Stage-based implementation of immediate postpartum long-acting reversible contraception using a reproductive justice framework

Kimberly D. Harper, MSN, RN, MHA; Audrey C. Loper, MPH, MS; Laura M. Louison, MSW, MSPH; Jessica E. Morse, MD, MPH

An increasing proportion of women in the United States choose long-acting reversible contraception (LARC) as a contraceptive method, which is up from 2% in 2002 to 14% in 2014. LARC is reversible birth control that provides pregnancy prevention for 3–10 years, depending on the method. The immediate postpartum period (IPP) is identified as an important time for contraceptive decision-making; it can be a particularly favorable, as well as safe and effective, time to provide LARC methods; one-half of women in the postpartum period report having unprotected intercourse before the routine 6-week postpartum visit. IPP LARC insertion is a clinical procedure that can be provided concurrent with mother-baby care related to delivery and is a cost-saving, highly effective strategy for decreasing the risk of unintended pregnancies. Although the risk of expulsion or malposition is higher in the IPP setting, this is still a preferred approach for some patients. Despite the benefits of providing access to IPP LARC, sustainable and equitable implementation within a hospital has often proved challenging, limiting patient access and reproductive autonomy.

Hospitals that want to incorporate IPP LARC as part of their obstetrics care must develop new internal systems to ensure efficient, sustainable, and equitable access for patients. For example, pharmacy must make devices easily accessible on obstetrics units; physicians and nurses must be trained in provision of care; electronic health records must be updated to support documentation and charging processes; billing and coding...
workflows must be developed to monitor and track reimbursement; and patient education and counseling materials must be available. Coordination and collaboration across multiple departments that is necessary to support such changes is often challenging. Although robust evidence demonstrates the efficacy and effectiveness of IPP LARC, proven treatments often fail to be implemented and sustained in usual care. This is, in part, due to the complexity of coordination of multiple departments and alignment of isolated systems, while clinical providers’ skills are being developed. The field of implementation science is dedicated to the identification and study strategies that are used to improve the uptake, execution, and sustainability of interventions and can be used to facilitate implementation and sustainment of IPP LARC. Implementation strategies include provider training, the development of policies and procedures to ensure standardization, and the creation of job aids such as checklists. When used alone or in combination, implementation strategies are essential for increasing the likelihood that interventions will produce desired outcomes successfully.

We describe a hospital-based approach to IPP LARC provision using a multidisciplinary, team-based, implementation science–informed approach. Innovative to our model is an emphasis on multidisciplinary team building and the identification of champions, a focus on implementation science at every stage of the process to develop a systematic and replicable strategy, and an awareness of the importance of the historic and cultural contexts of women’s fertility that created an imperative to apply a reproductive justice framework.

North Carolina’s 2016 Perinatal Health Strategic Plan recommends supporting healthy pregnancy intervals through access to effective methods of contraception, which includes increased access to LARC. Implementing LARC in the North Carolina context is one that requires technical support and raises issues of reproductive justice, which refers to the right to maintain individual bodily autonomy and to have or not have children that can be parented in safe and sustainable communities. Between 1929 and 1974, >7000 men and women in North Carolina were subjected to forced sterilization. This state-led eugenics effort was biased racially and targeted marginalized individuals who were deemed to be unfit: approximately 65% of the women who were sterilized in North Carolina were black. Any LARC implementation effort in North Carolina must be carried out with great intention to ensure reproductive justice is at the forefront of the program design and delivery.

Methods
Our project identified the need to support hospitals in changing and aligning their internal systems to support implementation of IPP LARC with sustainable infrastructure. We accomplished this through applying implementation science strategies to facilitate hospitals’ use of implementation teams, a staged process, and a reproductive justice lens.

Team and champion development
Kroeling et al. identified leveraging stakeholder partnerships as a critical approach for implementation efforts that aim to increase access to IPP LARC. Implementation teams are groups of stakeholders that are responsible for overseeing an implementation effort and conducting ongoing improvements. They provide a platform to support implementation efforts and are a common best practice across implementation frameworks. Team members should be diverse in experience and represent a variety of perspectives across all organizational levels of an impacted system. Inclusion of patient and family advisors can help provide insight and guidance on how to promote patient satisfaction, access to services, and protect patient reproductive rights. Multidisciplinary teams have a greater likelihood of sustaining evidence-based interventions; without teams, implementation efforts rely on individual leaders and fail to build stakeholder buy-in or account for diverse perspectives. When used effectively, implementation teams can identify and resolve infrastructure gaps, use data for decision-making and improvement, and link policy with practice within and across systems.

