Incorporating the Hormonal Intrauterine System into the Contraceptive Method Mix in the Public Health Sector in Kenya

Learning from Kisumu and Migori Counties

December 2019

www.mcsprogram.org

Background

While use of modern methods of family planning (FP) in Kenya has increased over the last decade, from 32% in 2003 to 60.7% in 2018, 13.8% of currently married women still have an unmet need for FP services, and 31% of FP users discontinue use of a method within 12 months. The most popular modern contraceptive methods used among all women are injectables (19%), implants (7%), and the pill (6%). Use of the intrauterine contraceptive device (IUCD) is low (2.3%). The public sector remains the major provider of contraceptive methods, with 60% of modern contraceptive users obtaining their contraception from a government source.[1–3]

First introduced over 30 years ago (see image in Box 1), the hormonal intrauterine system (IUS) is one of the most effective forms of contraception and has helped revitalize interest in long-acting reversible contraceptives (LARCs) in Europe and the US. However, the high cost of existing hormonal IUS products has meant limited availability of the method in many low- and middle-income countries, including Kenya. Several recent studies and assessments have indicated that in settings where unmet need for FP is high, increased availability of more affordable hormonal IUS products could result in increased demand and uptake of the method among women.[4]

Box 1. What Is the Hormonal IUS?

- It is a small, T-shaped contraceptive device placed in the uterus.
- Contains 52 mg of the hormone levonorgestrel and releases 20 micrograms every 24 hours in the uterus, for up to 5 years of protection from pregnancy.
- Is highly effective: failure rate is ~0.2% at 1 year and cumulative failure rate is 0.7% at 5 years.
- Significantly reduces menstrual blood loss (approved treatment for women suffering of heavy menstrual bleeding).
- Is immediately effective.
- Offers rapid return to fertility after removal.
- Is more cost-effective than oral contraceptives, condoms, and injectable contraception over 5 years.

Multiple hormonal IUS products are registered in Kenya: Mirena, the ICA Foundation's levonorgestrel intrauterine system (LNG-IUS), and Avibela.

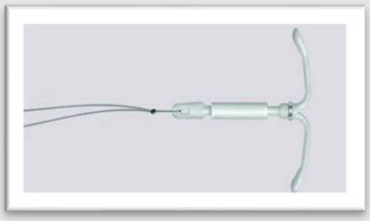


Image courtesy of ICA Foundation

[1] Central Bureau of Statistics (CBS), Ministry of Health (MOH), ORC Macro. 2004. *Kenya Demographic and Health Survey 2003*. Calverton, Maryland, USA: CBS, MOH, and ORC Macro.
[2] Kenya National Bureau of Statistics (KNBS), MOH, Kenya National AIDS Control Council (KNACC), Kenya Medical Research Institute (KMRI), Kenya National Council for Population and Development (KCPD), ICF International. 2015. *Kenya Demographic and Health Survey 2014*. Rockville, Maryland, USA: KNBS, MOH, KNACC, KMRI, KCPD, and ICF International.
[3] Performance Monitoring for Action 2020 (PMA2020). 2019. *PMA2020/Kenya: November-December 2018 (Round 7)*. Baltimore, Maryland, USA: PMA2020.
[4] Ross J, Stover J. 2013. Use of modern contraception increases when more methods become available: analysis of evidence from 1982-2009. *Glob Health Sci Pract.* 1(2):203-12. doi: 10.9745/GHSP-D-13-00010.

Figure 1. Hormonal IUS introduction timeline

This brief describes Maternal and Child Survival Program (MCSP) interventions in two counties in Kenya and the results of the implementation research conducted along with the interventions. The MCSP study aimed to establish the profile of women adopting the method, their experiences using it, and providers' perspectives on factors for successful introduction. Study results and lessons learned from implementation will be useful to inform best practices for phased scale-up. MCSP supported the introductory study and implementation of hormonal IUS services in Migori and Kisumu counties, collaborating with the Jhpiego-led Afya Halisi project when that project began.

