assistants and nurses, believe that IUDs are not an appropriate method for nulliparous women, and nearly two-thirds do not view teens as suitable IUD candidates [14-16]. Other clinician misconceptions about IUDs that may influence the provision of these methods to young women include beliefs that they increase the risk of pelvic inflammatory disease (PID) and that they are inappropriate for patients in non-monogamous relationships or who have a history of sexually transmitted infections (STIs) [14-17].

Young women's knowledge and attitudes about LARC methods also serve as barriers to their use [18-22]. Studies have shown that between 50% and 60% of young women have never heard of the IUD [18, 20-22], while over 90% have no knowledge about implants [20]. Moreover, research suggests that the accuracy of knowledge among young women who have heard of these methods is low. In one study, 71% of young women reported being unsure of the safety of IUDs, while 58% were unclear about their efficacy [21]. Another study found that many young women felt that LARCs were not appropriate methods for teens and erroneously believed that they were associated with infection and infertility [20].

Publicly funded family planning facilities, which serve a disproportionately high number of young clients in the United States [23], represent an ideal setting to meet the contraceptive needs of many teens and young adults. Teenagers represented 1 of 4 contraceptive clients served by these facilities in 2006, which reached nearly 2 million women aged <20 years [24]. Without these facilities, many of which receive funding through the federal Title X program, the number of unintended pregnancies and abortions in the United States is estimated to be nearly two-thirds higher among teens and among women overall [25].

One strategy to increase the use of contraceptives, including LARCs, among interested adolescents and young adults, is to ensure the availability of youth-friendly services at publicly funded family planning centers. The World Health Organization defines youth-friendly services as services that are equitable, accessible, acceptable, appropriate, and effective for young people [26]. Strategies to make health facilities more youth-

friendly include convenient locations, hours, and wait times; ensuring confidentiality; having separate waiting areas and examination rooms with age-appropriate educational materials; and improving provider knowledge and competencies related to teen development [27,28]. Studies of interventions that incorporate youth-friendly strategies into family planning services have found significant improvements in several behavioral outcomes and satisfaction with services [29–32].

The objectives of our research were (1) to describe youth-friendly contraceptive services, both general and LARC-specific, available to teens and young adults at publicly funded family planning facilities across the country, (2) to explore and compare provider and patient perspectives about LARC methods for young women and (2) to examine and identify strategies for addressing challenges experienced by facility staff in providing youth-friendly services and LARC methods to young women. The results of the study will help to identify ways in which publicly funded facilities that provide family planning can improve their services to better meet the contraceptive needs of sexually active teens and young adults in the United States.

Methods

Quantitative component

Sample

Between April and September 2011, we surveyed a nationally representative sample of 1,196 publicly funded facilities that provide family planning services in the United States. The sample was drawn from the Guttmacher Institute's regularly updated national database of publicly funded family planning facilities, numbering 7,895 sites when the sample was drawn. Since fielding of this survey coincided with a data collection effort using similar sampling strategies and there were concerns about overburdening facilities with requests, we also excluded facilities sampled for this other effort (N=1247).

Sampled facilities were stratified by type (Federally Qualified Health Centers [FQHCs], Planned Parenthood affiliates, health departments, hospitals, and other agencies) and by whether they received any Title X funding. "Other" agencies included Indian Health Services sites, Federally Qualified Look Alike sites, social service agencies that provide family planning, free clinics, and visiting nurse association sites. Facilities were randomly selected within each stratum.

Survey instrument

Our four-page questionnaire consisted of 23 primarily close-ended questions and asked for basic information about the facility, client caseload, demographics, and contraceptive services available to teens and young adults. We defined teens as persons aged <20 years and young adults as those aged 20–24 years. Questions, many of which were standard items asked in previous Guttmacher surveys of family planning facilities, addressed general and LARC services for teens and young adults, as well as challenges to providing these services. The questionnaire took approximately 15 minutes to complete.

Data collection

Questionnaires were mailed in mid-April 2011 to either the facility director or, in cases where multiple facilities within one agency were being sampled (N=153), to the agency director at the main facility site. The agency director could either complete the questionnaires for each facility or forward them to the appropriate person at each facility. A reminder was sent to agency directors in May 2011. To improve response, follow-up phone calls were made to non-respondents between May and September 2011. Sites that had not responded by July were offered a $25 gift card for completed questionnaires.

Data analysis

To account for non-response, responses were weighted to reflect the total universe of family planning facilities at the time the sample was drawn based on the distribution of these facilities by type and Title X funding status. We used chi-square analyses to examine associations between youth-friendly and LARC-specific service practices and the following key facility characteristics: facility type, Title X funding status and whether a facility focused primarily on reproductive health services or had a more general, primary care focus. We also examined the relationship between youth-friendly services and LARC services, using the measure of whether staff had been trained to meet adolescents' contraceptive needs as a proxy of whether or not a facility was

youth-friendly, as this factor is a key characteristic of youth-friendly services [26,27]. We used SPSS Statistics Version 18 for our analyses. This portion of the study was considered exempt from review by the chairman of the federally registered institutional review board of the Guttmacher Institute.

Qualitative component

Sample and data collection

Qualitative data come from three sources: 20 semi-structured telephone interviews with administrative directors at publicly funded sites that provide family planning services, 6 focus group discussions (FGDs) with a total of 37 facility staff, and 48 semi-structured in-depth interviews (IDIs) with clients 16-24 years of age. We used the 2009 Family Planning Annual Report, which provides national-level data on the Title X Family Planning Program, to help us identify Title X grantees that documented high (>6%) and low (<2%) percentages of LARC (IUD and implant) provision among young women. From the 44 grantees that met these criteria, out of the total universe of 89 grantees, we contacted the administrative directors at ten grantees (5 in each grantee group) that represented diversity in geographic location and grantee type (Planned Parenthoods, health departments and family planning councils). We asked each grantee to identify two to three health facilities among their funded sites that represented the same trends in LARC provision among women ages 16-24 that were documented at the grantee level.