To ensure effective implementation in this project, 2 implementation teams were developed. First, a core implementation team was formed to lead the overall project. This team designed, executed, and monitored the implementation strategies of participating hospitals. Core team members approached all implementation stages with attention to patient equity to maintain a reproductive justice framework throughout the process. Second, participating hospitals developed internal implementation teams to oversee IPP LARC delivery. These teams were built with support from the Perinatal Neonatal Outreach Coordinator, who served as a liaison between the teams. Each facility was encouraged to have representatives from obstetrics, pharmacy, nursing, nursing education, lactation, information technology, patient advisors, billing and coding, and finance. Hospitals were also encouraged to have a team lead person and champion to oversee all stages of the implementation process.

Stage-based implementation
Typical success in implementation efforts is based on provision of the clinical intervention and patient outcomes. However, exclusively focusing on outcome data does not permit better understanding of which implementation strategies are successful. Because our core implementation team was interested in understanding how best to facilitate hospitals’ efforts to provide IPP LARC and whether implementation science was helpful, we used a stage-based implementation approach that considered implementation outcomes beyond clinical data. There is consensus in the literature that all implementation efforts proceed through discrete stages from identification of need and exploration of potential solutions to adoption and sustainability. Our team used the following 4 stages identified by Metz...
et al.\textsuperscript{15} to guide our stage-based approach to the implementation of IPP LARC: (1) during exploration, the need, fit, and feasibility of a new practice are assessed; (2) installation involves building the infrastructure to support the new initiative, which includes building practitioner and organizational capacity; (3) initial implementation includes the beginning of the use of the new initiative, with attention to the use of data for continuous improvement; (4) full implementation occurs as practitioners skillfully provide the new program, and outcomes are achieved.

Within each implementation stage, we drew on the work of Proctor et al.\textsuperscript{19} to identify implementation outcomes that are necessary intermediate outcomes for the achievement of the desired service delivery and ultimately the clinical outcomes for patients (Table 1). This allowed us to gauge our success in supporting hospitals over the course of a time-limited grant-funded project.

A critical component of effective implementation is the enabling context within which an innovation will be implemented. Enabling context is the environment and capacity within a community and system, including policy and socioeconomic factors, that make it possible to implement the innovation.\textsuperscript{20,21} Before beginning any work, our team conducted a systems mapping exercise using the US Agency for International Development’s 5Rs Framework to understand the North Carolina implementation context for IPP LARC.\textsuperscript{22} The goals of the exercise were 2-fold: (1) understand the state and local systems context in which IPP LARC efforts would take place and identify potential opportunities for and challenges to the project’s success and (2) understand the hospital systems where IPP LARC would be implemented and identify potential opportunities and barriers to implementation. Systems mapping provided a lens for the assessment of the 5 Rs (resources, rules, roles, relationships, and results) for IPP LARC. The systems map depicts these interactions between organizations and individuals at the center (Figure 1). The roles of these actors were identified as either current or future, and distinctions between systems and hospital actors are noted. Nodes represent relationships between actors, which are dependent on available resources. Given these inputs, roles and relationships are situated to produce results. The process of converting resources into results through interactions of system actors is governed by a set of rules based on financial, political, and social limitations for IPP LARC.

The systems map revealed contextual complexity. Identified actors signaled the need to consider the role of Medicaid, the state’s Pregnancy Medical Home model, and the public health system, among others. At the hospital level, perspectives of colleagues in obstetrics, family planning, lactation, billing, finance and pharmacy were identified as critical to the success of the initiative. This understanding of the system, the need for diverse stakeholder engagement, and North Carolina’s historic and cultural context around reproductive justice served as a guide for the development of an implementation plan for IPP LARC.

