ABSTRACT

BACKGROUND: With recent recommendations from professional organizations, long-acting reversible contraception (LARC) methods are considered appropriate first-line contraception for adolescents. Many school-based health centers (SBHCs) in New York City (NYC) have recently added onsite LARC insertion and management to their contraceptive options. We aimed to explore key elements needed to implement LARC training and services into the SBHC setting and to identify successful factors for program implementation.

METHODS: Semistructured qualitative interviews were conducted with 19 providers and staff at 7 SBHCs in high schools in the Bronx and analyzed using Dedoose.

RESULTS: Support and leadership from administration; comprehensive onsite training of providers and staff; developing an effective staffing model for procedure sessions; and patient-centered contraceptive counseling were 4 key themes named by respondents as crucial to the program implementation process.

CONCLUSIONS: Integrating LARC services onsite at SBHCs is feasible and positively received by providers and staff. With good leadership, staffing, training, and appropriate contraceptive counseling, both SBHCs and other primary clinics that serve adolescents can integrate LARC insertion, removal, and management into routine contraceptive care. This in turn can increase youth access to these methods.

Keywords: intrauterine devices; school health services; adolescent health services; reproductive health services; contraception.

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Contraception is an essential component of health care for adult and adolescent patients. Long-acting reversible contraception (LARC), both intrauterine devices and contraceptive implants, are considered safe and appropriate for most women, including nulliparous women. While historically LARC devices were not recommended for adolescents, current research demonstrates their safety for teens. Research indicates that some adolescents prefer LARC over other methods because they are discreet, effective, and “forgettable.”

Between 2002 and 2013, the use of LARC by US adult women increased from 2.4% of contraceptive users to 11.6%. It is not clear if this increase also occurred for adolescents, since teens often face additional barriers to accessing LARC. Although publicly funded family planning facilities have made efforts to make their services more youth friendly through flexible hours, accessible locations, and confidentiality practices, teens may still face difficulties accessing these facilities. School based health centers (SBHCs) are uniquely positioned to meet adolescents’ reproductive health care needs, as services are convenient, free, and sensitive to teens’ health care concerns.

Reproductive health care is a frequent reason that teens seek care at SBHCs. The reproductive health services provided may include pregnancy testing, sexually transmitted infection (STI) diagnosis and treatment, and contraceptive counseling, provision, and management. While the percentage of SBHCs that distribute contraception has increased over the last...
decade, there are still policies, most often at the school district level, which limit more than 60% of SBHCs nationwide from providing contraception onsite. Of the 37% of SBHCs that provide contraception, only 39.8% of those insert LARC devices. Limited data exists on implementation of LARC provision within SBHCs. Research by a program that provides LARC services to adolescents in Seattle SBHCs found that the primary provider-related barriers to LARC service implementation were bias about LARC and lack of procedural skills.

This article examines key factors in the successful implementation of LARC services at SBHCs in the Bronx, NY. These clinics are run by a local health system which has contracted with the city departments of health and education. In New York state, as in 26 states around the country, adolescents are guaranteed access to confidential reproductive health services. By 2010, in accordance with this law, high school SBHCs within this system offered reproductive health services, including STI testing and treatment, pregnancy tests, and a range of contraceptive options. Between 2010 and 2015, onsite LARC services became available sequentially at 7 SBHCs, with training and implementation ongoing at remaining SBHC sites administered by this health system. Because this SBHC LARC program occurred in a state which allows adolescents confidential access to contraceptive services, and these SBHCs were already providing contraceptive care, this study focused on identifying the practical factors in provider and staff training, integration of procedural sessions into busy SBHC schedules, and approaches toward contraceptive counseling that enabled this program to succeed.

METHODS

Participants and Procedure

An experienced interviewer conducted semi-structured qualitative interviews with 19 providers and staff. Interviews took approximately 45 minutes and covered topics including relevant training, the program implementation process, and program success, as well as thoughts on adolescent use of contraception and LARC. Oral consent was obtained in all cases, and participants received a $25 gift card.

