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E2A EVIDENCE TO ACTION for Strengthened Reproductive Health

Pathfinder INTERNATIONAL

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Assessing the Feasibility of Including Removal Indicators for Long-Acting Reversible Contraceptives in Mozambique's National Family Planning Registers

STUDY REPORT | E2A PROJECT

About E2A

The Evidence to Action (E2A) Project is USAID's global flagship for strengthening family planning and reproductive health service delivery. E2A addresses the reproductive health care needs of girls, women, and underserved communities around the world by increasing support, building evidence, and leading the scale-up of best practices that improve family planning services. E2A is led by Pathfinder International in partnership with ExpandNet, IntraHealth International, and PATH.

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Acronyms

CPR	Contraceptive Prevalence Rate
DHIS2	District Health Information System 2
E2A	Evidence to Action Project
FP	Family Planning
HC	Health Center
HMIS	Health Management Information System
HP	Health Provider
HDI	Human Development Index
IFPP	Integrated Family Planning Program
IUD	Intrauterine Device
LARC	Long Acting Reversible Contraceptive
mCPR	Modern Contraceptive Prevalence Rate
MoH	Ministry of Health
PSI	Population Services International
RH	Reproductive Health
USAID	U.S. Agency for International Development
WRA	Women of Reproductive Age

Executive Summary

The Evidence to Action (E2A) Project is USAID's global flagship project for strengthening family planning and reproductive health service delivery. As a member of the Implant Removal Task Force and the lead of its data subgroup, E2A conducted a study in collaboration with the Integrated Family Planning Project (IFPP) to test the feasibility of including a set of six removal indicators for long-acting reversible contraceptives (LARCs) in Mozambique's national family planning register.

Background

Uptake of contraceptive implants has rapidly increased since 2012, reflecting client demand, donor investments and manufacturer price reductions. With the increase in implant insertions; a concern has emerged that the impending wave of needed implant removals may not be matched by either service delivery capacity or reliable implant removals data to support this effort. The unparalleled increase in implant insertions will result in an equal growth in removals three to five years (Implanon® and Jadelle® respectively) post-insertions, as all inserted implants must be removed by competently skilled providers at a nearby location, ideally by the product's effectiveness expiration date. While most countries carefully monitor LARCs (implants and intrauterine devices) uptake either in the District Health Information System 2 [DHIS2] or through other performance monitoring mechanisms, few routinely monitor removals, and even fewer track reasons for removal, discontinuation, and method switching. This lack of monitoring hinders an understanding of quality of care within family planning (FP) services by ministries, program managers and health facility staff.

Rationale

In response to the global recognition of the impending high demand for implant removal services, coupled with concerns about reliable implant removal data, the Implants Access Program's Operations Group partnered with Jhpiego to support two technical consultations on implant removals. In late 2015, the group initiated the Implant Removal Task Force—to bring together implementing partners and donors to identify existing best practices and call attention to research and programming gaps for future action. A data subgroup, led by E2A, was formed to improve data use, harmonize routine data at the country level, and survey data collected from various projects/initiatives to increase understanding of implant removals. Within the context of routine health management information system (HMIS) data collection, the data subgroup advocated for the collection, reporting, and analysis of these six relevant implant removal markers to track LARC removal issues within national FP HMIS systems:

1. **Reason for client visit—intrauterine device (IUD) and implant removals included as options**
2. **Reason for seeking removal**
3. **Time since insertion**
4. **Removal outcome (removed; not removed/counseled; not removed/referred for removal)**
5. **Reasons for referral (if removal outcome is "Not removed/referred for removal")**
6. **Client visit outcome (removal included as an option)**

E2A, in collaboration with IFPP, conducted a study to test and document the feasibility of introducing the recommended six removal indicators into Mozambique's national FP register and HMIS. Findings from the study will contribute to the knowledge base in Mozambique and globally regarding the feasibility of including these six removal indicators in national FP registers and HMIS. Findings are summarized below and detailed in this report.

Study Design

This study used quantitative data collection methods—data extraction from FP addendum registers for normal and difficult removals—as well as qualitative data in the form of service providers' perceptions solicited during monthly supportive supervision visits. The study was conducted in Nampula and Sofala provinces where IFPP maintains fully operational FP programs. These provinces were selected based on feasibility and practicality; the proximity of Pathfinder staff enabled day-to-day project oversight. E2A applied a multi-stage sampling strategy to select 17 study facilities from among the provinces' 402 health facilities (Nampula=238 and Sofala=157), aligning the health centers (HCs) with their referral district hospital, as detailed in this report. Additionally, the provincial MoH stakeholders recommended including the provincial capital HCs, yielding a final sample of 19 facilities (Sofala = 10; Nampula = 9). E2A obtained ethical approval from the appropriate ethics review boards in the United States and Mozambique.

The national FP registers specifically document the modern method accepted, disaggregated by method type and noting the specific product: Implanon NXT® and Jadelle® for implants and Cu-T for IUDs. It is important to note that IUDs were included in the assessment at the request of country stakeholders. They reasoned that IUDs are an integral component of their LARCs programming and thus a holistic assessment of removals would naturally include IUDs. The FP register addendum (normal removals) introduced as part of this assessment included the six implant removal indicators, herein referred to as "*LARCs removal indicator suite*". These include:

1. Reason for client visit
2. Reasons for seeking removal
3. Time since insertion
4. Removal outcome
5. Reasons for referral
6. Client visit outcome

A second FP register addendum for difficult removals, also introduced as part of this assessment, comprised the LARCs "difficult removal" indicator suite:

- Reason for referral
- Date of removal
- Removal outcome
- FP user status post-visit

The FP register addendum (normal removals) was employed in the 19 selected health facilities, while the FP register addendum (difficult removals) was introduced only at the district (n=6) and central (n=2)

hospitals. Age, parity, and marital status at current visit were included in both FP register addendums. The supportive supervision checklist included questions on perceived benefits and challenges encountered in completing the FP register addendums and time taken in recording the six normal removal indicator suite. Data collection took place over a six-month period, from November 21, 2018 to May 20, 2019, aligned with the HMIS monthly reporting period. A total of 795 (Nampula=336; Sofala=459) removal clients were documented in the FP register addendum and 64 supervisory visits (Nampula =33: Sofala =31) were conducted in the 18 health facilities over the data collection period.