Director interviews

We conducted approximately hour-long telephone interviews with administrative directors at 20 facilities, split evenly between facilities with higher and lower levels of LARC provision to young women. We asked directors about levels of LARC provision to teens and young adults at their sites to confirm whether their provision trends matched those at the grantee level. The semi-structured director interview guide asked respondents about LARC-related practices, including facility policies and protocols regarding provision of IUDs and implants to teens and young adults, workforce and training issues and needs, trends in LARC use among young patients, counseling/education practices, and perceived barriers to providing LARCs to young women.

Staff focus group discussions

From the 20 sites at which director interviews were conducted, we selected six (three with higher and three with lower levels of LARC use among young women) across the country that had different service delivery models (e.g. health department clinics, stand-alone family planning centers and adolescent-specific clinics) at which to conduct staff FGDs and client IDIs. We coordinated with a staff liaison at each site to recruit staff participants who were not in supervisory or subordinate positions to one another for each focus group; participants included clinicians, educators, medical assistants, and receptionists. All groups had between five and eight participants, were held either before or after work hours to minimize disruption of the clinic flow, and were approximately 90 minutes long. Each focus group was facilitated by a member of the research team while another team member took notes. Facilitators used a guide that queried participants about LARC trends among young patients, their attitudes about young women using IUDs and implants, and perceived barriers to providing LARC services to these younger patients.

Client in-depth interviews

Across the six sites at which staff focus groups were held, we conducted a total of 48 in-depth interviews with 22 adolescents (ages 16-19) and 26 young adult (ages 20-24) clients, evenly split between high and low sites. Eligible respondents were female, English-speaking clients between ages 16 and 24 who were visiting the site for family planning services during a second or supplemental visit. Research staff coordinated with clinic staff to recruit and interview interested and eligible respondents. All interviews were conducted by a member of the research team, took place after the respondents' appointments in a private location within the clinic settings, and lasted approximately one hour. The IDI guide, pretested with four clients aged 16-24 at a local family planning clinic, included questions about respondents' knowledge of, experiences with, and attitudes about IUDs and implants and their needs with regards to receiving these methods. At the conclusion of the interview, respondents were asked to fill out a short questionnaire on their socio-demographic characteristics.

Director interviews took place between June and August of 2011 and the FGDs and IDIs were conducted between September and December 2011. All participants received a component-specific study description, gave informed consent (minors 16 and 17 provided assent for the IDIs) and were paid for their participation ($75 for the director interviews, $50 for the FGDs and $40 for the IDIs). Participation in each component of the study was conditional on the interview or FGD being audio-recorded. This study and all associated procedures and study instruments were approved by the federally registered Institutional Review Board (IRB) of the PI's organization. The director interviews were considered to be exempt from review because questions focused on facility services and policies, not personal opinions or attitudes.

Data management and analysis

Recordings from each of the three components were transcribed verbatim and identifying information was stripped during the cleaning phase. For the FGDs, we organized participant responses according to themes directly related to questions from the FGD guide. For the director interviews and client IDIs, we developed initial coding schemes prior to data collection based on the interview guides and existing literature and subsequently adapted and updated the schemes throughout the interview and coding processes. Three members of the research team independently double-coded three director interview transcripts and three client interview transcripts and then examined inter-coder reliability, which initially ranged from 76-100% agreement. We resolved code divergence through discussion and the development of new codes. After further double-coding, subsequent examination of inter-coder reliability ranged from 95-100%, and all remaining transcripts were coded by at least one member of the research team. We used NVivo 8 to organize the data, code transcripts, and generate code reports.

Following Miles & Huberman [33], as a preliminary step to identify the most prevalent ideas, we counted the number of transcripts in which common codes or themes appeared. We then further analyzed the data by summarizing emerging themes and concepts and exploring patterns of similarity and difference, with a particular eye toward differences between high and low utilization sites and teens and young adults. Key topics that emerged are summarized via a textured description and illustrated using direct quotes from participants [34]. Due to the substantive differences between the group dynamic present in FGDs and the one-on-one format of an IDI, we used the FGD as the unit of analysis to compare to individual respondents in the IDIs [35]. Where contrasts emerged between sites with higher and lower levels of LARC use, teens and young adults, or patients and providers, we note them; otherwise, we weave the responses together.

Findings

Administrators at 584 eligible facilities responded to the questionnaire, for an overall response rate of 52%. Planned Parenthood facilities had the highest response rate (80%), followed by health departments (65%) and FQHCs (49%); 36% of other facilities and 30% of hospitals responded. Compared to non-responders, facilities that responded to the survey were more likely to be Planned Parenthoods and health departments, to have received Title X funding, and to be located in the South and Midwest. Most health departments (87%) and Planned Parenthoods (67%) received Title X funding and provided services primarily focused on reproductive health (68% and 98%, respectively). The majority of FQHCs did not receive Title X funding (79%) and had a more general, primary care focus (89%). Most facilities that primarily focused on reproductive health indicated that they received Title X funding (68%).

Of the twenty sites at which director interviews were conducted, six were Planned Parenthood affiliates, three were federally qualified health centers, three were health departments, two were hospitals, and six were some other type of facility. The six sites at which FGDs and IDIs were conducted included two health departments, one hospital, one Planned Parenthood affiliate, and two other types of sites.

Among the 48 client respondents, just over half were young adults aged 20-24 (54%), and 46% were teens aged 16-19. Nearly half (46%) of the clients were below 100% of the poverty level, and most of the rest (35%) were low-income (100-199% of the poverty level). Forty percent of clients in the sample were white non-Hispanic, 19% were black non-Hispanic, 35% were Hispanic (of various races), 8% were of mixed or other races, and 2% did not identify a race or ethnicity. One teen had previously given birth compared to ten young adults who reported one or more past births.