Data Analysis

All interviews were recorded and transcribed. Based on readings of interview transcripts, a codebook was developed by 3 of the authors. Initial interviews were coded by 2 of the authors, and disagreements were resolved by discussion until consensus was reached. After further modification of the codebook, inter-rater reliability was at 90%. All interviews were coded using Dedoose qualitative analysis software, using the editing and immersion/crystallization methods.

In order to assess the validity of emerging patterns, authors independently reread the coded data to assess whether initial conclusions represented the major and minor themes in the transcripts.

RESULTS

Description of Sample

Interviews were conducted between January and March of 2015. Nineteen of the 23 (83%) providers and staff approached for interviews participated. Those who did not consent to the interview were primarily clinic staff: 1 patient care technician (PCT), 1 licensed practical nurse (LPN), 1 senior clerk, and 1 non-inserting provider. Non-respondents stated that lack of time was their primary reason for nonparticipation. Table 1 lists participants by job role.

In exploring provider and staff experiences with the successful integration of onsite LARC services, 4 primary themes emerged: support and leadership from administration; comprehensive onsite training of providers and staff; developing an effective staffing model for procedure sessions; and patient-centered contraceptive counseling.

Support and Leadership From School-Based Health Center Administration

Laying the groundwork. In addition to an supportive external environment which allowed teens confidential access to contraceptive care, strong leadership from SBHC administration and the local health department was key to program success. Before the LARC program began, the health department received a citywide grant for the development of sexual and reproductive health services within all of their SBHCs. Grant-funded activities included gathering information about provider and staff attitudes toward LARC, training providers about LARC, and developing a referral system for offsite LARC insertion.

As the program progressed and SBHC leadership decided to offer onsite LARC services, the SBHC administration hired a family physician with extensive family planning experience to serve as project champion. She began by adapting existing LARC protocols for the SBHC setting, as well acquiring necessary instruments and supplies. In addition to some clinical responsibilities, this position included

<table>
<thead>
<tr>
<th>Job role</th>
<th>Number of respondents</th>
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<tbody>
<tr>
<td>Inserting provider</td>
<td>6</td>
</tr>
<tr>
<td>Non-inserting provider</td>
<td>6</td>
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<tr>
<td>LPN or PCT</td>
<td>3</td>
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<tr>
<td>Senior clerk</td>
<td>3</td>
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<tr>
<td>Community health organizer</td>
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<td>Total</td>
<td>19</td>
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LPN, licensed practical nurse; PCT, patient care technician.

Table 1. Study Respondents by Job Role
time for training providers at other SBHCs in LARC provision and management.

All providers expressed strong appreciation for the project champion. One non-inserting provider (interview 19) explained, “Having one person designated to do the trainings and being available to go on site is very important. Just from my experience of other people who have been trained, she’s very patient, she’s very nonjudgmental, she’s a really good person to do the trainings. If she were a full-time provider at a site she wouldn’t be able to mobilize herself and do these things.”

An administrator (interview 12) shared additional enabling factors for program initiation, such as “making sure we’re doing all the right reporting to the health department, interfacing with infection control… And also facilitating discussion with all the providers who were either already inserting or at various stages of their training, and implementation with… the patient care technicians who were supporting. Obviously [the champion] was the most central person to that process, but my role… was to help to support it and problem solve and evolve it.”

**Gradual Program Rollout.** On a practical level, only a few providers could participate in the training process at a time, as the project champion had designated but not unlimited time for training. However, she discussed how the sequential nature of the training allowed interest and trust in the program to grow organically. “One at a time, we would get one provider who was willing to do it. One site, we did lots of talking at that site about what it would be like when you have that provider start to insert. Two or 3 months go by and all the other providers go, ‘Oh, well, if they’re doing it at that school and nothing has happened [laughs] then maybe it’s not as bad as we thought.’” Or, “Maybe it’s a lot safer than we thought” (interview 17).

As many staff were accustomed to previous guidelines, which restricted intrauterine devices (IUDs) to parous women in monogamous relationships, both trainings and participation in the implementation process were important to changing staff attitudes. One senior clerk (interview 16) said, “I thought that only grown women get the IUD after your first child or whatever. I didn’t think that teenagers would be getting an IUD, and surprisingly we had it booked every week. … I would look at them like, ‘What do you need that for? Just get on the pill.’ Until I read on it and I was like, ‘Oh, you know what? This is the best thing for them.’” As this senior clerk learned more and observed patients choosing LARC, her opinions shifted.