The field study team encountered challenges collecting data in seven health facilities in Sofala for varying periods of time during the six months data collection period. The team was unable to reach one HC due to precarious travel conditions. In addition, data collection was interrupted for a three-week period (March 15 to April 10) following Hurricane Idai in six HCs. Despite these challenges, the team was able to document 795 LARCs removals, a sufficient number to assess the usefulness of including the six additional LARCs removal columns as part of the routine HMIS.

Findings

This report contains extensive quantitative results from the FP addendum registers and qualitative findings from the supportive supervision checklist, including these key findings:

- Urban HCs have a higher client load for reproductive health (RH) and FP services compared to rural HCs, irrespective of urban/rural women of reproductive age (WRA) catchment populations. Overall, nearly 71% of new FP acceptors sought FP/RH services at HCs, with more new FP acceptors in urban (n=16,043) than rural (n=13,840) HCs. However, the proportion of FP new acceptors to WRA catchment population is similar across urban and rural health HCs (26.6%/urban vs. 27.8%/rural).

- A total of 795 LARC clients sought FP services for removals. A considerable proportion (14.1%) decided against removal after the initial targeted counseling session offered to all removal clients as per LARC removal guidelines. A much larger proportion (83.5%) of clients had their implants successfully removed. Among the remainder (n=19, 2.4%), 10 clients' cases were categorized as difficult but removed at the same facility; five were categorized as incomplete; and four (IUD=3; Implant =1) were referred.

- Nearly 55 % of 661 clients sought removal services within two years. There were significantly fewer on-schedule removals (n=68; 10.3%). Close to 7% of all removals were categorized as delayed—more frequently for Jadelle (n=44) as compared to Implanon NXT (n=1).

- The three most frequently reported removal reasons were side effects (25.8%), desire to become pregnant (22.9%), and on-schedule/expired (29.5%).

- Women under age 25 comprised nearly 43% of removal clients, 44% were never married or co-habited, and 38% had three or more children. Parity influenced perceived reasons and duration of use. Multiparous women least often sought LARC removals due to a desire to get pregnant (15.6%), whereas side effects were most frequently reported by nulliparous women (31.3%)

- Per LARCs removal guidelines, FP counseling and service provision are offered to all clients following successful removal. FP counseling and service provision (post-removal FP session) depicted a mixed pattern of service provision and outcome. Most were counseled and accepted a method (n=232), most often a short-acting method (n=186). A considerable number either discontinued (n=197) or were not counseled (n=188), most of whom (n=127) desired a pregnancy.

- Service providers overwhelmingly perceived that the additional LARCs removal columns in the normal removal addendum were useful and effortless to record. Perceptions of usefulness were associated with the documentation of the number and timing of removals, recognition of the reasons for removals, and insights to quality of services. A service provider remarked that "*It shows that if the health provider does proper counseling at the insertion […*and at*…] subsequent visits and proper management of side effects, method retention could be higher.*" The most significant challenge reported was ascertaining date of insertion.

- Four clients were referred for difficult removals. Tracking these clients to referral facilities to assess removal outcome was challenging.

Conclusions and Recommendations

The results from this assessment suggest that inclusion of additional columns in the national FP register to monitor LARCs removals is useful and does not add significantly to the service providers' workload. The assessment team recommends including four additional columns with a clear and concise description of the codes and recording instructions, noting that the current FP register includes a reason for client visit with the coding option of LARCs removal.

The additional columns proposed to be added to the register include:

1. Reason for seeking removal
2. Method removed, by LARCs type
3. Removal outcome: Not removed (counseled); removed (no difficulty, with difficulty, incomplete, significant difficulty)
4. Reasons for referral: Trained provider unavailable, equipment/consumables unavailable, Implant not palpable, IUD string not visible, incomplete removal, removal complicated (additional equipment/expertise required), client requested referral

However, **the assessment team recommends excluding the tracking of difficult and/or incomplete removals to ascertain difficult removal outcome.**

To strengthen the execution of these recommendations, the assessment team proposes that a broad array of stakeholders from the public sector and implementing partners at different levels (national and provincial) be actively engaged in technical discussions regarding the rationale, usefulness, and ease of including the additional columns to strengthen Mozambique's ambitious LARCs /FP programs, particularly the programmatic implications of including the suite of removal indicators for forecasting removal load and quality of care.

Finally, the assessment's findings support strengthening FP counseling and services during supportive supervision visits and advanced trainings on counseling techniques, including the balanced counseling approach, discerning reproductive intentions, knowledge of side effects, and awareness of common misperceptions to minimize early removals and promote LARC retention.

