

# Implementing Immediate Postpartum Long-Acting Reversible Contraception Programs

Lisa G. Hofler, MD, MPH, MBA, Sarah Cordes, MPH, Carrie A. Cwiak, MD, MPH, Peggy Goedken, MPH, Denise J. Jamieson, MD, MPH, and Melissa Kottke, MD, MPH, MBA

**OBJECTIVE:** To understand the most important steps required to implement immediate postpartum long-acting reversible contraception (LARC) programs in different Georgia hospitals and the barriers to implementing such a program.

**METHODS:** This was a qualitative study. We interviewed 32 key personnel from 10 Georgia hospitals working to establish immediate postpartum LARC programs. Data were analyzed using directed qualitative content analysis principles. We used the Stages of Implementation to organize participant-identified key steps for immediate postpartum LARC into an implementation guide. We compared this guide to hospitals' implementation experiences.

See related editorial on page 1.

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From the Department of Gynecology and Obstetrics, Emory University School of Medicine, Atlanta, Georgia.

Supported by a grant from the Society of Family Planning Research Fund.

Presented at the 2016 North American Forum on Family Planning, November 4–7, 2016, Denver, Colorado.

The authors thank Sandra Naoom, PhD, MSPH, from the National Implementation Research Network, University of North Carolina, Chapel Hill, for her assistance with topic development for this study.

The Society of Family Planning Research Fund had no involvement in the study design; data collection, interpretation, or analysis; writing of the report; or the decision to submit for publication.

Each author has indicated that he or she has met the journal's requirements for authorship.

Corresponding author: Lisa G. Hofler, MD, MPH, MBA, Department of Obstetrics and Gynecology, University of New Mexico, 1 University of New Mexico, MSC10 5580, Albuquerque, NM 87131; email: lhofler@salud.unm.edu.

## Financial Disclosure

Dr. Cwiak has received research funding for an intrauterine device clinical trial from Medicines 360 and has served as a faculty trainer on Nexplanon for Merck. Dr. Kottke has served as a faculty trainer on Nexplanon for Merck, has served as a consultant for CSL Behring, and has served on the advisory board for Evofem, Inc. The other authors did not report any potential conflicts of interest.

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ISSN: 0029-7844/17

**RESULTS:** At the completion of the study, LARC was available for immediate postpartum placement at 7 of 10 study hospitals. Participants identified common themes for the implementation experience: team member identification and ongoing communication, payer preparedness challenges, interdependent department-specific tasks, and piloting with continuing improvements. Participants expressed a need for anticipatory guidance throughout the process. Key first steps to immediate postpartum LARC program implementation were identifying project champions, creating an implementation team that included all relevant departments, obtaining financial reassurance, and ensuring hospital administration awareness of the project. Potential barriers included lack of knowledge about immediate postpartum LARC, financial concerns, and competing clinical and administrative priorities. Hospitals that were successful at implementing immediate postpartum LARC programs did so by prioritizing clear communication and multidisciplinary teamwork. Although the implementation guide reflects a comprehensive assessment of the steps to implementing immediate postpartum LARC programs, not all hospitals required every step to succeed.

**CONCLUSION:** Hospital teams report that implementing immediate postpartum LARC programs involves multiple departments and a number of important steps to consider. A stage-based approach to implementation, and a standardized guide detailing these steps, may provide the necessary structure for the complex process of implementing immediate postpartum LARC programs in the hospital setting.

(*Obstet Gynecol* 2017;129:3–9)

DOI: 10.1097/AOG.0000000000001798

There are many advantages to long-acting reversible contraception (LARC) provision in the immediate postpartum period.<sup>1–6</sup> The American College of Obstetricians and Gynecologists' clinical management



guidelines state that “The immediate postpartum period is a particularly favorable time for IUD (intrauterine device) or implant insertion.”<sup>3</sup> The Centers for Disease Control and Prevention’s “U.S. Medical Eligibility Criteria for Contraceptive Use” lists few contraindications to immediate postpartum LARC.<sup>7</sup>

Increased interest nationwide in immediate postpartum LARC is leading many states and health care systems to work toward its availability.<sup>8</sup> In April 2014, Georgia Medicaid approved separate reimbursement for LARC placed immediately postpartum.<sup>9</sup> To promote this, the Georgia Perinatal Quality Collaborative chose immediate postpartum LARC as a key initiative. Participating hospitals agreed to implement immediate postpartum LARC programs.