Project Intervention

MCSP is a global, $560 million, 5-year cooperative agreement funded by the US Agency for International Development (USAID) to introduce and support scale-up of high-impact health interventions among USAID's 25 maternal and child health priority countries, as well as other countries. In 2016, with funding from USAID, and in partnership with the Kenyan Ministry of Health (MOH), MCSP built capacity for LARCs in public health facilities in Kisumu and Migori counties, and used this platform to embed introduction of and learning about the potential of hormonal IUS within LARCs, using commodities donated by the International Contraceptive Access (ICA) Foundation. MCSP worked in close collaboration with the MOH to incorporate the hormonal IUS directly into the contraceptive method mix at select high-volume facilities.

In both counties, MCSP's LARC capacity-building approach involved a modular, facility-based approach for training and mentorship, incorporating the hormonal IUS into the existing contraceptive method mix. Implementation took place via already trained MOH LARC mentors, who were then trained in the hormonal IUS, emphasizing voluntarism and informed choice, counseling, quality of care, World Health Organization Medical Eligibility Criteria, insertion and removal clinical skills, and infection prevention. Once the LARC mentors were fully trained and certified as competent in the hormonal IUS, they provided step-down training through an on-the-job approach.

Global evidence shows that traditional training approaches that focus on extended, offsite, group-based workshops have had limited effectiveness in improving and maintaining provider performance after training.[5] New evidence identifies better ways to optimize sustained improvements in service delivery using interactive techniques that engage the learner, include simulated practice, provide constructive feedback, and offer learning opportunities that are planned and delivered at an appropriate dose and frequency. As such, to support implementation of comprehensive FP programming in Kenya and other countries, MCSP pioneered a new, evidence-based, in-service training package, the LARC Learning Resource Package.[6] This comprehensive tool consists of 10 modules that provide facilitators and learners with consolidated, essential information about the safe use of LARCs, specifically IUDs (hormonal and nonhormonal) and contraceptive implants (single- and two-rod) in the interval, postabortion, and postpartum periods. MCSP, in collaboration

[5] Bluestone J, Johnson P, Fullerton J, Carr C, Alderman J, BonTempo J. 2013. Effective in-service training design and delivery: evidence from an integrative literature review. *Hum Resour Health*. 11:51. doi: 10.1186/1478-4491-11-51.
[6] MCSP. 2017. *Long-Acting Reversible Contraceptives Learning Package*. Washington, DC: MCSP. https://www.mcsprogram.org/resource/providing-long-acting-reversible-contraception-larc-learning-resource-package/.

with the MOH, adapted the hormonal IUS module to the Kenya context, and it was later added to Kenya's national FP training curriculum. Programming approaches and strategies used for incorporating the hormonal IUS into the existing method mix can be found in Table 1.

As of October 2019

41	48	190	1,500
PUBLIC HEALTH FACILITIES	**MOH PROVIDERS**	**SERVICE PROVIDERS**	**CLIENTS**
are providing the hormonal IUS as part of the method mix (22 in Kisumu and 48 in Migori).	were certified as hormonal IUS mentors (23 in Kisumu and 25 in Migori).	were trained in the hormonal IUS (126 in Kisumu and 64 in Migori).	adopted the hormonal IUS (637 in Kisumu and 863 in Migori).

Table 1. Program approaches and strategies for incorporating the hormonal intrauterine system into the contraceptive method mix in Kisumu and Migori counties

Health Workforce	
	**Determined existing local capacity:** • Nurses and midwives identified as main family planning (FP) service providers in Kenya. • Medical officers and clinical officers also provide FP services. • Ob-gyn specialists also provide services while overseeing provision by the other cadres. **Supported knowledge and skill transfer through mentoring:**[7] • Designated, engaged, and prepared existing Ministry of Health (MOH) mentors to serve as long-acting reversible contraceptive (LARC) mentors; health care providers identified already met the key qualifications, attributes, experience, and skills that were needed for FP mentorship, including LARCs. • Worked with in-country stakeholders to plan for mentor availability, support, and sustainability. **Identified human resources for health issues outside of MCSP's control, including:** • Staff shortages • Industrial unrest/health care worker strikes