General contraceptive services for teens and young adults

Facilities varied in how they provided contraceptive services to younger clients (Table 1). All associations between the three site characteristics examined (facility type, receipt of Title X funding, and service focus) and contraceptive-related practices for teens and young adults were significant at $p \leq 0.01$. Exceptions to this finding were for the associations between (1) receipt of Title X and walk-in appointment availability and (2) service focus and walk-in appointment, extended hour availability, and the use of peer educators, for which there were no significant associations. A facility's service focus was associated with having a designated check-in area for teens ($p=0.034$).

At most facilities (78%) and at all Planned Parenthoods, younger clients were able to access hormonal contraceptive methods (excluding the hormonal IUD) without having a pelvic exam. A higher proportion of health departments, Title X, and reproductive health focused facilities also incorporated this practice more often than the other types of facilities. About two-thirds of all facilities reported that they were accessible to clients in multiple ways: through public transportation (67%), by not requiring scheduled appointments for contraceptive refills (67%), and by offering walk-in or same-day appointments during flexible hours. Planned Parenthoods more frequently offer these flexible appointments and hours.

Fewer than half of facilities (43%) had teen-friendly décor (as defined by the respondent) in their waiting and examination rooms, but most Planned Parenthoods (70%) did. Although 27% of facilities reported using social networking media to provide education or outreach to potential clients, few offered online appointment scheduling for patients (9%) or sent text messages to patients (8%). The exception was Planned Parenthood affiliates; 63% offered online scheduling and 75% used social media to reach clients or provide education. Facilities that received Title X funding and those that primarily focused on reproductive health also reported using these youth-friendly practices more often.

Most facilities provided outreach and/or education to young people through community organizations, employers, or faith-based groups (70%) or local schools (69%); health departments, Title X-funded, and reproductive health-focused facilities offered these outreach activities more commonly than their counterparts. Additionally, staff members at most facilities had received training to meet teens' special contraceptive needs (78%). Among the types of facilities, FQHCs reported these teen-specific trainings least often (58%).

The majority of facilities took steps to ensure confidentiality for younger clients; most (77%) required consent from a minor in order for parents to access medical records, and 60% had incorporated additional measures to ensure confidentiality when contacting teen clients. Planned Parenthood, Title X, and reproductive health-focused facilities incorporated these practices to a greater extent than did their counterparts.

LARC-specific services for teens and young adults

All associations between the three site characteristics examined (facility type, receipt of Title X funding and service focus) and LARC-related services for teens and young adults were significant at $p < 0.01$ (Table 2). The only exceptions to this finding were for the associations between (1) receipt of Title X funds and past IUD trainings and future implant trainings and (2) service focus and future hormonal IUD training, for which there were no significant associations. A facility's receipt of Title X funds was associated with past staff trainings on the implant ($p=0.038$).

With teens, IUDs were discussed "often" or "always" at 43% of facilities, and implants were discussed as frequently at 40% of facilities. With young adults, IUDs were discussed "often" or "always" at 56% of facilities and implants at 44% of facilities. In comparison, other methods including the pill, condom, and other short-term hormonal methods (i.e., shot, patch, or ring) were discussed "often" or "always" with both teens and young adults at 80-100 % of responding facilities, depending on the method (data not shown).

Nearly half (47%) of facilities indicated that IUD use among teen and young adult clients had increased over the past two years, and 37% indicated a rise in implant use among these age groups. Planned Parenthood and reproductive health-focused facilities were most likely to report increases in LARC use among teens and young adults. Fewer than half of the facilities (43%) reported that removals of LARC methods among teen and young adult clients were more common than among older adults. Across all facility types and regardless of receipt of

Title X funds or service focus, the hormonal IUD (64%) was more commonly provided to teens and young adults than the copper IUD (16%).

Most facilities provided the IUD (82%) and implant (65%) to patients on-site. On-site insertions were made possible through either direct purchase of the IUD (74%) or implant (59%) from the manufacturers or by having patients bring in the IUD (8%) or implant (6%) after obtaining a prescription. A larger proportion of facilities followed alternative dispensing routes for implants than for IUDs. Planned Parenthoods and "other" types of facilities and hospitals provided IUDs and implants directly to clients more often than health departments and FQHCs; relative to other facility types, hospitals and FQHCs more commonly provided prescriptions for IUDs (and, for FQHCs, implants) that clients had to fill elsewhere before having them inserted at the site. Facilities that receive Title X funding, and those that were reproductive health-focused, more commonly reported direct LARC dispensing.

Staff training on LARC methods was most common for the implant, followed by the hormonal IUD and then the copper IUD. Facilities focused on providing reproductive health services more commonly reported having staff trained on all three LARC methods than did their primary care- focused facility counterparts. These trainings were not necessarily specifically focused on LARC methods for young clients.

Respondents from facilities that were more youth-friendly were significantly more likely to indicate that both LARC methods are typically discussed during a contraceptive visit with teens and young adults. In addition, IUD and implant provision among teens and young adults was more likely to have increased at youth-friendly facilities than at non-youth-friendly ones. Youth-friendly facilities were more likely to directly dispense the IUD but not the implant to patients, less likely to have staff trained on the implant and more likely to have future staff trainings scheduled on the IUD.

The qualitative findings provide greater context for many of the patterns observed in the survey findings. Staff in the FGDs did not generally equate being a teen with ineligibility for IUDs; instead, characteristics associated with teen behavior, such as having multiple partners, concerned them. In two of the focus groups at sites with higher levels of LARC provision, some staff considered young women who had never given birth to be ineligible for IUDs due to their smaller reproductive anatomy. In contrast to staff, one quarter of the young women did perceive young age as rendering them ineligible, describing this method as "more serious" and often citing media portrayals of "typical" users as older women seeking to limit their family size. Nine young women at sites with lower levels of LARC provision talked about age-related candidacy criteria compared to three young women at higher sites.