After mapping the context for IPP LARC, our team used the stage-based approach to assess hospital readiness and plan for implementation.\textsuperscript{15} To support hospitals in the exploration stage, we reviewed the existing literature and professional organization recommendations. We noted that a facility readiness assessment tool for IPP LARC was not available, despite the fact that readiness is an important implementation domain.\textsuperscript{23} Using the information identified in the systems map and best practices for IPP LARC, we developed a readiness assessment that could be used for the anticipatory identification of the fit and feasibility of IPP LARC within a birthing facility (Figure 2). This tool was designed to be completed through conversation with key hospital stakeholders and to help identify implementation facilitators and barriers. After the discussion, the assessment was reviewed and scored. Results were then used to identify the next steps for implementation. If barriers were identified, potential solutions or other options were discussed. For example, in 1 system major practice changes were scheduled for implementation during the timeline for IPP LARC. The identification of this barrier resulted in a change in the implementation timeline. Understanding facility readiness is a key to implementation timelines, organizational structure, and securing project champions. Attempting to complete implementation in a facility

<table>
<thead>
<tr>
<th>TABLE 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation stages and outcomes</td>
</tr>
<tr>
<td>Exploration</td>
</tr>
<tr>
<td>Acceptability: perception among stakeholders that the given intervention is satisfactory</td>
</tr>
<tr>
<td>Adoption: agreement among stakeholders to take up the intervention</td>
</tr>
</tbody>
</table>

that is not ready can impact project uptake and sustainability adversely.

Once readiness was assessed and hospitals were invested in moving forward with the initiative, teams considered the infrastructure that would be needed to transition through the stages of implementation. Our team developed and deployed a stage-based implementation checklist to outline resources and processes for effective implementation and the activities that should occur at each stage (Figure 3). It is important to note that each implementation stage does not end cleanly as the next begins. Stages often overlap, and activities in the stages relate to each other. It is not necessary for all outcomes in a stage to be achieved before proceeding to the next stage. However, sufficient progress must be made in each stage to be prepared adequately for the next. The checklist attends to 3 core implementation components: (1) the use of implementation teams, (2) the use of data and feedback loops for decision-making, and (3) the development of sustainable infrastructure. The stage-based checklist was used with hospital implementation teams to identify barriers and facilitators and to ensure attention to necessary implementation strategies at each stage.
Reproductive justice
Increasingly, the field of implementation science is concerned with how implementation strategies can be used to increase equity.24 Our goal was to use a reproductive justice framework to implement IPP LARC provision in a person-centered care framework for reproductive health. Diamond-Smith et al.25 describes the person-centered care framework of reproductive health as having dignity, autonomy, privacy/
FIGURE 2 (Continued)

5c. Select the departments that have modified or created policies, procedures, guidelines to support immediate postpartum placement of *implants*.

<table>
<thead>
<tr>
<th>Department</th>
<th>Labor &amp; Delivery</th>
<th>Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother/Baby Unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OB OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Have billing codes been established and tested? If yes, for which devices?

<table>
<thead>
<tr>
<th>Device</th>
<th>IUD</th>
<th>Implant</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>IUD</td>
<td>Implant</td>
<td>Both</td>
</tr>
</tbody>
</table>

6a. Is the facility fiscally prepared currently to bear the costs of devices that are not reimbursed?

<table>
<thead>
<tr>
<th>Device</th>
<th>IUD</th>
<th>Implant</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. Have IT revisions been completed to assure adequate data collection, tracking and documentation? If yes, for which devices?

<table>
<thead>
<tr>
<th>Device</th>
<th>IUD</th>
<th>Implant</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>IUD</td>
<td>Implant</td>
<td>Both</td>
</tr>
</tbody>
</table>

7a. Select the IT revisions that have been completed to assure adequate data collection, tracking and documentation for *IUDs*.

<table>
<thead>
<tr>
<th>Revision</th>
<th>EHR for consent</th>
<th>EHR for contraceptive choice counseling</th>
<th>Order sets</th>
<th>Pharmacy system</th>
<th>Billing system</th>
<th>Tracking tools</th>
<th>All of the above</th>
<th>None of the above</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHR for consent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EHR for contraceptive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>choice counseling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order sets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7b. Select the IT revisions that have been completed to assure adequate data collection, tracking and documentation for *implants*.

<table>
<thead>
<tr>
<th>Revision</th>
<th>EHR for consent</th>
<th>EHR for contraceptive choice counseling</th>
<th>Order sets</th>
<th>Pharmacy system</th>
<th>Billing system</th>
<th>Tracking tools</th>
<th>All of the above</th>
<th>None of the above</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHR for consent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EHR for contraceptive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>choice counseling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order sets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. How does immediate post-partum LARC fit with the birthing facility’s priorities?