BACKGROUND

Long-Acting Reversible Contraceptives

A recent review of available national surveys showed that implant use is rapidly increasing and that this increase was equitably distributed in many sub-Saharan African countries across all socio-demographic categories.[1] Over the period under review (2003–2017), the implant contraceptive prevalence rate (CPR) rose substantially—from approximately 1.1% to over 7%.[1] PMA2020 data from countries such as Niger[2]—with an implant contraceptive rate of 16.7% though a relatively low modern contraceptive prevalence rate (mCPR) of 15.2%—serves as an example of implants' growing contribution to mCPR (PMA 2020 R4 2017). Therefore, if demand continues to grow, ensuring consistent and dependable access to insertion and removal services, including difficult removals, must be paramount. Also critical to a successful comprehensive implants program will be sustained long-term financial commitments in accordance with a rights-based RH framework[3] and universal health coverage.[4]

Christofield and Lacoste,[5] noted the rapid increase in implant uptake since 2012 reflecting client demand, donor investments and manufacturer price reductions. With the increase in implant insertions, a concern has emerged that the impending wave of needed implant removals may not be matched with either service delivery capacity or reliable implant removals data to support this effort. Specifically, the unparalleled increase in LARCs insertions will result in an equal growth in removals three to five years (Implanon® and Jadelle® respectively) post-insertions as ultimately all inserted implants must be removed by competently skilled providers at a nearby location. Unfortunately, while most countries carefully monitor LARCs uptake either in the DHIS2 or through other performance monitoring mechanisms, few routinely monitor removals. Even fewer track reasons for removal, discontinuation, and method switching,[6] thereby hindering a holistic overview of quality of care that would allow ministries and program managers to more effectively monitor FP performance.

Competently skilled service providers for normal and difficult removals are often not available. Many providers who complete competency-based training, encounter low client load at their designated facility,

resulting in limited or no practical experience to retain their removal skills level. This is even more pronounced for difficult removals. For example, PMA2020[7] data from the fifth round of data collection in Ethiopia conducted between March and April 2017 showed that 7.2% of current implant users have attempted but failed to have their implant removed. It is, therefore, imperative to note that inadequate removal services deny women the opportunity to exercise their RH right to voluntary contraceptive choice and fulfillment of their reproductive intentions irrespective of age, parity, or marital status.

Rationale

In response to the global recognition of the impending high demand for implant removal services and the need for reliable implant removal data, the Implants Access Program's Operations Group partnered with Jhpiego to support two technical consultations on implant removals. In late 2015, the group initiated the Implant Removal Task Force to bring together implementing partners and donors to identify existing best practices and call attention to research and programming gaps for future action.[5] A data subgroup, led by E2A, was proposed with the objective of improving data use and harmonizing routine data and survey data currently collected by various projects/initiatives to increase understanding of implant removals. Within the context of routine HMIS data collection, the data subgroup advocated for the collection, reporting, and analysis of these six relevant implant removal markers to track implant removal issues within national FP HMIS systems:

1. **Reason for client visit [intrauterine device (IUD) and implant removals included as options]**
2. **Reason for seeking removal**
3. **Time since insertion**
4. **Removal outcome (removed; not removed/counseled; not removed/referred for removal)**
5. **Reasons for referral (if removal outcome is "Not removed/referred for removal")**
6. **Client visit outcome (removal included as an option)**

E2A, as USAID's global flagship project for strengthening family planning and reproductive health service delivery, a member of the Implant Removal Task Force, and the lead of its data subgroup, decided to conduct a study to test and document the feasibility of including the above recommended six indicators in a country context.

Mozambique Overview

Mozambique is a low-income country located in southeast Africa. It is ranked 180 of 189 countries on the human development index (HDI), positioning the country in the low human development category.[8] Over the past 27 years (1990–2017), Mozambique's HDI value increased from 0.209 to 0.437—nearly 110%—with increases of 16.0 years for life expectancy at birth and 2.7 years for mean years of schooling. During this period, Mozambique experienced rapid population growth, increasing from 13.2 million (1990) to 28.86 million (2017), with most of the population (nearly 67%) living in rural areas.[9] The country has 11 provinces, and the two most populated are Nampula (21.2% of the total population) in the north, and Zambézia (17.7 of the total population) in the center region.[9]