> *I think [the IUD is] more for women who've already had children and don't really want to have more kids, and are just waiting for menopause. I think it's more for, like, women in their 30's and 40's [client IDI43, teen, higher LARC provision site].*

When asked what they thought about young women their age using IUDs and implants, three quarters of clients mentioned a positive, lifestyle-related aspect of at least one of the methods. Nine young adult clients and six teens indicated that young women's busy, hectic lives made them ideal candidates for IUDs and/or implants because these methods were long-acting and easy to forget about post-insertion.

> *I think [IUDs and implants] are good for women my age because I think we all have 5000 things on our plate. Women my age are going to grad school and working full time and thinking about starting commitments … that the day to day can slip right by. And so things like pills or…any other form of birth control that requires you to have any sort of planning in advance, that's always inconvenient, so I think we're just…young and probably stupid most of the time and making decisions on the fly and something like that, where it's just done taken care of, check that off the list and move on with life, that's probably good [client IDI35, young adult, lower LARC provision site].*

Another popular client sentiment was that their strong desire to avoid pregnancy rendered them ideal candidates for IUDs and implants due to their high efficacy. This was more commonly mentioned by clients at higher-provision than lower-provision sites (nine vs. five) and among young adults (nine vs. five teens).

Staff and clients alike identified several common advantages and disadvantages to young women using IUDs and implants (Figure 1). Most of these were applicable to both types of longer-acting methods; as such, the figure represents advantages and disadvantages grouped for IUDs and implants. Clients and staff agreed that the "forgettable" nature of the methods and their duration were some of LARC's most significant advantages. Clients emphasized the effectiveness of LARC methods to a greater extent than did staff, while staff placed more emphasis on their beneficial side effects and discreet nature. They also agreed that fear of pain associated with both insertion and removal and negative side effects were disadvantages. Clients placed greater emphasis on the disadvantage of having a foreign object in one's body and the possibility that they or others could either see or feel the implant, while staff were more concerned about cost issues and the possibility that LARCs might reduce condom use among younger users. Staff from four sites also indicated a concern that they would lose opportunities to intervene in other health issues, especially STIs, with their young patients who chose the longer-acting methods because they might not return to the clinic for the duration of the method's coverage.

Some aspects of IUDs and implants were perceived as advantages by some clients but disadvantages by others. For example, the long-acting nature of IUDs and implants was seen as a positive by young women who wanted to delay childbearing for several years, while others felt that 5-10 years for the IUD, and even three years for the implant, was too long for them to consider.

> *I mean if you're getting something inserted, the one that lasts longer would be more appealing to me [client IDI43, teen, higher LARC provision site]*

> *Three years does not sound as bad as 5, I would probably be willing to try that. […] Again I don't know why it's so shockingly different when it's essentially the same idea but for whatever reason, 3 more years seems way more reasonable than 5 to me, again because I'm anti committal, shorter time [client IDI35, young adult, lower LARC provision site]*

Similarly, some young women looked favorably upon the menstrual suppression associated with the hormonal IUD, but this was perceived as a downside by others, including some Latina clients who cited cultural beliefs about the harmful effects of not getting a regular period. In addition, some respondents identified LARC methods as being cost effective over the duration of their use, while others indicated that the high upfront costs associated with obtaining them was prohibitive. Finally, the necessity of having LARC methods inserted and removed by a doctor appealed to some respondents because it took control out of their hands, yet others disliked this lack of control and inability to discontinue the method without visiting a clinic.

Select concerns led respondents to favor one LARC method over another. Staff and directors expressed both more concerns about IUD use and a stronger preference for implants for younger women. Many felt that IUDs posed more clinical and logistical challenges, including difficulty dilating the cervices of nulliparous women and/or placing the device in a small uterus, managing clinic flow around the lengthy IUD insertion visit, and maintaining adequate staffing in the face of possible complications from insertion. FGD participants from five sites felt that IUDs are not good methods for young women because they are not comfortable reaching into their vaginas to regularly check the strings. In contrast, staff in five of the FGDs felt that the location and ease of insertion associated with the implant rendered it a particularly appropriate method for young women.

> *I think a lot of teenagers in that age group, like the 15 [year olds] or so, I think they mention that they want the Implanon more so than an IUD. So I'm not too sure they are feeling more comfortable or if they know a teen that had it or because it's in the arm and not in the vagina [staff FGD 6, higher LARC provision site].*

Despite the many disadvantages cited regarding the IUD for young women, clinicians were not unified in their preference for implants. The side effect profile of the hormonal IUD was cited as an advantage by staff in

all six FGDs, who mentioned a patient's tolerance for irregular bleeding as the main criterion for whether to recommend the implant. They revealed differing opinions on whether this criterion was met by teenaged patients, however, as some participants in each FGD indicated that teens' propensity to be less tolerant of side effects led them to discontinue the use of LARC methods, especially implants, at a higher rate than older women.

> *I just wish they were a little bit more open minded and a little bit more patient with possible side effects. I mean you have these young women that will go and chop off their hair and if they don't like it they'll think to themselves oh, it will grow back, but with birth control if like two days later they are having bleeding they call right away and they are like I want this taken out right now [staff FGD 6, higher LARC provision site].*

Overall, 21 clients expressed a preference for one of the LARC methods over the other; of these, 13 favored the implant while eight favored the IUD. Fourteen young women preferred the implant's location, mostly because of concerns that the IUD's location would harm fertility, while seven young adults were more comfortable with the location of the IUD, mostly due to concerns that the implant's location would reduce efficacy.