**Training of Providers and Staff**

**Onsite training and support for inserting providers.** Initially, the project champion provided IUD insertion training at a nearby clinic, but subsequently training shifted to the SBHCs where each provider worked. A program administrator explained, “Initially we thought that the training should start at [an offsite affiliated clinic]. But [that] meant… taking the provider out of the school-based health center where they were supposed to be doing care. … Ultimately having someone like [the project champion] available to come into that person’s clinic and do onsite training and precepting. … was the most successful” (interview 12). Other providers highlighted how shifting IUD training from offsite clinics to SBHCs had the benefit of an improved patient show rate, saying, “If you have a teen in the school who wants an IUD and you say… ‘you have to come to a different building,’ we lost like 80 percent of the patients” (interview 17).

Onsite support was also important in instituting these services. One provider described how, as she began to insert LARC, the project champion’s availability was very helpful. This provider explained, “If I had a patient that I was struggling a little bit with insertion, she would come… and give me a little tip about the way to position the patient on the table, or just helping the patient really relax” (interview 8). This support made newly trained clinicians more confident about their LARC skills and was a crucial part of the training process.

**Training of Entire SBHC Team.** While the provider at each site trained in IUD insertions, all clinic staff learned more about LARC. A provider described how early trainings run by the health department set an important context. “I would say what worked beautifully before was [the grant-funded trainings]. … We used to go for 8-hour retreats and they realized the importance of educating everybody on the staff, from the front desk to the nurse to the community health organizer” (interview 8). Having all staff on the same page was key for the successful adoption of this new service.

Noninserting providers, who often counsel patients about LARC, described how the training increased their confidence in providing critical information. One explained, “I needed to get a little bit more education about it, how to address it and how to talk to patients in the room, because I wasn’t used to doing it” (interview 1). Similarly, others discussed how the training helped them assist students with IUD-related concerns. One senior clerk said, “I tell them, ‘If you’re bleeding too much, I can let you see the provider and she can perhaps help you regulate or give you something to help slow it down.’… If they’re cramping, I’ll tell the provider, ‘She had the IUD placed and she’s still cramping. Can we give her a warm pack to make her feel more comfortable?’ She’ll sit there with the warm pack and she feels better” (interview 9). Comprehensive training for all
providers and staff builds a clinic responsive to patient concerns and enhances patient care.

Staffing, Teamwork, and Clinic Flow

Developing a staffing structure for procedure days. When the onsite LARC sessions began, the clinic’s LPN worked with the inserting provider, leaving each clinic’s second provider alone to cover all other patient care. One non-inserting provider (Interview 4) described her concerns: “It would slow the functioning of the clinic, it would also put more of a patient load on me. […] I was on my own to see double the patients and prep the patients.” She continued, “People were backing up so they weren’t getting seen in a timely manner, and … patients were complaining, and I was overwhelmed.”

In response, administration hired additional staff for procedure sessions, so that a PCT assists the inserting provider with LARC and the clinic’s LPN assists the non-inserting provider with regular patient care. The provider above contrasted her initial frustration with the current situation, saying, “It’s gotten much, much better.” Other providers echoed her sentiments, stating that the current model worked well.

Teamwork, input, and flexibility. Input from the whole team was also crucial in establishing a functional scheduling system. One senior clerk (interview 6) described LARC session scheduling, saying “It’s basically between the provider and the senior clerk to figure out what days, what time slots, and to lock those times and days in advance to leave open for the IUDs. After that, everything just flows.”

Staff described how flexibility around students’ unpredictable schedules was often necessary. A senior clerk (Interview 6) explained, “When the patient comes in late, for example, there’s a nine o’clock slot and the patient comes in 9:30, then [the provider] has a ten o’clock [appointment] plus a walk-in, so that makes it a little challenging. But we will just communicate with the provider and she will decide whether she is going to see that patient if there is time … if not, we reschedule. It’s pretty easy because we’re always communicating.” In addition to this ongoing communication, staff highlighted flexibility around use of clinic rooms and teamwork in assisting each other in patient care.