9. How does immediate post-partum LARC fit with community values and priorities in the community in which the birthing facility operates?

Confidentiality, communication with providers/patients, social support in the facility including family members, supportive care, trust in providers, and health facility environment. Person-centered care provided a framework to acknowledge and respect the historic and current context of women’s fertility and lactation. These concerns, combined with modern tensions around LARC coercion, reinforced our priority around supporting women’s preferences. These preferences may also be related to contraception or breastfeeding and may not align with broader public health.
10. What other initiatives or practices currently being implemented will intersect with immediate postpartum LARC (i.e., Baby Friendly certification)? Will the other initiatives make implementation easier or more difficult?

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Score</th>
<th>1: no capacity, 2: some capacity, 3: strong capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>Lactation consultant</td>
<td></td>
</tr>
<tr>
<td>MCO Liaison</td>
<td>OB provider</td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td>All of the above</td>
<td></td>
</tr>
<tr>
<td>Billing</td>
<td>Other (specify)</td>
<td></td>
</tr>
<tr>
<td>Nursing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Who will need to be an active part of the IPP LARC initiative team in your hospital? Check all that apply.

- Administration
- MCO Liaison
- Pharmacy
- Billing
- Nursing
- Lactation consultant
- OB provider
- All of the above
- Other (specify)

11a. Who has already been engaged in consideration of IPP LARC in your hospital? Check all that apply.

- Administration
- MCO Liaison
- Pharmacy
- Billing
- Nursing
- Lactation consultant
- OB provider
- All of the above
- Other (specify)

12. Is facility leadership knowledgeable about supportive of IPP LARC?

- No
- Yes

13. Have any staff completed an education program on the importance of offering immediate postpartum LARC?

- Administration
- MCO Liaison
- Pharmacy
- Billing
- Nursing
- Lactation consultant
- OB provider
- All of the above
- Other (specify)

14. Have any staff completed an education program on the skills needed to administer immediate postpartum LARC?

- OB provider
- Pharmacy
- Nursing
- Lactation consultant
- OB provider
- All of the above
- Other (specify)

Other notes

15. What barriers to implementation exist that may not have been captured above?
goals that are related to unintended pregnancy or baby-friendly hospitals. Although we strive to improve the availability of LARC through access in the IPP, we also recognize that this availability does not assume uptake. For this reason, the project has not set any benchmarks for IPP LARC uptake.

Critical to ensuring a reproductive justice framework in this initiative was training providers, not only in IPP LARC insertion, but also in the historic context of eugenics in North Carolina and the importance of appropriate, noncoercive contraceptive counseling. All providers trained in IPP LARC insertion through this project were provided both didactic and skill-based clinical training coupled with didactic training on reproductive justice. The content for provider training integrated concepts of reproductive justice, shared decision-making, and the history of eugenics in North Carolina. The importance of on-demand LARC removal was emphasized during the training as an important aspect of the reproductive justice framework.

Particularly critical to the reproductive justice lens was the framing of contraceptive counseling and patient education materials.23 Although there are a number of patient education and contraceptive counseling materials that cover LARC, our team was unable to find materials that focus specifically on considerations for IPP LARC insertion at the desired patient education level. Using a person-centered care framework, our team engaged with patient advisors to codevelop patient education materials. Stock patient education materials for contraception were adapted to educate patients on the process, benefits, and risks of IPP LARC insertion, what patients can expect after their IUD or implant is placed. These materials were developed at an eighth-grade reading level and were reviewed by patient and family advisors before publication.

**Results**

Our project collaborated with 5 hospitals in North Carolina: 3 tertiary facilities and 2 community facilities. These hospitals are located in a single perinatal region selected by the funding agency. Hospitals in the region completed a fit and feasibility assessment for IPP LARC during an initial engagement discussion. Based on findings of the assessment and other internal factors, hospitals...
self-selected to participate in the implementation of IPP LARC.

**Teaming and champions**

The core implementation team consisted of 7 members: the Perinatal Neonatal Outreach Coordinator, assistant director of the UNC Center for Maternal and Infant Health, 2 implementation specialists, a maternity care coordinator, and 2 family planning specialist physicians. Team members were selected because of their expertise in family planning, hospital systems, and implementation science. The core team identified 1 of the family planning physicians as its champion. The core team served as a liaison between hospitals and state organizations, such as Medicaid and North Carolina of the Department of Health and Human Services’ Women’s Health Branch. This relationship provided facilities with connections to navigate barriers effectively that became evident during implementation. The core team, which lead the project overall, provided technical support to each of the hospital-based teams as they navigated their individual, institutional challenges to sustainable IPP LARC implementation.