> *I don't know if it's a biased observation of me because I just feel like putting something in your vagina is just weird. I felt like that would just affect children but then maybe under the skin wouldn't be as damaging maybe [client IDI39, teen, lower LARC provision site]*

> *I think I would rather go for the IUD if I had to choose between the two. […] But it sounds kind of weird being under the skin of your arm [...] Just, you think, your uterus, that's going to prevent pregnancy because it's close to down there. The arm is far away [client IDI41, young adult, lower LARC provision site].*

Costs of LARC methods (60%), staff concerns about IUD use among teens (47%) and more training needed on implant insertion for staff (47%) were the most common challenges to providing LARC-specific services to younger patients in the survey. From the director interviews and FGDs, additional challenges included the extra time required to counsel young patients about LARC methods, outdated clinic policies requiring multiple visits to obtain IUDs, and a perceived higher removal rate among young women due to their impatience with the bleeding side effects of LARC methods (Figure 2). All directors from sites with lower levels of LARC provision and most from higher-provision sites identified challenges to providing LARC methods to younger patients, and almost all of the identified challenges related to cost issues. The most commonly cited strategy for addressing many of these challenges was securing supplementary funding to support the provision of these services to young patients. Only directors from higher LARC provision sites named successful strategies. Several of the strategies outlined by providers addressed multiple challenges, sometimes at both the provider and patient levels.

Conclusions:

Findings from this study indicate that publicly funded family planning facilities across the United States vary in their ability to provide youth-friendly contraceptive services to adolescents and young adults. Of the five key characteristics identified by the World Health Organization as constituting youth-friendly services [26], our study focused particularly on assessing facilities' ability to make services accessible, acceptable, and effective. The majority of publicly funded facilities are making their services accessible to younger clients through locations easily accessed via public transportation, flexible hours, appointment flexibility, and outreach efforts. Planned Parenthood facilities are especially successful in incorporating these aspects of youth-friendly service delivery, while hospitals are almost universally accessible through public transportation, and health departments prioritize providing outreach in the community and in local schools. Acceptable practices that consider the culture of younger clients varied to a much greater extent across facilities. Most

sites incorporated practices to protect minors' confidentiality; however, fewer facilities have adopted newer technology that helps connect with younger clients or incorporated practices to make teens feel more welcome. Effective health services that incorporate evidence-based practices and emphasize staff training were adopted at the majority of facilities. Planned Parenthoods, most of which are Title X-funded and reproductive health-focused, make IUDs and implants more accessible by having them available on-site. Young women seeking these methods at FQHCs and health departments, in contrast, may need to obtain the method from an outside pharmacy or obtain a referral to another provider.

Provision of a broad range of youth-friendly services may reflect a facility's healthcare provision infrastructure and patient population. For example, having a central organization that issues guidelines with regards to evidence-based protocols, training regimens and outreach to young women, as Planned Parenthood facilities have, may make it easier for these facilities to incorporate youth-friendly practices. In addition, these sites almost all focus on providing reproductive health services. Although FQHCs are able to incorporate some youth-friendly practices to a similar degree as other facility types, they fall behind their counterparts in the areas of confidentiality and staff training, perhaps because they serve a broader client population and are less able to stretch their resources to these areas.

Our findings additionally reveal that, although some similarities in attitudes toward LARC methods for young women exist between clients and staff, these two groups prioritize certain advantages and disadvantages of the IUD and implant differently, which influences their opinions regarding the appropriateness of LARC methods for young women. Several clients were concerned that IUDs and implants were too long-lasting, suggesting a key educational and counseling message is that these methods are reversible and can be removed prior to their full duration, making them less "serious" and more appropriate to delaying initial childbearing. However, this message may not gain support from all staff, many of whom were discouraged by perceived high discontinuation rates among younger women and therefore steered these clients away from LARC methods. Yet many women discontinue other hormonal contraceptive methods for reasons similar to those cited for LARC methods, most commonly side effects [36], and an analysis of discontinuation at the national level indicates that young women are *not* more likely than older women to discontinue IUDs and implants due to dissatisfaction (M. Kavanaugh, unpublished data, June 2012). Ensuring that younger clients, who may be more "impatient" with side effects than older women, fully understand the potential side effects and benefits associated with IUDs and implants by encouraging staff to adopt a "managing expectations" style of counseling may be one avenue for addressing staff's frustration with perceived high levels of discontinuation of LARCs among younger women.

Efficacy of LARC methods resonated with clients to a much greater extent than with staff, who were more focused on clinic-related concerns (e.g. cost issues and time constraints). Reorienting clinic-based discussions of contraceptive methods towards a tiered counseling approach based on method efficacy may better reflect clients' perspectives. Although both groups slightly favored the implant over the IUD for young women, a more resonant finding across both staff and clients was that what one person perceives as a method advantage another might see as a disadvantage, and vice versa. These diverse attitudes represent differing needs among young women and emphasize the importance of the availability of a diverse method mix. In addition, they highlight the need for staff to employ an open-ended counseling style that does not make assumptions about what a client will find desirable, or off-putting, about any given method. Several staff concerns regarding IUD and implant use among younger women, especially negative side effects and reduced use of condoms, are concerns that are applicable to most other short-term hormonal contraceptive methods [36]. In addition, these concerns were not as salient to young women themselves. It isn't clear why staff seemed more concerned about these potential disadvantages in relation to LARC methods, but it may be that they are more comfortable educating clients about the more familiar methods that are traditionally marketed to younger women. Emphasizing the importance of clients' beliefs and desires regarding contraceptive methods in trainings on LARCs for staff at all levels would help them to better meet the contraceptive needs of their younger clients.

Certain challenges to incorporating youth-friendly services identified by responding facilities, such as inconvenient clinic hours, too few staff and costs of LARC methods, represent areas that may be difficult for facilities to address and/or improve upon, especially given the current climate of funding cuts at the federal and state levels. Other challenges with regards to staff training on LARC methods and addressing staff

concerns about providing LARCs to younger women may be somewhat more straightforward to tackle, especially with several leading public health and reproductive health organizations issuing guidelines for eligibility criteria for LARC methods that emphasize the importance of these methods for these subgroups of women [7,8]. Strategies for combating facility-level challenges to providing LARC methods to young clients – including improved counseling for clients, broader training for staff, and updated, evidence-based facility guidelines – were all contingent on having financial support for these activities, as all required significant time and effort from staff. Implementation of the Affordable Care Act may enable more facilities to stock and provide IUDs and implants to young clients.