There is little evidence to guide the implementation of immediate postpartum LARC programs. The complexities of the implementation process, the steps required for implementation, and the needs of health care institutions are not well characterized. Barriers to office LARC provision include lack of training, cost, and the need for multiple visits<sup>10–13</sup>; however, barriers to immediate postpartum LARC are not well understood.

We sought to understand immediate postpartum LARC program implementation in Georgia hospitals. The study objectives were to determine the most important steps required to implement immediate postpartum LARC programs in different Georgia hospitals and the barriers to implementing these programs. We hypothesized that some steps for implementation would be unexpected and that program barriers would include cost and unfamiliarity with LARC.

## MATERIALS AND METHODS

This is a qualitative evaluation of immediate postpartum LARC program implementation in the 10 hospitals participating in the Georgia Perinatal Quality Collaborative’s postpartum LARC initiative. We conducted semistructured interviews with key personnel from each hospital. This project was approved by the Emory University institutional review board.

Implementation science is the study of methods to promote the integration of research-based evidence into clinical practice. An important component of implementation science is investigating barriers and facilitators to effective implementation.<sup>14</sup> Several frameworks describe factors that may influence effective implementation.<sup>15</sup> We prepared the interview guide using constructs from the Promoting Action on Research Implementation in Health Services framework, a flexible, organized, intuitive framework that is well studied and appropriate to apply to an institution-level health intervention.<sup>16–20</sup> Interviews explored hospital experiences with establishing

immediate postpartum LARC programs, including the steps that had been taken and the facilitators of and barriers to immediate postpartum LARC program implementation at that hospital. We piloted the interview guide with faculty familiar with immediate postpartum LARC program implementation.

We conducted site visits at the beginning of the study to collect demographic data about each hospital. The first phase of interviews occurred in conjunction with the site visit during March and April 2015. Additional interviews occurred from July through November 2015 with a median of 6 months from the first interview to the final interview at each hospital. Each study participant was interviewed once. Interviews that did not occur during site visits took place in person or over the telephone based on scheduling convenience. One researcher (L.G.H.) conducted all interviews.

The first study participants recruited were the institutional liaisons for the Georgia Perinatal Quality Collaborative from the 10 study hospitals. We recruited additional participants through snowball sampling<sup>21</sup> by asking each participant to list other important individuals involved in immediate postpartum LARC implementation at their institution. When we identified more than three potential participants at one hospital, participants were purposively selected to ensure a variety of perspectives with a goal of at least three interviewees per hospital to capture a range of hospital settings, geography, and job titles. One advantage of qualitative research is to capture the existing range of perspectives and experiences; recruitment is often completed when no further themes are found. Thematic saturation was reached before study completion.

After obtaining verbal consent, interviews were audio-recorded and notes were taken during each interview. Interviews lasted an average of 49 minutes. Audio recordings were transcribed verbatim by a transcription company. Research staff verified transcripts against the audio recordings for accuracy and removed identifying information.

Data were analyzed using directed qualitative content analysis principles.<sup>22</sup> First, a data analysis codebook was created from existing theory using implementation drivers and the Promoting Action on Research Implementation in Health Services framework.<sup>20,23</sup> The codebook was then refined throughout data collection based on new findings and emerging themes. Two researchers (L.G.H. and S.C.) independently coded and analyzed the transcribed data to assure comprehensive and consistent coding application. Rare disagreements were discussed to reach a consensus about the codes in question and code application. Finally, key concepts were interpreted