Service Delivery	
	**Together with key stakeholders, designed the strategy, approach, and scope:** • Layered the hormonal intrauterine system (IUS) into existing FP/LARC programming at MOH facilities that used a modular, facility-based approach for training and mentorship. • Identified existing service delivery channels (FP services, maternity, etc.). • Identified existing communication channels for providing information to potential clients/communities. **Identified and assessed facilities with needs for LARC capacity-building:** • Conducted facility readiness assessments using an MOH assessment tool (included a review of human resources, equipment and supplies, management systems, and existing data collection and review systems used at the facility). • Information from the facility readiness assessment was used to plan capacity-building and follow-up. **Oriented program staff and key stakeholders:** • Shared the needs assessment results with key stakeholders, including the MOH and staff in charge of the facilities, highlighting any major gaps in provision of LARC services (e.g., staff shortage, FP supplies).

[7] Based on recent evidence that suggests learning within the workplace—in short segments with frequent practice and a focus on doing, rather than knowing—is the most effective at impacting performance.

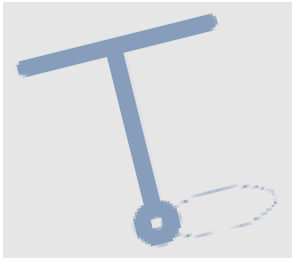
Service Delivery	
	• Oriented the facility managers and other key personnel to the training approach and planned the training schedule. **Developed/revised necessary tools and documents:** • In collaboration with the MOH, adapted MCSP's training module for the hormonal IUS to the Kenya context. • Supported the MOH to formally add the adapted the hormonal IUS module to Kenya's national FP training curriculum. **Provided necessary equipment and supplies:** • Provided LNG-IUS commodities (sourced via ICA Foundation), anatomic models, and essential medical instruments. **Supported service reorganization:** • Worked with health facility officer in-charges and other health care workers to determine how to improve client flow, privacy, and quality of care. **Conducted facility-based training:** • Coordinated, planned, and implemented facility-based training with MOH stakeholders and program staff. • Trained and certified MOH mentors, who subsequently mentored health care workers at the facility level. This training included more emphasis on postpartum insertions as an area of weakness in LARC facility assessments. **Followed up and mentored trained service providers:** • Provided regular, on-the-job mentoring and supervisory visits to facilities to ensure confidence and competence of the newly trained LARC providers. **Supported and manage implementation:** • Worked with in-country and global stakeholders to develop an initial transition strategy to have the government manage all elements of scaling up the method, including supply chain management, capacity-building, availing consumables and supplies, counseling, and demand generation (see below). **Facilitated ongoing learning and adaptation:** • Shared/harmonized learning and programmatic approaches, and supported facilitation of ongoing in-country discussions among hormonal IUS partners in Kenya, including leading a standalone community of practice for organizations involved in hormonal IUS service delivery, presentations to national FP technical working group, and briefings of donors, including USAID and the Department for International Development. • Organized a learning visit to Kisumu facilities for national and selected county stakeholders (from Kisumu, Migori, Baringo, Kakamega, and Nakuru counties). • The Jhpiego-led bilateral, Afya Halisi, will continue to use lessons learned from MCSP to improve the quality of care of LARC services, scale up the hormonal IUS to other public health facilities within Migori and Kisumu counties, and complete a phased rollout of services in Kakamega County.

Health Information Systems	
	**Reviewed data collection tools:** • Reviewed the existing system and tools for monitoring FP services (e.g., the FP register and monthly reports). • Met with the MOH team supporting the national health management information system to discuss which tools need to be modified to record and monitor LARC services, including the hormonal IUS. **Adapted existing tools:** • Supported the national-level MOH to modify FP reporting tools to incorporate intrauterine contraceptive device type (hormonal and nonhormonal) and disaggregate reporting of intrauterine contraceptive device data in the national health management information system (the revised tools will soon be printed and distributed). • Built systems and processes to monitor progress, including regular review of data for LARC services. • Designed tools and formats to support documentation and monitoring progress. **Enabled ongoing monitoring of progress:**

Health Information Systems

- Supported systematic measurement of key process and outcome measures.
- Tracked efficacy of intervention against select key performance indicators.