Many providers, policy makers, program planners, and researchers focused on family planning have recognized the potential that LARC methods have to help young women avoid undesired pregnancies. Young women themselves are farther behind in widespread recognition of this potential [37], but our findings indicate that many do see IUDs and implants as feasible options for their lifestyle. Furthermore, data on LARC use at the national level indicate that young women are increasingly adopting these long-acting methods [9]. However, given the limited knowledge and misconceptions about LARC methods among a substantial number of young women in our study, programs to educate young women about IUDs and implants through youth-friendly approaches are recommended. Since cost factors largely in whether facilities are able to provide LARC methods to young women, efforts to increase funding and support for these services are warranted. Attempts to increase provider-level awareness through updated guidelines and improved provider and staff trainings are currently underway [38] but our findings suggest that fine-tuning messages about LARC methods to more accurately reflect clients' concerns is justified. In addition, educational efforts targeting providers should emphasize available evidence regarding LARC trends and younger women's needs in order to combat negative attitudes towards young women using IUDs and implants that are based on anecdotal, sometimes inaccurate, data at the facility level. Employing these strategies will help facilities move toward having a more comprehensive package of contraceptive services available to young women, fully integrating IUDs and implants into the arsenal of methods offered. Enabling family planning facilities' to provide equitable, accessible, acceptable, appropriate, and effective channels for young people to receive LARC methods should be an integral component in our national strategy to reduce unintended pregnancy.

Table 1. Facility practices related to providing contraceptive services to teens and young adults, by key facility characteristics

	Total	Facility type						Title X funding status			Service focus		
	N=584	Health Dept N = 157	Hospital N = 28	PP N = 147	FQHC N = 159	Other N = 93	**p-value**	Yes N = 397	No N = 187	**p-value**	Reproductive Health N = 337	Primary care N = 228	**p-value**
	%	%	%	%	%	%		%	%		%	%	
Accessibility													
Teens and young adults can begin use of hormonal contraceptives without a pelvic exam	78	83	74	100	66	77	**<.001**	86	69	**<.001**	88	69	**<.001**
Facility is easily accessible using public transportation	67	58	95	83	63	67	**<.001**	66	69	**.010**	68	65	**.004**
Clients are **not** required to schedule an appointment to obtain method refills	67	54	66	96	65	76	**<.001**	62	72	**<.001**	74	61	**<.001**
Walk-in or same day appointments are available during after-school, evening, and/or weekend hours	64	55	51	86	64	72	**<.001**	65	63	.052	64	64	.403
Facility hours include evening and/or weekend hours	54	34	41	91	65	58	**<.001**	50	58	**<.001**	54	54	.596
Dedicated adolescent-only hours and/or days	11	9	16	9	9	15	**<.001**	14	7	**<.001**	12	9	**<.001**
Environmental adaptations													
Waiting and exam rooms are designed/decorated to appeal to adolescents	43	36	35	70	33	57	**<.001**	45	41	**<.001**	50	35	**<.001**
Designated adolescent check-in area available	10	6	16	4	9	20	**<.001**	9	12	**<.001**	9	11	**.034**
Use of technology													
Facility uses social networking media to reach potential clients or to provide education	27	20	12	75	14	41	**<.001**	32	22	**<.001**	42	11	**<.001**
Clients can schedule appointments online	9	3	0	63	2	7	**<.001**	13	6	**<.001**	16	2	**<.001**
Facility uses text messages to reach clients for follow-up or educational purposes	8	11	0	9	4	12	**<.001**	9	6	**<.001**	11	4	**<.001**

Table 1 cont. Facility practices related to providing contraceptive services to teens and young adults, by key facility characteristics

	Total	Facility type						Title X funding status			Service focus		
	N=584	Health Dept N = 157	Hospital N = 28	PP N = 147	FQHC N = 159	Other N = 93	**p-value**	Yes N = 397	No N = 187	**p-value**	Reproductive Health N = 337	Primary care N = 228	**p-value**
	%	%	%	%	%	%		%	%		%	%	
Outreach													
Facility provides outreach and/or education with community organizations, employers, or faith-based groups to reach young people	70	82	39	64	64	76	**<.001**	82	57	**<.001**	75	63	**<.001**
Facility provides outreach and/or education in local schools for young people	69	80	53	66	61	72	**<.001**	78	60	**<.001**	74	64	**<.001**
Facility has programs specifically to reach male adolescents about contraception	26	32	21	27	17	31	**<.001**	34	17	**<.001**	31	21	**<.001**
Facility uses peer educators/counselors	22	10	26	31	23	33	**<.001**	18	26	**<.001**	21	22	.241
Staff training and focus													
Staff have received training to meet teens' special contraceptive needs	78	90	74	85	58	86	**<.001**	91	65	**<.001**	89	68	**<.001**
Staff trained on how to communicate with teens over the phone	61	61	60	65	50	72	**<.001**	67	54	**<.001**	66	56	**<.001**
Dedicated staff member to coordinate or oversee contraceptive services for adolescents	28	29	35	17	21	39	**<.001**	29	26	**0.002**	30	26	**<.001**
Confidentiality													
Minor clients must give consent for parents or guardians to access their medical records	77	81	58	92	77	72	**<.001**	81	73	**<.001**	82	72	**<.001**
Staff will use code name or shielded language when calling for appointment reminders or follow-up	60	61	47	87	46	68	**<.001**	68	51	**<.001**	68	52	**<.001**

Note: Data are weighted to reflect the distribution of facilities by type and Title X funding status in the full universe of publicly funded family planning facilities in the US in 2012.