In parallel with the core team, each hospital team formed a linked implementation team. Members included obstetrics providers; nursing staff; lactation consultants; information technology, pharmacy, billing and reimbursements department representatives; outpatient maternity care coordinators; and patient and family advisor liaisons. These diverse implementation teams were able to assess, to plan for, and effectively to build needed infrastructure before implementation to ensure clinical changes are well-supported. Teams that were most effective had physicians and nurse coleads and team members who were invested in IPP LARC and had the skills necessary for implementation and supporting systems change.

**Implementation science**

The implementation readiness assessment for IPP LARC was completed with each hospital and was used to anticipate potential barriers and opportunities. Identified barriers ranged from the requirement of health system engagement to make changes to the electronic health record to potential education overload on staff members because of multiple improvement projects within the obstetrics care unit. Several hospitals...
that were engaged in our project were embedded in larger healthcare systems; changes within these systems required convening system hospitals and facilitating agreement about recommended changes at the system level. The information gained from the readiness assessment was used to create timelines and workflows for implementation processes.

Our project noted that teams from all hospitals demonstrated the readiness criteria to implement an IPP LARC project successfully. Each hospital then progressed through the implementation stages, achieving variable outcomes depending on contextual barriers. Table 2 summarizes the implementation stage, length of engagement and implementation outcomes achieved for each facility. Each hospital began exploration at different time points, with some having previously considered or accessed funding for IPP LARC implementation. All facilities successfully identified champions to move the initiative forward. Most facilities identified adding LARC devices to pharmacy formularies and justifying associated expenses as a major barrier. Given the complexity of changing large healthcare systems, the use of implementation outcomes as intermediate measures of success helped our team identify successes, even for hospitals that did not begin providing IPP LARC during the grant period.

**Reproductive justice**

Our team completed 11 trainings with 140 providers on IPP LARC insertion and reproductive justice. Although these trainings were well-received, there is no mechanism to ensure the providers would continue to use a reproductive justice lens in their daily practice. Integration of standard workflows to uplift and support reproductive justice in the providers’ hospitals would be necessary to ensure continued attention to reproductive justice. Implementing hospitals were encouraged to track outcomes with an equity perspective to assess the impact of the project from a reproductive justice standpoint. Making sure all women are offered the approach as a components of standard counseling, which includes access to removals, are key metrics to addressing reproductive justice.
In an ideal implementation process, patient and family advisors are engaged throughout the process, particularly during the exploration stage, which allows key stakeholders to identify potential barriers to implementation and opportunities to advance equity. The core team was created to support the development of individual facility implementation teams that integrated and supported the use of patient and family advisors. Facilities determined the timing of patient engagement based on institutional policies and standard practices. Our core team engaged these stakeholders in the development of patient education materials. Advisors who were engaged conveyed gratitude for the ability to provide input. Their inclusion in the process was viewed as a partnership between the patient and the healthcare team to support shared decision-making. Patient advisors will remain an active part of ongoing quality improvement processes for the implementation and sustainability stages. Although implementation science is interested in advancing equity, the field is still struggling with how to measure equity as an outcome of implementation.

Comment
The use of interdisciplinary implementation teams to move IPP LARC forward was a key strength of this approach. Having access to a broad array of skillsets and loci of control made it possible for both the core team and linked hospital teams to navigate barriers to implementation. The core team also identified lessons learned to inform implementation as the project moved forward, applying best practices while being attentive to the context of each birthing facility. Implementation science provided critical grounding for the work. Using a stage-based approach allowed teams to sequence and scope the work appropriately and provided framing for the technical assistance that was provided by the core team. Although the use of a reproductive justice lens is not novel, per se, our team found these principles to be critical in guiding our work when the next steps were unclear. One potential weakness of this approach is the time needed to reproduce this intervention. Although there were no significant costs beyond staffing