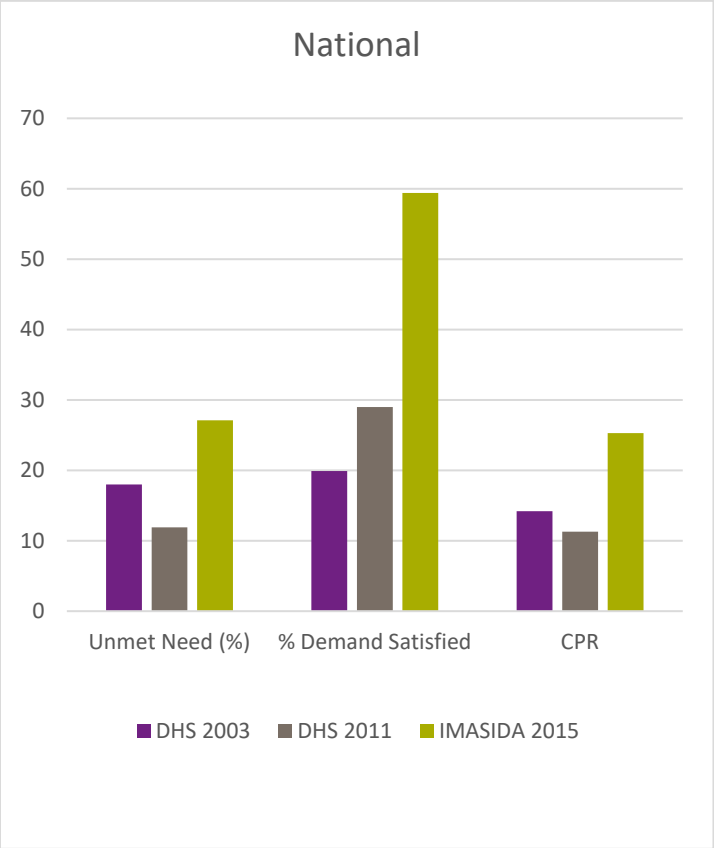
Figure 1: Map of Mozambique

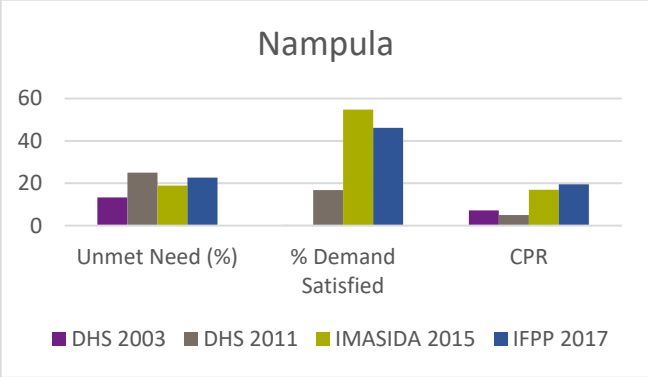
Family Planning in Mozambique

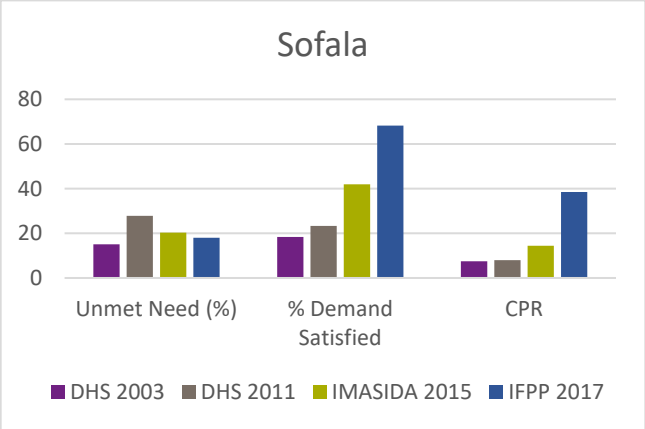
In the last 12 years, Mozambique has made significant advances in contraceptive uptake, with a mCPR rising from 14.2% in 2003[10] to 25.3% in 2015[11]. Total fertility rate has declined more slowly, from 5.5 (2003)[10] to 5.3 (2015)[11], albeit masking significant urban-rural differences.[a] During the same period, unmet need for family planning rose from 18.0% to 29.0%, signifying the need for strengthened family planning service delivery programs. The most recent demographic survey[11] reports a mCPR of 25.3%, with implants the third most frequently used method among all women of reproductive age, 15 to 49: 2% reported using implants, preceded by oral pills (6%), and injectables (13%). The remaining 4.3% comprised condoms, lactational amenorrhea, IUD and tubal ligation. A substantial difference in method mix among married and unmarried women is observed: nearly 70% of married women on a modern method use hormonal methods, while most unmarried women use condoms (50.3%).[11] It is important to note that this overall progress masks substantial regional variations in reproductive health indicators. For example, the 2015 IMASIDA survey reports CPR of 16.9% and 14.4% among women in union for Nampula and Sofala respectively.[11] (Figure 2)

[a] Urban-Rural: 4.4-6.1/2003[10] and 3.6–6.1/2015[11]

Figure 2: Trends in unmet need, percent demand satisfied and contraceptive prevalence rate, Mozambique overall and Nampula and Sofala provinces, 2003–2017







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- IFPP 2017: Integrated Family Planning Program (IFPP): Baseline Survey Report - Population-based survey to evaluate knowledge, attitudes and practices related to family planning in Nampula and Sofala Provinces, Mozambique. Pathfinder International, N'weti, Abt Associates, and Population Services International (PSI). August, 2017.

Mozambique's FP2020 Commitment

Mozambique made its FP2020 commitment at the London Summit on Family Planning in 2014, then updated its commitment at London Summit 2017—including specific financial, program, and service delivery pledges—to meet its family planning goals of increasing access to long-acting and permanent methods from 1% to 5% of women by 2015 and to increase CPR from 12% in 2008 to 26% in 2015 and 34% in 2020.[12]

Implant insertion only began in 2013 at static health facilities, though in 2014, the Ministry of Health (MoH) decided to include implant insertions and referrals for IUDs at Mozambique's outreach activities during National Health Weeks. By 2015, 1.7% of women ages 15 to 49 were using an implant,[13] reflecting the Government of Mozambique's commitment to the London FP summit, universal health coverage, and RH, further bolstered by the implant price reduction program.[14] Over the course of the previous six years, the annual number of LARC insertions rapidly increased from around 32,000 in 2013 to 324,000 in 2018, aggregating to a total of 1.6 million insertions in 2018 (See Table 1). Because of this fast growing number of implant users, high unmet need, and total demand for family planning, implant removal services will be a steadily growing need—a need to which the MoH must respond, including adding relevant implant removal indicators in Mozambique's national FP registers and HMIS, strengthening service providers technical capacity to remove devices, and increasing supplies and consumables for implant removals.