Table 2. LARC-related services for teens and young adult by key facility characteristics

	Total	Facility type						Title X funding status			Service focus			Youth-friendly site		
	N=584	Health Dept N = 157	Hospital N = 28	PP N = 147	FQHC N = 159	Other N = 93	**p-value**	Yes N = 397	No N = 187	**p-value**	Reproductive Health N = 337	Primary care N = 228	**p-value**	Yes N = 455	No N = 129	**p-value**
	%	%	%	%	%	%		%	%		%	%				
COUNSELING																
IUDs are discussed often or always during a typical intial contraceptive visit with a…																
Teen	43	48	44	46	37	39	**<.001**	48	37	**<.001**	49	36	**<.001**	45	34	**<.001**
Young adult	56	64	53	54	49	52	**<.001**	63	48	**<.001**	62	49	**<.001**	59	46	**<.001**
Implants are discussed often or always during a typical intial contraceptive visit with a…																
Teen	40	41	44	48	35	40	**<.001**	44	36	**<.001**	47	34	**<.001**	43	31	**<.001**
Young adult	44	42	44	48	42	47	**<.001**	45	43	**.004**	48	40	**<.001**	45	39	**<.001**
TRENDS																
IUD use among adolescent and young adults in past 2 years has…							**<.001**			**<.001**			**<.001**			**<.001**
Increased	47	45	46	64	47	40		48	45		57	35		49	36	
Stayed about the same	49	50	46	34	49	56		49	49		39	61		47	58	
Decreased	4	4	9	2	4	4		3	6		3	3		4	6	
Implant use among adolescent and young adults in past 2 years has…							**<.001**			**<.001**			**<.001**			**<.001**
Increased	37	31	45	59	35	36		36	39		46	28		39	29	
Stayed about the same	56	63	48	40	59	55		59	53		49	65		54	65	
Decreased	6	6	7	2	6	9		5	8		5	6		6	6	
IUD and implant rate of removal among adolescents and young adults is…							**<.001**			**<.001**			**<.001**			**<.001**
Higher than adults 25+	43	44	38	46	34	54		44	41		46	39		45	32	
About the same as adults 25+	48	44	62	47	56	39		46	52		42	55		46	58	
Lower than adults 25+	9	13	0	6	10	7		10	7		12	5		9	9	
Most common type of IUD among adolescent and young adults							**<.001**			**<.001**			**<.001**			**<.001**
Hormonal IUD	64	64	57	60	61	72		63	66		66	62		64	62	
Equally split between IUD types	20	14	18	27	27	19		18	23		16	25		19	27	
Copper IUD	16	22	24	13	11	9		20	11		18	14		17	11	

Table 2 cont. LARC-related services for teens and young adult by key facility characteristics

	Total	Facility type						Title X funding status			Service focus			Youth-friendly site		
	N=584	Health Dept N = 157	Hospital N = 28	PP N = 147	FQHC N = 159	Other N = 93	p-value	Yes N = 397	No N = 187	p-value	Reproductive Health N = 337	Primary care N = 228	p-value	Yes N = 455	No N = 129	p-value
DISPENSING	%	%	%	%	%	%		%	%		%	%				
When providing clients with IUDs…							**<.001**			**<.001**			**<.001**			**<.001**
Clinic purchases method & inserts on site	74	68	77	95	66	79		78	68		85	58		75	68	
Clinic provides Rx to outside pharmacy, clinic inserts	8	2	23	2	18	2		2	16		3	15		6	20	
Clinic does not provide method or refers out	9	9	0	3	10	14		7	11		4	15		12	8	
Other	7	15	0	0	4	3		10	2		5	10		8	4	
When providing clients with implants…							**<.001**			**<.001**			**<.001**			**<.001**
Clinic purchases method & inserts on site	59	49	82	87	53	51		62	55		69	46		58	69	
Clinic provides Rx to outside pharmacy, clinic inserts	6	8	0	2	14	1		6	8		4	10		5	13	
Clinic does not provide method or refers out	27	34	0	10	23	43		24	31		17	39		28	16	
Other	8	9	18	1	10	4		9	6		10	5		9	2	
TRAINING																
In the past 2 years, clinic staff have received training for…																
Implant	73	67	80	85	76	69	**<.001**	72	75	**.038**	75	68	**<.001**	71	82	**<.001**
Hormonal IUD	43	46	40	35	43	46	**<.001**	42	45	.121	45	39	**<.001**	43	45	0.198
Copper IUD	29	28	36	29	25	31	**<.001**	28	29	.491	32	23	**<.001**	29	27	0.284
In the coming year, clinic staff are scheduled to receive training for:																
Implant	71	67	70	91	70	63	**<.001**	71	71	.890	74	64	**<.001**	69	82	**<.001**
Hormonal IUD	30	47	10	18	34	16	**<.001**	39	20	**<.001**	32	29	.076	32	19	**<.001**
Copper IUD	26	17	20	22	33	31	**<.001**	20	32	**<.001**	24	29	**.009**	28	12	**<.001**

Note: Data are weighted to reflect the distribution of facilities by type and Title X funding status in the full universe of publicly funded family planning facilities in the US in 2012. Measure of "youth-friendly" site is based on item asking about staff having received training to meet adolescents' special contraceptive needs, as this is identified in literature as a key aspect of youth-friendly services.