Medical Products



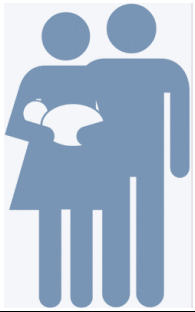
Managed commodities:

- Sourced donations of generic LNG-IUS from the ICA Foundation.
- Managed the donations from ICA Foundation (requesting, receiving, distributing, monitoring, and reporting) and subsequently transitioned management to the Jhpiego-led Afya Halisi project.

Supported continuity of commodity supply:

- With the aim of transitioning commodity management to either the national MOH FP program manager and/or the implementation counties, MCSP initiated discussions with Migori and Kisumu counties about development of their own agreements with the ICA Foundation. ICA Foundation also expressed willingness to ship commodities directly to the counties, and the counties are currently in discussions regarding taking over this responsibility.
- In the meantime, commodities will continue to be managed through the Afya Halisi bilateral.

Clients



Raised awareness/created demand among clients outside of service delivery points:

- Supported the MOH to integrate the hormonal IUS into community health volunteers' FP training.
- Incorporated hormonal IUS messaging into existing FP activities and messaging that takes place via community health volunteers.

Health Governance

Incorporated the hormonal IUS into national guidelines/training package:

- Worked closely with MOH leadership from national and county levels (heads of the Department of Family Health and Division of Reproductive and Maternal Health, FP program team, county directors of health) for government leadership. As a result, the hormonal IUS was incorporated into the national FP guidelines and FP training package.

Facilitated partner coordination and conversations about scale-up:

- Provided leadership for an hormonal IUS community of practice that engaged key stakeholders, including USAID Kenya and Department for International Development implementing partners, nongovernmental organizations accessing ICA Foundation commodities, and manufacturers, to strategize and harmonize on the way forward, and meet with MOH officials regularly to plan scale-up.

Health Finance

Supported resource mobilization for scale-up:

- Advocated with the government to include FP as part of universal health coverage.
- Supported the MOH to engage county assemblies to increase the health budget, ring-fence FP resources, and set aside stipends for community health volunteers.
- Provided support for development of county FP costed implementation plans that link to County Integrated Development Plans, Annual Work plan and Program Based Budget processes.
- Provides ongoing support (via Jhpiego country office) to the MOH in its advocacy for increased budgetary allocation to health, including a budget line for FP commodities.

Implementation Research

As part of MCSP's core mandate to expand method choice, the project conducted a research study with the aim to investigate the effects of adding a hormonal IUCD as an FP method option within a broader strategy to strengthen voluntary LARC services at governmental public health facilities in Kenya. LARC methods have higher effectiveness, and users typically continue using these methods for longer, so ensuring women have access to a LARC that suits their preferences has public health benefits. Hormonal IUCDs affect women's bodies in a different way than copper IUCDs (CuTs) or implants because of the localized hormonal action. Thus, they offer a different option for women who are seeking longer pregnancy prevention.

Study Objectives and Questions

1. Assess the benefit of including a hormonal IUS as a method choice and whether adopters of the hormonal IUS include new FP users, women switching methods, or populations of special interest (adolescents, postpartum women, postabortion women).
2. Determine women's reasons for choosing the hormonal IUS (contraceptive benefits of the hormonal IUS versus CuTs, noncontraceptive benefits, sources of information about the method).
3. Determine rates of early discontinuation and expulsion, and reasons for removals.
4. Assess hormonal IUS implementation challenges and opportunities from provider perspective.