Respondents also discussed how procedure session timing was adjusted to allow for more patient recovery time. One provider (interview 7) said, “We had 3 to 4 [insertions], and we had to cut it down because it takes time, and a lot of the girls would get cramps, and they would have to stay in the room longer, so it backed the provider up. So we broke it down to 3: one at 8, one at 9, and one at 10, just to give the provider time and the student enough time to recuperate.”

Input from the entire team was also crucial to establishing functional systems. An administrator (interview 12) described the valuable contributions of the PCTs hired to provide support for procedures. He reflected, “I almost made a real mistake in that the first meeting we did, I invited just the providers. And then kind of realized that we needed to invite the PCTs, and the PCTs were not only essential to the service, they were essential to the developing of the protocols, … [they are] really astute and continue to be helping to refine at the sites.” He described how PCTs gave input on “the physical layout of the room and where things were and where they would stand … basic ergonomic issues, as well as kind of getting the patient into the room and making sure like things that can delay a procedure […] and even ultimately thinking about … the dirty instruments and how do we make sure they’re getting disinfected and then sent over to the autoclave […] those kind of conversations were really important.” Throughout the process, valuing input from all staff was fundamental in creating functional systems.

Patient-Centered Contraceptive Counseling

The final key factor for program implementation mentioned by providers and staff was patient-centered contraceptive counseling, which emphasized 2 patterns: beginning counseling by inquiring about patient preferences, and offering LARC as one option among many good choices.

Many providers spoke about how patients had a wide range of reactions to LARC methods. While the convenience and privacy of these methods meant some students found them appealing, others did not. One inserting provider (interview 2) explained, “I talk to them about [the IUD] and you know, they’ll be like, ‘Ugh. I don’t want that inside of me.’ Which is fine. You know, even the implant … they’re like, ‘Ooh, something’s going to stay in my arm?’ To myself, I’m like, ‘That’s really not a big deal… but it’s a big deal for them.’” Other providers also mentioned the importance of following the patient’s lead and dropping the subject when patients do not have a positive reaction to the idea of LARC.

While patients had many preferences which shaped their contraceptive choices, having a regular period and confidentiality were common priorities. One non-inserting provider explained, “The big priority for a lot of students is whether they can get their period or not. So that seems to be the number one thing. Then I think the second thing would be if it’s confidential or not. And then it goes like, ‘Can you take a needle if you wanted the Depo?… Can you put your fingers in your vagina?’” (Interview 4). In this model, specific patient preferences inform which methods providers emphasize.

Notably, very few providers in this setting focused primarily on contraceptive efficacy, unless it was a...
student’s stated priority. A few providers spoke about how they responded to questions about the “best” method. For example, this provider (interview 4), said, “They always will say, ‘Which one is the best one?’ And I say, ‘They’re all good. It all means, you know, what’s good for you.’” While a few providers and staff stated they emphasized higher-efficacy methods, this was the exception. The project champion (interview 17) explained her opposition to prioritizing effectiveness in counseling, saying, “The effectiveness model of counseling doesn’t jive with most people. I think the effectiveness model is a theoretical model, right. Like what do people want to use? They want to use the thing that’s the most effective. Well, sort of, until you get to the nitty gritty of like, ‘Well, how do I use it? How exactly does that affect me? What are my symptoms?’ So I think that it’s much more what fits into your life because to me the difference between 93 percent effective and 95 percent effective and 99 percent effective isn’t that much… But the difference between, ‘My mom is going to take my pills and throw them in the trash,’ or like, ‘My mom’s going to haul my butt to a doctor’s office because I haven’t gotten my period’—those are actually very real life applications.

Keeping the focus on those “real-world applications” is key, as patients choose among contraceptive methods often not in spite of “side effects” but with a main focus on them. Another provider, who considered herself “a champion of LARC,” talked about how she balanced her own pro-LARC opinions with an emphasis on patient autonomy. She stressed the importance of creating space for adolescent patients to make their own choices, saying, “I find that if I push them I’m going to turn them off. Then they won’t come. And that’s the worst thing that can happen. I have girls who come every other week for emergency contraception, and they’ll walk in the door, “I know, Miss, I know.” It’s like, “Look, it’s up to you. […] The most important thing is just leaving the door open. If they think that you’re being judgmental or putting them down or disrespecting them, that door’s going to close. They’ll never come back. So as long as the door’s open you have the opportunity to effect change” (Interview 15). This approach of meeting patients where they are is key to patient-centered counseling. Particularly in a context where LARC is new to many patients, creating an environment where patients feel equally empowered to choose or to decline these methods was crucial to program implementation.