**Table 1. Characteristics of Study Participants**

Characteristic (N=32)	n (%)
Professional role	
Physician	13 (40.6)
Nursing	12 (37.5)
Pharmacy	3 (9.4)
Lactation consulting	2 (6.2)
Finance and billing	2 (6.2)
Years at institution	
Fewer than 5	13 (40.6)
5–9	6 (18.8)
10–14	5 (15.6)
15 or more	8 (25.0)
LARC experience	
Counsels about or provides all available LARC methods	8 (25.0)
Counsels about or provides some available LARC methods	2 (6.3)
Some training or education about LARC methods but does not currently counsel or provide available methods	4 (12.5)
No training or education about available LARC methods; personal or anecdotal experience only	18 (56.3)
Physician LARC provision (n=13)	
Currently provides all LARC methods in the outpatient setting	6 (46.2)
Currently provides intrauterine devices in the outpatient setting	9 (69.2)

LARC, long-acting reversible contraception.

with a systematic exploration and integration of themes. Data were analyzed using MAXQDA 12.0.

During analysis, we grouped participant-identified key steps for immediate postpartum LARC program implementation into three sequential stages based on the National Implementation Research Network's Stages of Implementation framework.<sup>23</sup> The first stage, exploration, involves assessing the immediate postpartum LARC project and organizing the hospital's resources before deciding to proceed. The second stage, installation, entails performing the preparatory tasks necessary to offer immediate postpartum LARC. The third stage, implementation and sustainability, includes rolling out and adapting the program. We organized the key steps for implementation to create a stage-based guide for implementing immediate postpartum LARC programs. Finally, we further interpreted hospital implementation by comparing the implementation guide with the steps accomplished by each hospital at the time of the final interview.

## RESULTS

Thirty-two key personnel from 10 hospitals participated in the study. In addition to physicians and nurses, interviewees included pharmacists, billing personnel, and lactation consultants. Most study participants held both clinical and administrative positions within their hospitals. The majority had no experience with currently available LARC methods. Table 1 shows characteristics of study participants.

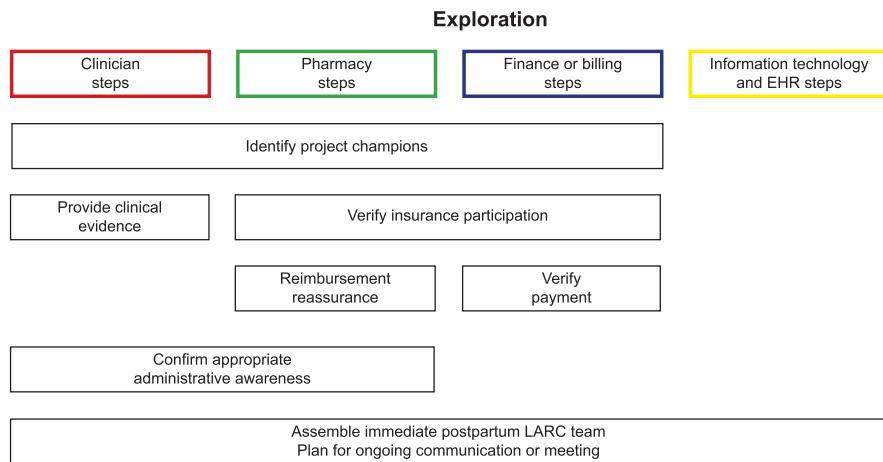
Of the 10 hospitals we studied, nine worked toward implementing immediate postpartum LARC programs during the study period and one had started placing the devices shortly before interviews began. At the completion of interviews, 7 of 10 study hospitals had devices available for placement; three of these seven hospitals had not yet started offering them to patients. The majority of hospitals were located in metropolitan areas and had resident training programs. Table 2 shows characteristics of study hospitals.

During the exploration stage, hospitals assessed the immediate postpartum LARC project before deciding to proceed. Key steps included identifying team members for the project, "Get the key people on board early"; providing clinical evidence for immediate postpartum LARC to others, "We presented the evidence overall

**Table 2. Characteristics of Study Hospitals**

Characteristic (n=10)	n (%)
Area population, in thousands	
1,000 or more	3 (30)
250–999	3 (30)
100–249	3 (30)
Less than 100	1 (10)
Annual deliveries	
Fewer than 1,500	3 (30)
1,500–3,000	3 (30)
More than 3,000	4 (40)
Teaching hospital	
Obstetrics and gynecology resident training	7 (70)
	6 (60)





**Fig. 1.** Key steps in the exploration stage of implementing immediate postpartum long-acting reversible contraception (LARC). Steps are organized by department. From left to right are steps involving clinicians, pharmacy, finance or billing, and medical records. EHR, electronic health record.