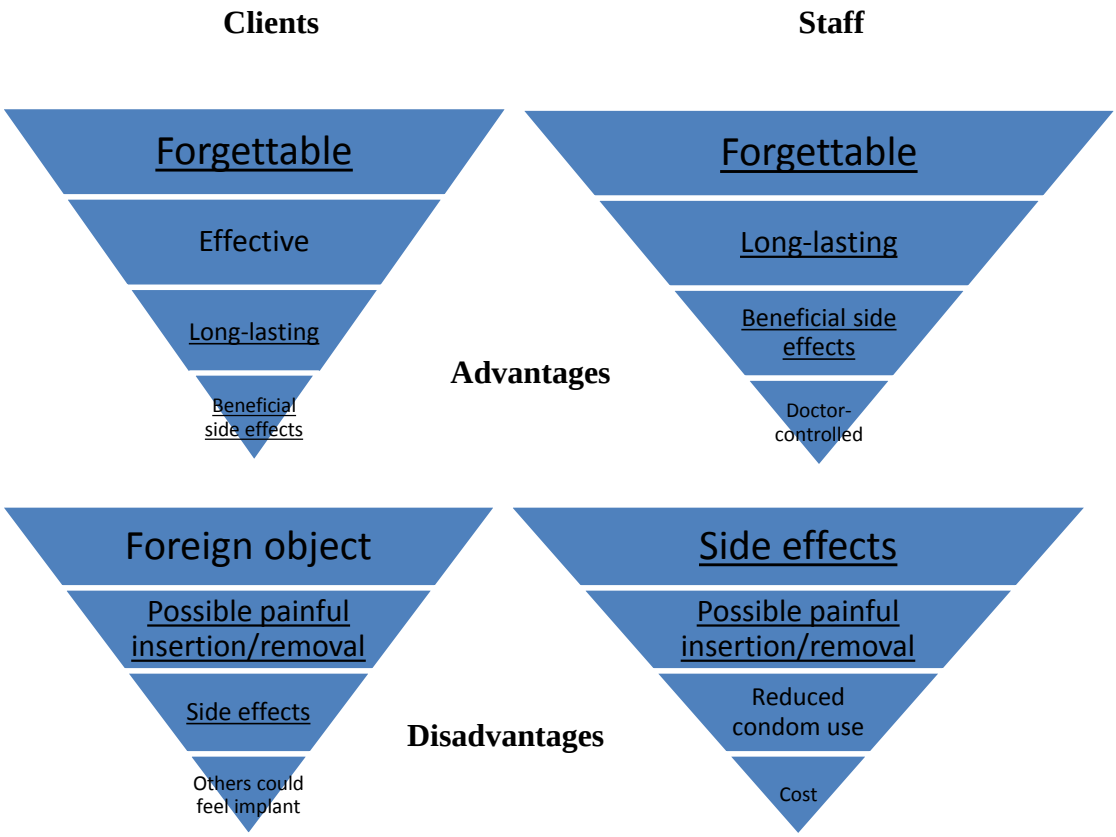

Figure 1: Client and staff perspectives on advantages and disadvantages of LARC methods, listed in descending order from most to least common within groups. Top four characteristics mentioned in client IDIs and staff FGDs are presented. Underlined characteristics represent agreement between clients and staff.

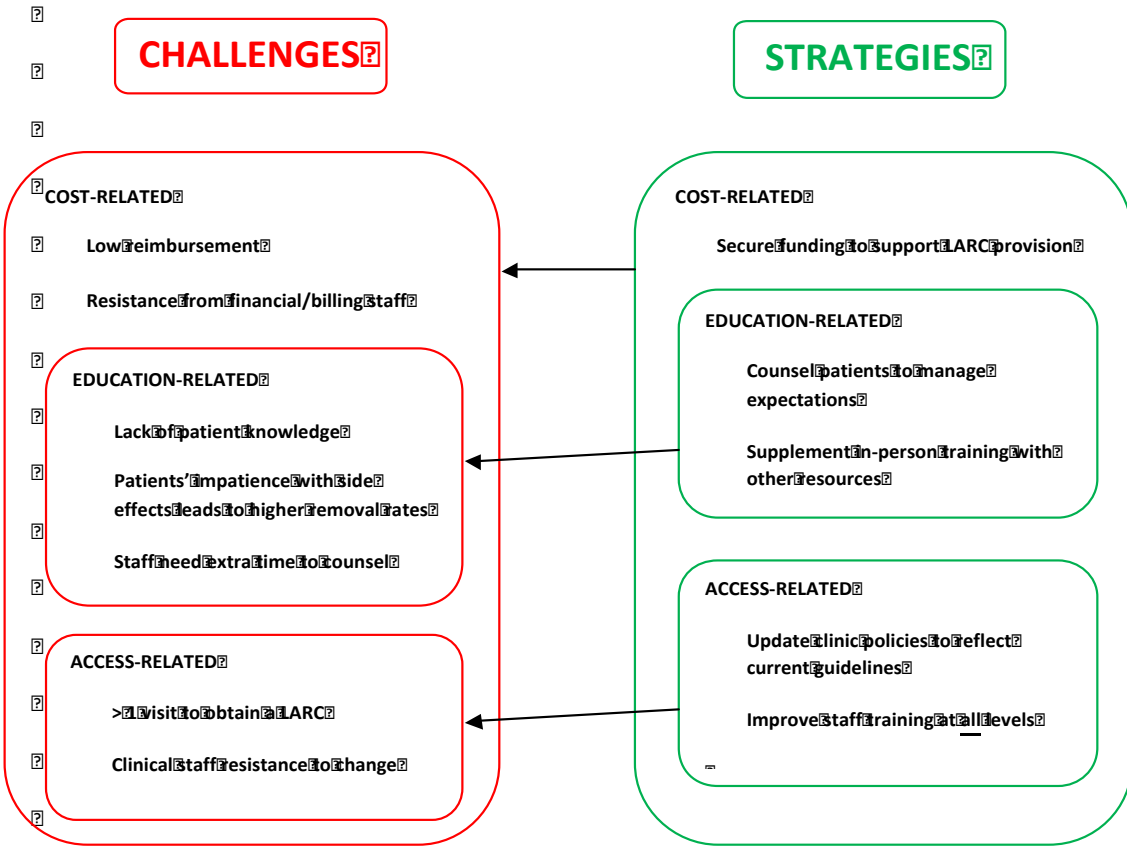

Figure 2: Challenges to providing LARCs to young women and strategies to combat these challenges, as identified by administrators and staff at lower rates of LARC provision facilities (challenges) and higher rates of LARC provision facilities (both challenges and strategies).

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