Table 1: Annual and cumulative LARC insertions among WRA in Sofala and Nampula provinces, and in Mozambique overall, January 2013–December 2018

Measure	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
						SOFALA
Annual # of insertions	1,128	7,614	16,509	25,104	55,237	75,268
Cumulative # of insertions	1,128	8,742	25,251	50,355	105,592	180,860
# of WRA	461,349	475,335	489,988	505,216	520,904	582,370
Ratio of cumulative insertions to WRA	0.002	0.019	0.053	0.104	0.212	0.325
						NAMPULA
Annual # of insertions	2,411	6,125	21,155	20,433	64,485	68,345
Cumulative # of insertions	2,411	8,536	29,691	50,124	114,609	182,954
# of WRA	1,152,390	1,184,371	1,216,195	1,248,146	1,280,520	1,599,661
Ratio of cumulative insertions to WRA	0.002	0.007	0.025	0.042	0.093	0.119
						MOZAMBIQUE
Annual # of insertions	32,327	64,451	100,233	118,225	288,547	324,072
Cumulative # of insertions	32,327	96,778	164,684	218,518	406,832	730,904
# of WRA	5,902,713	6,079,274	6,260,172	6,44,945	6,637,330	6,835,221
Ratio of cumulative insertions to WRA	0.0057	0.016	0.027	0.035	0.064	0.111

Note: Implanon NXT® was introduced nationally in 2017 (last quarter); Sofala and Nampula provinces training program was implemented in 2018 (first quarter).

Meeting Mozambicans Contraceptive Needs Through IFPP

The Integrated Family Planning project (IFPP) is a five-year cooperative agreement funded by USAID/Mozambique and implemented by Pathfinder International, N'weti, Abt Associates, and Population Services International (PSI). In project-supported districts, IFPP aims to increase the mCPR, generate new contraception users, and produce a more diverse and effective method mix.

The geographic coverage of IFPP includes two provinces (Nampula, with a population of 5.8 million, and Sofala, with a population of 2.3 million). The project is implemented in 36 districts (23 in Nampula and 13 in Sofala) and 402 health facilities (238 in Nampula and 164 in Sofala). The project's 2017 baseline survey[15] provided values for key reproductive health indicators, noting substantial differences between the two provinces. For example, in 2017 the mCPR was 19%, and 38.1% with implants contributing 2.1% and 9% in Nampula and Sofala, respectively (See Table 2).

Table 2: Contraceptive use, method mix, unmet need, and demand satisfied among women of reproductive age (WRA) in Nampula (n=802) and Sofala (n=512), IFPP baseline survey, August 2017*

Family Planning	Nampula %	Sofala %
mCPR	19.0	38.1
Method Type		
LAM**	0.9	2.3
Condom	0.7	4.4
Oral Contraceptives	3.9	5.1
Injectables	11.6	18.4
IUD	0.9	0.8
Implants	2.1	9.0
Tubal Ligation	0.2	0.1
Unmet Need for Family Planning	22.7	18.0
Demand Satisfied	47.4	67.7

*IFPP Baseline Survey Report - Population-based survey to evaluate knowledge, attitudes and practices related to family planning in Nampula and Sofala Provinces, Mozambique. Pathfinder International, N'weti, Abt Associates, and Population Services International (PSI). August, 2017
**LAM = Lactational Amenorrhea Method

Since IFPP's inception, in the 402 IFPP health-supported facilities, nearly 3,685 health providers (HPs) have been trained under the comprehensive RH/FP training package that includes LARCs insertion and removals, and management of IUD and implant complications. Until March 2019, 97% of all health facilities had at least one trained HP and 48% had all HPs trained in FP in the 402 health facilities supported by IFPP. In a two-year period (April 2017–March 2019), 266,995 implant insertions and 8,987 removals were documented, a magnitude of insertions that indicate a high and growing demand for removals three to five years downstream.

Though RH indicators in the IFPP provinces have improved significantly in the recent past, paying particular attention to the provision of quality FP/RH services, including implant insertion and removal services in the same locations, is important. Studies have documented that good quality FP/RH services improve not only a method's effectiveness, but also address clients' reproductive health rights and attracts people to use the

method.[16-17] Quality of care elements, including technically competent trained health workers and the provision of the appropriate constellation of counselling and services (including LARCs insertion and removal services and follow-up), in the same locality are key to satisfied clients and future continued use—the ultimate goal of IFPP.

This goal is shared by E2A, who intends for its study's findings to build the knowledge base in Mozambique and globally regarding the feasibility of including these removal indicators in national FP registers and HMIS to monitor and improve the quality of family planning services.

METHODOLOGY

Overview

This feasibility study sought to determine whether the inclusion of six recommended implant removal indicators (identified above) in the national FP registers would be useful in monitoring implant removal performance. The study team identified the following priority areas of inquiry: duration of use, reasons for removals, and post-removal FP status. In addition, the team was interested in ascertaining the additional record-keeping time that would be required with the inclusion of additional indicators as well as the perceived benefits and challenges.

Study Design

This study used quantitative data-collection methods in the form of data extraction from the HMIS FP addendum register. In addition, qualitative data were collected from the on-call service providers regarding the inclusion of the removal indicator suite and additional record keeping time. This feedback was solicited during monthly supportive supervision visits. The study was conducted in two provinces of Mozambique, Nampula and Sofala, where IFPP maintains fully operational FP programs. These provinces were selected based on feasibility and convenience, enabling day-to-day project oversight.

Sampling

The Nampula and Sofala health care delivery systems (central and district hospitals and HCs) constituted the primary sampling frames for each province. As shown in Table 3, there are 238 and 164 health facilities in Nampula and Sofala, respectively. IFPP works in all 402 health facilities.