**DISCUSSION**

Integrating onsite LARC services into this SBHC system was successful due to several key factors: the legacy of previously established contraceptive services within this SBHC system and state regulations that support confidential contraceptive care for teens; support and leadership from administration; onsite training of inserting providers and all staff; an effective staffing model for procedure sessions; and patient-centered contraceptive counseling. Furthermore, the program’s gradual rollout allowed for systems to be refined as needed and meant acceptance among staff increased as they observed program success at other sites.

The focus on patient-centered contraceptive counseling allowed staff to avoid “pushing” LARC methods, an issue particularly important when working with historically disadvantaged populations, such as those served by these SBHCs. Providers sometimes struggled with the tension of finding the line between appropriate promotion and overemphasis of LARC methods. However, the emphasis from SBHC leadership on letting patient preferences guide contraceptive counseling and that no one method is right for everyone helped providers negotiate that line.

Our primary limitation is generalizability. The progressive political environment in New York City, longstanding groundwork around youth reproductive health done by advocates, parents, and public health leaders, and state regulations which support confidential adolescent access to contraception, all meant that this program may have been easier to implement in this setting than in other contexts. This study’s findings are also somewhat different from research conclusions drawn from the Seattle SBHC system, which found negative bias around LARC methods among providers and administrators. While some staff in our study had initial reservations, many of these were overcome through program-wide trainings, and further sustained by the quickly changing environment within the medical and public health communities around LARC for adolescents. Additionally, the slow and sequential growth of the LARC program allowed time for staff to become more comfortable with the new services offered. While within this SBHC system breaches of confidentiality related to billing and explanations of benefits were not an issue due to external grant funding for LARC devices obtained by the local Department of Health, this issue must be kept in mind in contexts where billing students’ parents’ insurance might violate confidentiality.

Although initial research demonstrates positive student reactions to LARC services within this SBHC system, future research topics include more detailed explorations of patient experiences. In addition, our study respondents spoke primarily about IUDs rather than contraceptive implants, as implants were integrated into the system more recently; studying implementation and acceptability challenges specific to contraceptive implants is an important topic for further investigation.
IMPLICATIONS FOR SCHOOL HEALTH

Our results demonstrate that, in a state that allows for confidential contraceptive care for teens, it is feasible to successfully integrate insertion and removal of LARC within a SBHC practice. Steps for other SBHCs to consider are program-wide contraceptive training which includes the front desk, nursing, providers, and administrative staff; identifying a project champion who can mobilize to train team members onsite; assigning specific nursing staff to assist with expanded reproductive health services; and dedicating specific procedure time each week to optimize access while ensuring patient flow is maintained. While the logistics had to be worked out over time, they proved to be possible with good staffing, leadership, and teamwork.

Some of the preconditions that made this project possible, such as the progressive political context and grant funding of LARC devices within these SBHCs, are difficult to replicate, as discussed above. The work necessary to create these conditions merits further research and discussion which is beyond the scope of this project. There may be some environments where first steps for similar projects will be to respond to parental and community concerns through mechanisms like community meetings and public education about the safety and strong evidence around LARC methods. However, some elements of this project can still be implemented in SBHCs which are unable to provide LARC onsite. These include in-service training for all in order to create good contraceptive counseling around LARC, and developing a relationship with an offsite clinic for LARC referrals which is accessible and responsive to student concerns.

However, for those SBHCs already offering onsite contraceptive services, this research demonstrates the feasibility and acceptability of incorporating insertion and removal of LARC into routine contraception provision. Doing so has the potential to increase contraceptive access and reproductive choice for adolescents.

Human Subjects Approval Statement

The study was approved by the Montefiore Medical Center Institutional Review Board.

REFERENCES