Hofler. *Implementing Immediate Postpartum LARC*. *Obstet Gynecol* 2017.

of what LARCs, you know, all the good things that LARCs can actually do. And you know, how it can help overall”; and verifying insurance payment and financial feasibility of the project, “We had to work with the state to get appropriate reimbursement.” With those steps completed and appropriate administrative awareness, assembling a team with discrete tasks and planning for ongoing communication were critical to moving forward with the next stage of implementation. Successful teams involved members each with clinical, pharmacy, or finance and billing perspectives. Figure 1 illustrates the key steps in the exploration stage.

During the installation stage, hospitals made preparations for offering immediate postpartum LARC. Some steps almost always occurred before others, whereas other steps occurred in parallel, particularly for different departments working simultaneously. Ultimately, each team member depended on the others to successfully advance the project. Clinician steps fell into two broad categories: readying documents such as policies, protocols, and consents, “We also developed the policy, or the protocol, to go along with the placement”; and clinical training involving patient care team members, “We did more of an in-service for the nursing (staff).” Additionally, clinicians and the pharmacy worked together to bring the devices into the hospital, “We got involved with the pharmacy so that they could order the devices that we are using.” Finance and billing tasks included coding and charge documentation, “I had to create a charge code for the actual device”; and the electronic health record interconnected with clinician charting, pharmacy inventory and ordering, and charge capture, “We already have Billing and IT (information technology) onboard, and they are working behind the scenes.” Figure 2 shows key steps in the installation stage.

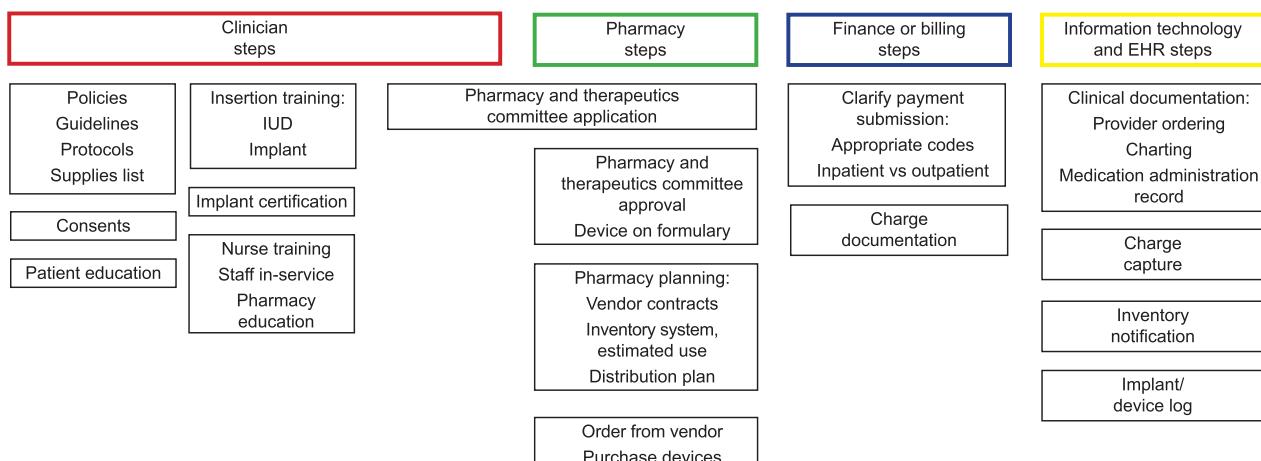
In the implementation and sustainability stage, hospitals began placing devices and adapting their immediate postpartum LARC programs. Although not every hospital reached the implementation and sustainability stage, most recognized the need for a trial period with piloting, feedback, and adjustment. Examples of piloting and ongoing improvement included training, “And if we get new nurses, when they’re on orientation, they have to go through the process”; documents, “For the IUD I basically came up with a list and I thought about getting a kit together, but it was going to be a little bit too much work”; device storage, placement location, and placement timing, “We’ve worked this out to where we’re not doing it at the last minute, holding up the patient’s discharge”; and billing, “Then I followed up after payment to make sure that it was being processed correctly.” Figure 3 illustrates steps in the implementation and sustainability stage.