Methodology

From April 2017 to March 2019, providers administered short interviews to consenting women immediately after insertion of the hormonal IUS or CuT to document demographic information, the contraceptive method used before IUCD insertion (if any), reasons for choosing the method, and where and when women first heard about the hormonal IUS. MCSP included CuT clients as a comparison. Because the volume of implant clients was high, MCSP did not include implants, as this would have been too burdensome for providers to collect. MCSP conducted follow-up phone calls to assess early continuation rates as well as user experience and satisfaction. The timing of follow-up calls varied for different operational reasons in each county but ranged from a few weeks to over 1 year later. In total, 289 hormonal IUS and 144 CuT adopters enrolled in the study, with 180 hormonal IUS and 88 CuT adopters participating in follow-up phone interviews. In early 2019, MCSP conducted six qualitative focus group discussions with providers, covering topics of feedback on their training, their perceptions of their clients' experiences with the method and other LARCs, their own and their facility's readiness to provide hormonal IUS and LARC services, and questions around the disaggregation of data to capture additional information about LARC services, such as timing (interval, postabortion, or postpartum).

Results Snapshot

Characteristics of Hormonal IUS Adopters (N = 289)

- Average age was 28 years, with a range of 15–48 years.
- 86% were married (compared to 85% for CuT).
- 96% had at least one child (compared to 94% for CuT).
- 56% were either not using contraception or were switching from a short-acting method.
- 61% were in the 1-year postpartum period (compared to 59% for CuT).

Women had different reasons for choosing the hormonal IUS, with no one reason mentioned by a majority of women. The top reasons were fewer side effects (mentioned by 38%), followed by "can be used for spacing" (31%), it is reversible (30%), and long-lasting (29%). (Note that possible reasons were unprompted and responses coded using a list of possible reasons.)

Hormonal IUS Adopter Experience Post-Insertion (N = 182)

Adopter satisfaction:

- 86% were satisfied with their decision.
- 79% would recommend it to other women.

Changes in bleeding pattern:

- 28% had no changes in bleeding patterns.
- 52% had reduced or no bleeding.
- 8% had spotting.
- 12% had increased bleeding.

Impact on adopters' lives:

- 78% of women experiencing absence of bleeding and 92% of women experiencing reduced bleeding viewed the change as having a positive or neutral impact on their lives.
- 17% of adopters reported experiencing a "major" problem (most commonly cramping, pain, or too much bleeding), while only 6% were still experiencing the problem at the time of follow-up interview.
- 86% were still using the hormonal IUS at the time of the follow-up interview: seven (5%) hormonal IUS adopters had expulsions, 11 (7%) had the hormonal IUS removed, and two women were not sure if the IUCD was still in place (one reinsertion was reported). Expulsions were within the expected range.

Provider Feedback on Capacity-Building Approach

Qualitative focus group discussions revealed that mentees universally shared positive feedback about the mentorship program and that participation in it significantly improved their confidence in hormonal IUS counseling and service provision. Moreover, mentees felt that being mentored by someone known to them and at their health facility created a positive learning experience because they could learn in a familiar, nonthreatening environment. When asked if there was anything mentees would change about the program, the majority felt that it was well organized and sufficient in building their knowledge and skills. Since attending the training, mentees reported seeing an improvement in their counseling skills and have been able to provide IUD services, without any post-insertion complaints from clients.

While providers viewed the mentorship program as a success, they noted some challenges that came out in focus groups. Mentees widely believed that time allocated for practical skills building was inadequate due to low numbers of clients on whom to practice insertion and the short length of the practical portion of the training. In addition, the half-days of onsite mentorship were identified as a challenge because mentees had to divide their time between learning new information and performing their regular duties at the health facility. To overcome this challenge, mentees proposed restructuring the program to extend the training period and reduce overlap between training and daily duties by conducting daylong sessions.

> "*Since I left college, I was not able to insert any IUCD, but after training, I'm really trying. … Before when the clients were coming for IUCD, I would refer them. Not that I would tell them that I don't know how to insert, maybe I could pretend that we don't have methods, but inside I knew I was not able to insert it well. But after training, I can't refer any client to the next facility; I'm doing it.*" –Mentee

Key Findings

A positive political and policy environment in Kenya that favors FP and access to long-acting reversible methods was key for the success of this intervention, as it allowed for critical MOH ownership and leadership of hormonal IUS work. This in turn created an enabling environment at national and county levels. Involving key stakeholders in discussions before beginning implementation further helped ensure the intervention was well positioned for long-term sustainability.