Table 3: Health care facilities comprising the primary sampling frame, Nampula and Sofala

Facility Type	Nampula	Sofala
Referral Hospitals	1	1
Central Hospitals	1	1
District Hospitals	7	5
Health Centers*	229	157
TOTAL	238	164

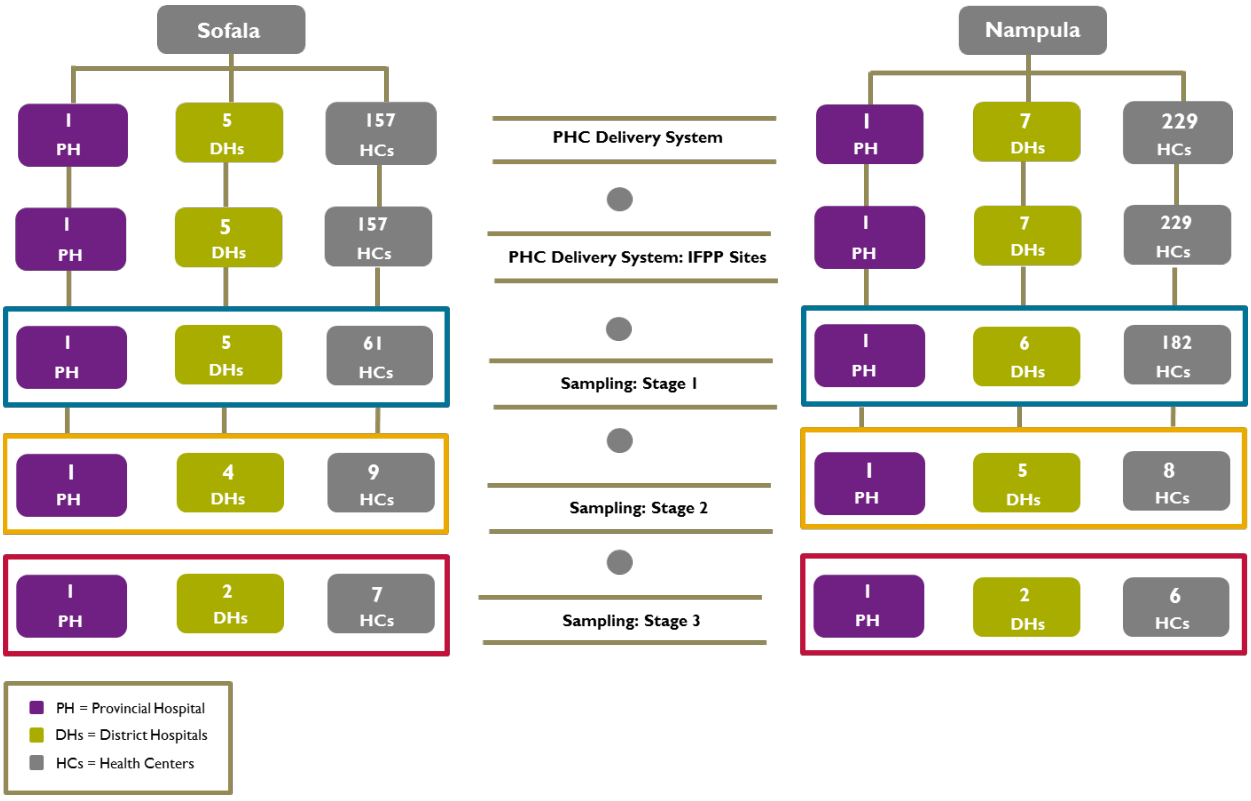
*Health Centers Type 1 and 2 and health posts

E2A applied a purposive, multi-stage sampling strategy to select the district and HCs in each province. In the first stage, the assessment team reviewed DHIS2 data and extracted the number of removal clients for HCs (Type 1 and 2), district hospitals, and the central hospital for a 15-month period (January 2017–March 2018) from the 402 health facilities. The team selected district hospitals reporting removals (5 in Sofala and 6 in Nampula); and aligned each district hospital with its respective HCs (61 in Sofala; 182 in Nampula) located within the district hospitals catchment area (See Sampling: Stage 1—Figure 3).

In the second stage of sampling, HCs that reported five or more removals in one or more months were selected, reducing the total number of HCs and districts per province (See Sampling: Stage 2—Figure 3).

In the third and final stage of sampling, the assessment team selected two HCs per district that reported the highest number of removals in any month. The total number of study health facilities selected was 17 (9 in Sofala and 8 in Nampula). Provincial MoH stakeholders also recommended including provincial capital HCs, adding two more, which yielded a final sample of 19 facilities (10 in Sofala and 9 in Nampula) (See Figure 3).

Figure 3: Flow chart illustrating the total number of hospitals (provincial and district) and health centers in the primary health care delivery systems of Nampula and Sofala (first row), cascading to the sampled hospitals (provincial and district) and health centers (fifth row)



Study Tools: Family Planning Addendum Registers and Supportive Supervision Checklist

Mozambique's FP registers specifically document the modern method accepted; disaggregated by method type, [b] noting Implanon NXT® and Jadelle® for implants; and Cu-T IUDs. The registers also document the date of service provided, FP continuers, FP discontinuers, and method removed. It is important to note that IUDs were included in the assessment at the request of country stakeholders. They reasoned that IUDs are an integral component of Mozambique's LARCs programming and thus a holistic assessment of removals would naturally include IUDs. The FP card (client record) includes the date of LARC insertion and removal status. Daily summary and monthly FP/RH client visits data are collated at the health facility level. Each health facility transmits the paper copies of its monthly summary to the district HMIS cell located at the district health directorate, where it is entered in the MoH DHIS2 format and subsequently transmitted electronically to the provincial HMIS cell located within provincial health directorates.