Overall, study participants identified common themes for the implementation experience: team member identification and ongoing communication; payer preparedness challenges; discrete yet interdependent department-specific tasks; and piloting with ongoing improvements. Key first steps that most participants identified as important in the postpartum LARC implementation process were identifying project champions, creating an implementation team that included all relevant departments, obtaining financial reassurance, and ensuring early hospital administration awareness or approval as appropriate to their setting.

Key potential facilitators of immediate postpartum LARC program implementation were a program team, “And that would be pharmacy, nursing, physicians...get all the people it’s going to impact—billing, finance, how you’re going to charge for that,” and a guide with steps and tools. Overall potential barriers to implementation included lack of knowledge about



## Installation



**Fig. 2.** Key steps in the installation stage of implementing immediate postpartum long-acting reversible contraception. Steps are organized by department. From left to right are steps involving clinicians, pharmacy, finance or billing, and medical records. EHR, electronic health record; IUD, intrauterine device.

Hofler. Implementing Immediate Postpartum LARC. *Obstet Gynecol* 2017.

immediate postpartum LARC, “You don’t have every proton pump inhibitor. Do you need to have every IUD?”; financial concerns, “If the insurers say that they are not ready to do it, then why would we jump ahead of them?”; and competing clinical and administrative priorities, “I haven’t pushed it forward as expeditiously and, see, I haven’t done that because it’s just one of the thousand other things you do on a daily basis.”

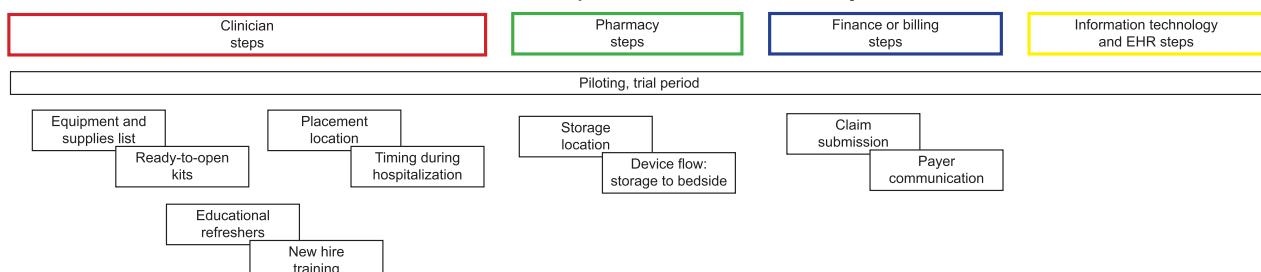
In describing the steps required for implementation at their hospitals, several interviewees requested anticipatory guidance, “Because yes, we’ve got to get it here, but how do we now go from approval to making it happen?” We consolidated hospital experiences and lessons learned into a stage-based guide with steps for implementing immediate postpartum LARC programs, shown in Appendices 1–3 (available online at <http://links.lww.com/AOG/A900>), and

compared the steps of the guide with the steps that each hospital took.

Of the three hospitals that did not have LARC by the completion of the study, two hospitals were still in the exploration stage and one had not yet finished the steps to installation. The three hospitals that had devices available but were not yet offering them to patients prioritized the pharmacy-related installation steps and focused less on the involvement and participation of other departments. These three hospitals also had not finished many of the steps to installation.

Among the hospitals that placed LARC immediately postpartum by the completion of the study, one offered only intrauterine devices, one started only with implants, and two implemented both at the same time. Not every step of installation was needed for these hospitals to progress into the implementation

## Implementation and sustainability



**Fig. 3.** Key steps in the implementation and sustainability stage of implementing immediate postpartum long-acting reversible contraception. Steps are organized by department. From left to right are steps involving clinicians, pharmacy, finance or billing, and medical records. EHR, electronic health record.