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Implementation stage (at completion of grant period)</th>
<th>Length of time for targeted support, mos</th>
<th>Implementation outcomes achieved (Table 1)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exploration</td>
<td>3</td>
<td>Working towards acceptability</td>
<td>Reimbursement protocols and policies related to immediate postpartum long-acting reversible contraception have prevented facilities from successfully meeting the outcome of adoption; institutions continue to use processes to determine facility return on investment and policies to support financial acceptance.</td>
</tr>
<tr>
<td>2</td>
<td>Exploration</td>
<td>3</td>
<td>Working towards acceptability</td>
<td>Reimbursement protocols and policies related to immediate postpartum long-acting reversible contraception have prevented facilities from successfully meeting the outcome of adoption; institutions continue to use processes to determine facility return on investment and policies to support financial acceptance.</td>
</tr>
<tr>
<td>3</td>
<td>Installation</td>
<td>12</td>
<td>Acceptability; adoption; working on appropriateness</td>
<td>Understanding the ability of the facility to support the financial investment for immediate postpartum long-acting reversible contraception for consumers with varying mechanisms of payment is currently under investigation within this facility.</td>
</tr>
<tr>
<td>4</td>
<td>Initial Implementation</td>
<td>6</td>
<td>Acceptability; adoption; appropriateness; feasibility; fidelity; working towards implementation cost</td>
<td>Transition through the various stages of the implementation process was enhanced by this institution’s ability to secure outside financial support to cover costs that are associated with costs for long-acting reversible contraception devices; this facility is in the process of identifying mechanisms to support sustainable financial mechanisms for patients with varying insurance types.</td>
</tr>
<tr>
<td>5</td>
<td>Initial Implementation</td>
<td>14</td>
<td>Acceptability; adoption; appropriateness; feasibility; working on fidelity</td>
<td>Reimbursement protocols and policies have been developed that, although time intensive, should lead to sustainability of the service, especially as the payor mix broadens; full implementation has been challenged by multiple other initiatives and a desire to minimize disruption to fragile workflows.</td>
</tr>
</tbody>
</table>

for the core team, the time needed to build the core implementation team and linked hospital teams and to build buy-in was considerable. The implementation science literature documents that the exploration and installation stages may take up to a year or more, which creates a potential barrier to some facilities.26 Time spent in each stage varied per facility based on the supports available. Transition timing within our project was congruent with timing that was noted in other states with implementing IPP LARC projects.27 Although many patient barriers to accessing IPP LARC were addressed, cost and reimbursement continue to be a challenge. Medicaid reimbursement policies enabled facilities to consider support of the IPP LARC. However, the uncertainty of Medicaid reimbursement amounts and practices for other payors delayed uptake in certain institutions. Although significant attention was paid to training providers and developing systems that will honor patient-preferences, a tiered reimbursement system (coverage by Medicaid and uncertain/changing reimbursement system (coverage by private payors) sets up the potential for a process that appears to target Medicaid patients. Discussion and negotiation with private payors are ongoing to ameliorate these discrepancies. In the interim, historically vulnerable populations have more access to IPP LARC, which could appear as unintentionally targeted care. Given North Carolina’s long history of racially stratified reproduction, we remain vigilant in our efforts to provide patient-centered care and will lean on our patient advisors to provide feedback regarding actual experiences and perceptions of care.

The 3 innovative aspects of our implementation process, taken together, result in a systematic, multidisciplinary, and culturally appropriate model for IPP LARC that can be replicated across hospitals. This model will help allow this evidence-based practice to become a routine part of the options that are available to women as they consider their postpartum priorities.

We recommend birthing facilities that are exploring IPP LARC use a similar approach that identifies implementation stages and outcomes as a guide for their work. Birthing facilities can use the resources developed for this project to build diverse teams and engage champions, assess readiness, and target both clinician competency and organizational infrastructure to ensure sustainability. A focus throughout the process on reproductive justice will aid in the development of relevant, efficient, and equitable care processes.

ACKNOWLEDGMENTS
We thank the UNC Center for Maternal and Infant Health leadership: Dr Kate Menard (UNC School of Medicine, Division of Maternal Fetal Medicine), Dr Sarah Verbiest (Jordan Institute for Families, UNC School of Social Work; Executive Director, Center for Maternal and Infant Health), and Ms Erin McClain and Ms Denise Shaver (UNC Center for Maternal and Infant Health) for their support and guidance with project design and implementation, and Dr Matthew Zerden (WakeMed Health and Hospitals) for his collaboration in project design and implementation.

REFERENCES