The FP register addendum (normal removals) introduced by the study included the recommended six implants removal indicators, herein referred to as "*LARCs removal indicator suite*" reflecting inclusion of IUDs (**See Box 1**). These include:

1. Reason for client visit
2. Reasons for seeking removal
3. Time since insertion
4. Removal outcome
5. Reasons for referral
6. Client visit outcome

A second FP register addendum for difficult removals was also introduced as part of the study. This "LARCs difficult removal indicator suite" addendum included: reason for referral, date of removal, removal outcome and FP user status post-visit. Age, parity, and marital status at current visit were included in both FP register addendums. The FP register addendum (normal removals) was used in the 19 selected health facilities, while the FP register addendum (difficult removals) was employed only at the district (n=6) and central (n=2) hospitals. [See Appendix A.I–Family Planning Register Addendum (Normal Removals); and Appendix A.II—Family Planning Register Addendum (Difficult Removals)].

For the qualitative component, the supportive supervision checklist included questions for providers on perceived benefits and challenges encountered in completing the FP register addendums and time taken in recording the six normal removal indicator suite (See Appendix A.III—Supportive Supervision Checklist).

[b] Method type: each method has a separate column in the FP register, daily and monthly summary report forms

Box 1: LARCs Removal Indicator Suite

The following six indicators, advocated by the data subgroup of the Implant Removal Task Force, were included in the national family planning register addendums for normal removals.

Reason for client visit: LARCs removal was an option for clients seeking family planning/reproductive health services.

Reasons for seeking removal: several categories—such as expired, method change, opted to get pregnant, vaginal bleeding, vaginal discharge, arm pain, backache, headache, family opposition, infrequent sex, reduces sexual pleasure, interferes with body natural processes—were listed; specific multiple responses instructions were also included.

Time since insertion: date of insertion and date of successful removal were two separate columns.

Removal outcome: included several options such as not removed, not removed but referred and removed. The latter category included a series of removal options (no difficulty, incomplete, with difficulty, and with significant difficulty) to capture the range of potential outcomes during the removal process.

Reasons for referral: several categories were listed, such as trained provider unavailable, no equipment/consumables availability, implant unpalpable, IUD string not visible, incomplete removal, complicated removal, and client requested referral. Specific multiple responses instructions were also included.

Client visit outcome: reflected the outcome of the client's visit – Not Removed/Removed, including FP user status post removals:

- Not Removed: options included not removed or referred for difficult removals
- Removed: disaggregated by the client's FP user status post-removals:
  - Removed - Non-FP User: options included not counseled, counseled only, counseled and referred, and refused
  - Removed – FP User: options included LARCs, Short-Acting Methods and Tubal Ligation

Training and Pretesting of Tools

The field study team (one senior and three junior staff) from IFPP's provincial offices in Nampula and Sofala, respectively, participated in a two-day training workshop conducted by E2A and Pathfinder/Mozambique (See Appendix B: Field Study Teams). The training sought to achieve the following objectives:

- Develop a shared understanding of the study objectives, including main elements of interest
- Gain familiarity with the data collection instruments, relating instruments to study objectives and revising draft instruments as needed
- Review study processes, including the utilization of study instruments in the field
- Develop a shared understanding of the ethical and confidentiality issues involved in conducting the study
- Develop a shared understanding of the study teams' roles and responsibilities
- Prepare to pilot-test the data collection tools
- Share information and learn from each other about how best to conduct the study

The FP addendum and supportive supervision checklist were pre-tested on day two to determine clarity, flow, and cultural appropriateness of the questions. The pre-test was conducted at two health facilities (peri-urban and urban) in Maputo. During pre-testing, the FP addendum and supportive supervision checklist were employed at the health facilities over a three-hour window. Each field study team had the opportunity to review the completed FP addendum for normal removals and administer the supportive supervision checklist at the end of the three-hour pretesting window. Based on the observations during the pre-test, the assessment team revised and reworded the FP addendum as needed. The finalized FP addendum and supportive supervision checklist were subsequently reviewed and translated into Portuguese.

Photo credit: Pathfinder Mozambique

Service providers and technical staff participate in a stepped-down training

Each field study team then conducted a one-day stepped-down training at IFPP's provincial offices. Service providers (n=47) from the sampled health facilities and 12 technical staff from the provincial MoH participated (See Appendix C–Stepped-Down Training Participants). The training included small group exercises on the FP addendum registers (for normal and difficult removals). The training was followed by a two-week field trial run November 12–20, 2018, to resolve any issues with data recording and improve data quality.

Issues identified during this two-week period were discussed and resolved by the respective field study team member during scheduled supervision visits over this two-week period.

Data Collection

Following the trial run and coinciding with the HMIS recording month, data collection from the FP register addendums for normal and difficult removals commenced. The study aligned its data collection to correspond to the MoH monthly reporting period; with the first month corresponding to the period November 21–December 20, and so on. Data collection lasted six months: November 21, 2018–May 20, 2019, herein referred to as December 2018–May 2019 (See Table 4).

Routinely each month, after the close of the HMIS reporting period, junior study team member(s) visited each facility to review the previous month's FP addendums for normal and difficult removals with the on-call service provider as appropriate. These meetings were an opportunity to scan the respective FP register addendum pages and clarify any data quality issues. The IFPP senior study team member conducted the supportive supervision checklist interview with the on-call service provider. After obtaining informed consent from the on-call service provider, the senior study team member administered the supervision checklist. Each interview lasted between 5–10 minutes and was conducted in Portuguese.

Relevant data (age, parity, marital status, LARCs normal and difficult removal suite of indicators) described earlier were extracted from these scanned pages and transferred to Excel spreadsheets to ensure standardized data extraction and data entry across all study health facilities.