Despite extended nursing strikes and the close of the MCSP country program, the uptake of the hormonal IUS in Kenya is promising, with over 1,500 insertions over a 2-year period, including high numbers of new FP users and women previously using short-acting methods adopting the method. The hormonal IUS also seems to be an appealing method to younger women, postpartum women, and high-parity women, which could potentially help expand use of LARCs among these key target groups. High levels of user satisfaction

and continuation (comparable to earlier studies conducted in Kenya[8] and Nigeria[9]) are promising. A substantial proportion of women choosing the hormonal IUS (approximately one-third) are not interested in using other LARCs, suggesting there are features of the method that distinguish it from other LARCs. Study results and lessons learned from implementation will be useful to inform best practices for phased scale-up, which is in early stages of rollout in three additional counties (Baringo, Kakamega, and Nakuru) under USAID-funded projects. MCSP is also preparing a mixed-methods article on this study and a similar one in Zambia.

Programming Opportunities and Recommendations

- While initial results indicate hormonal IUS inclusion in the contraceptive method mix at public facilities is feasible, key stakeholders at national and county levels need to continue to think about sustainable strategies for commodities. There is a need to incorporate the hormonal IUS into national FP commodity supply chain management to ensure it becomes a sustainable part of the method choice in Kenya.
- As additional counties begin adding the hormonal IUS to their method mix, it is critical for each to look at sustainable paths to scale-up, and identify existing systems and resources that can be used to support the interventions. It is also important to capitalize on any hormonal IUS funding opportunities that support introduction/expansion of the contraceptive method mix to also strengthen existing FP/LARC services across the full range of methods.
- When adding a new method to the existing contraceptive method mix, successful approaches must include program interventions that address both individual health provider and system-level gaps. As such, effective hormonal IUS/LARC programming should include a multipronged approach to address localized, needs-based gaps in the health system and individual human capacity to create lasting improvements in health care outcomes.
- To build provider capacity in the hormonal IUS and LARCs, those implementing FP capacity-building should continue to support evidence-based, onsite capacity-building approaches that promote sustained increases in health provider performance. Capacity-building approaches that combine onsite clinical training with mentorship and supportive supervision are ideal for continuous improvement of clinical and managerial competencies, and for development of soft skills in leadership and client-centered care.[10]
- Findings from site visits suggest that counties need to implement the revised infection prevention and control guidelines rather than using the older edition. Counties should also consider adopting the revised national LARC training curriculum, which includes new content on reproductive coercion and intimate partner violence.
- This study showed that women switching from injectables and implants to the hormonal IUS often did so because they desired fewer side effects. It would be interesting to further assess if access to this method could help improve contraceptive use continuation rates.
- Continue to assess interventions and strategies to help improve FP services by creating opportunities for regular review, continuous adaptation, and improvement of approaches based on what is working well and what is not, and supporting changes to implementation and processes based on findings.

This brief is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the terms of the Cooperative Agreement AID-OAA-A-14-00028. The contents are the responsibility of the Maternal and Child Survival Program and do not necessarily reflect the views of USAID or the United States Government.

[8] Hubacher D, Akora V, Masaba R, Chen M, Veena V. 2014. Introduction of the levonorgestrel intrauterine system in Kenya through mobile outreach: review of service statistics and provider perspectives. *Glob Health Sci Pract*. 2(1):47-54. doi: 10.9745/GHSP-D-13-00134.

[9] Eva G, Nanda G, Rademacher KH, et al. 2018. Experiences with the Levonorgestrel Intrauterine System among Clients, Providers, and Key Opinion Leaders: A Mixed-Methods Study in Nigeria. *Glob Health Sci Pract*. 6(4):680-92. doi: 10.9745/GHSP-D-18-00242.

[10] Bluestone J, Johnson P, Fullerton J, Carr C, Alderman J, BonTempo J. 2013. Effective in-service training design and delivery: evidence from an integrative literature review. *Hum Resour Health*. 11:51. doi: 10.1186/1478-4491-11-51.