Hofler. Implementing Immediate Postpartum LARC. *Obstet Gynecol* 2017.



and sustainability stage. For example, some hospitals considered creating implant tracking logs, but other hospitals did not. All four hospitals that successfully implemented immediate postpartum LARC involved the main stakeholder groups early.

## DISCUSSION

This study of immediate postpartum LARC program implementation in Georgia hospitals reveals that the complex implementation process involves many steps across several departments. Lack of knowledge about LARC, financial concerns, and competing priorities were common barriers to program implementation. Hospitals that successfully implemented immediate postpartum LARC programs did so with a multidisciplinary approach. These hospitals more easily navigated barriers and unexpected steps using clear communication and problem-solving among team members.

This study reveals a need for education about immediate postpartum LARC and its implementation. Although many study participants held managerial or administrative roles and were likely experts in their hospitals' systems, they were not always prepared for the complexities of postpartum LARC program implementation. The involvement of several departments per hospital meant that many participants had no similar inpatient implementation experience for comparison. Several participants had little previous exposure to LARC, and clinicians did not always easily appreciate the differences between providing LARC in the inpatient and outpatient settings.

In the office setting, frequently reported barriers to LARC provision include cost, lack of health care provider training, and the need for two clinic visits.<sup>10–13</sup> Early repeat pregnancy, health care provider counseling against LARC, and failure to follow up are additional barriers to LARC provision at the outpatient postpartum visit.<sup>24,25</sup> We found similar financial concerns and lack of knowledge about LARC in the inpatient setting; however, in the hospital, follow-up is no longer a barrier to care.

Similar to our findings, previous implementation research highlights the importance of education and facilitative teams.<sup>26,27</sup> Implementation stages have been used to describe other programs,<sup>28</sup> although many implementation studies do not provide sufficient program detail for replication. One South African hospital increased postplacental intrauterine device uptake through health care provider training and clinical protocols; however, the authors do not provide steps for implementation.<sup>29</sup>

A stage-based approach to implementation and a standardized guide may provide the necessary

structure for the complex process of implementing immediate postpartum LARC programs in the hospital setting. We organized the key steps for program implementation into a guide based on aggregate experiences from different Georgia hospitals. For any one hospital, steps may occur simultaneously, in a slightly different order than in the implementation guide, or not at all. Users may determine whether and how each step fits best at their institution.

Although not every step of the guide is necessary for successful implementation, we identified three essential elements for starting the process. First, early involvement of the necessary members of the implementation team leads to better communication and understanding of the project. Teams should include direct clinical care, pharmacy, or finance and billing perspectives; the specific team members may vary depending on the hospital and may include additional roles. Second, implementation cannot move forward without financial reassurance early in the process. Finally, consistent communication and team planning with clear roles and responsibilities are key to navigating the complex and interconnected steps for implementing immediate postpartum LARC programs.

This group of hospitals provided a unique opportunity to study immediate postpartum LARC program implementation; however, the circumstances also led to some limitations. Every hospital had access to monthly support calls, sample documents and references, and immediate postplacental intrauterine device placement training. These hospitals all expressed interest in implementing LARC programs and may be early adopters of evidence-based programs generally. We encourage other groups working toward immediate postpartum LARC program implementation to assess institutional readiness for implementation, especially if resources are limited. Although all hospitals we studied were in Georgia, we intentionally included a variety of practice settings and geography. These variables were not related to implementation success.

Snowball sampling permits rapid study participant identification; however, limitations include identifying the correct study participants and purposively sampling by job title and involvement in the immediate postpartum LARC program. Study participants were invested in their hospitals' immediate postpartum LARC programs and may have highlighted successes and downplayed barriers. We designed the interview guide to minimize social desirability bias through rapport building and use of specific, concrete questions about the key steps in the process.

A stage-based approach may help organize hospital and implementation team activities for establishing



immediate postpartum LARC programs. This implementation guide is an important complement to existing efforts to expand postpartum LARC access such as the American College of Obstetricians and Gynecologists' LARC Program.<sup>30</sup> These efforts already include many tools for implementing immediate postpartum LARC programs, and this implementation guide provides an organized approach for applying those tools.

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