The study team encountered data collection challenges. One challenge was the inability to reach one facility (Grujda health facility, Caia district) during the six-month period, as it remained inaccessible due to heavy rains and related logistic issues. This reduced the study's sample to 18 health facilities. Another challenge was the consistency in client loads. Seven health facilities reported LARCs removal clients every month, whereas the other eleven facilities did not. In addition, Hurricane Idai severely interrupted data collection in six Sofala study sites for over three weeks (March 15–April 10, 2019). Even so, a total of 795 (Nampula=336; Sofala=459) removal clients were documented in the FP register addendum at 18 health facilities over the six-month data collection period. In relation to qualitative data collection challenges, the senior study team member was scheduled to conduct monthly supervision visits over the six-month study period at the 18 health facilities (n=108 supervisory visits). However, this was not always possible due to logistics and other related accessibility challenges. A total of 64 supervisory visits (Nampula =33; Sofala =31) were conducted over the six-month study period.

Table 4: Number of LARC removal client visits per month, Nampula and Sofala; December 2018–May 2019

LARCs Removal Clients	LARC Removal Client Visits						
	December	January	February	March	April	May	Total
Health Facility Category							
Central Hospitals (n=2)	12	13	8	8	3	17	61
District Hospitals (n=4)	20	28	30	12	27	32	149
Urban Health Centers (n=4)	91	74	118	61	47	83	474
Rural Health Centers (n=8)	23	15	23	14	16	20	111
TOTAL (n=18)	**146**	**130**	**179**	**95**	**93**	**152**	**795**
LARCs Method*							
Jadelle	111	101	133	62	65	121	593
Implanon NXT	2	3	5	4	5	2	21
Cu-T IUD	9	8	16	7	13	14	67
Not Removed	24	18	24	21	10	15	112
TOTAL	**146**	**130**	**178**	**94**	**93**	**152**	**793**

*Missing information: 2

Data Quality Assurance

The study team adopted several quality assurance measures to ensure that data were of the highest quality. These included:

- Training on the study objectives
- Reviewing and clarifying data entry issues with the on-call service provider
- Conducting supportive supervision using the checklist and probing as appropriate
- Scanning the relevant pages of the FP registers and study addendums
- Transferring select data from the scanned pages to the Excel spreadsheet, and coding.

Senior IFPP researchers conduct supportive supervision visits | Photo credit: Pathfinder Mozambique

All supportive supervision was conducted in Portuguese, translated, and reviewed by the senior IFPP researchers. Senior IFPP researchers reviewed and verified data entered in the Excel spreadsheet. The supportive supervision checklists and data in the Excel spreadsheet were subsequently submitted to E2A for a second round of quality assurance review.

Data Management and Analysis

The Nampula and Sofala senior field study team member reviewed the Excel data sets for Nampula and Sofala. The clean data set was transferred to SPSS (IBM SPSS Statistics 25) for analysis. Frequency tables were generated for each province with the aggregated six-month distribution of number of removals, duration between insertion and removal, reasons for removal, removal outcome, referrals, and post-removal FP user status. Bivariate statistical analysis was conducted to assess the relationship of age and parity to number of removals, removal reason, and FP user status. The supportive supervision checklist information was reviewed to determine the time taken to record the removal indicator suite and thematically analyzed to assess perceived benefits and challenges encountered during record keeping.

Duration of use was calculated as the time interval (in months) between date of insertion and date of removal recorded as dd/mm/yyyy. If day or month was not recorded for date of insertion, the study team imputed "15" for day (n=15) and "6" for month (n=5); and "missing" if year was not recorded, resulting in 19 missing records. Data from the duration of use indicator was subsequently classified in six broad categories dependent on effectiveness period for Implanon NXT (3 years), Jadelle (5 years), and IUD (10 - 12 years); and subsequently collated as shown below.

Implanon NXT

1. Very early:<3 months
2. Early: 3 – 5 months
3. Early mid-schedule: 6 – 18 months
4. Mid-schedule: 18 – 35 months
5. On schedule: 36 months
6. Delayed: >36 months

Jadelle

1. Very early: <6 months
2. Early: 6 – 11 months
3. Early mid-schedule: 12 – 23 months
4. Mid-schedule: 24 – 47 months
5. On schedule: 48 – 60 months
6. Delayed: >60 months

Cu-T IUD

1. Very early: <12 months
2. Early: 1 - < two years
3. Early mid-schedule: 2 - <4 years
4. Mid-schedule: 4 – 9 years
5. On schedule: 10 - 12 years

Reasons for removal were reviewed and recoded under the following categories, noting that clients sometimes offered more than one reason for seeking LARC removals:

- **Side effects:** vaginal bleeding, headache, vaginal discharge, interferes with body natural process
- **Misconceptions:** arm discomfort, back pain
- **Social norms:** husband/in-laws opposition, mother's opposition
- **Desire to be pregnant**
- **On-schedule**; expired
- **Method failure**
- **Switch method**
- **Other**

Ethical Considerations

E2A obtained ethical approval from the appropriate ethics review boards in the United States and Mozambique. In Mozambique, the protocol was submitted to the Bioethics Committee of the Ministry of Health, Mozambique IRB #00002657, registration number 88/CNBS/2018. In the United States, it was submitted to PATH. After obtaining approval, training and data collection commenced. The study included no invasive or medical procedures of any kind. During the training of fieldworkers, emphasis was placed on the importance of obtaining informed consent and avoiding coercion of any kind. Training also emphasized ensuring complete confidentiality of service providers. The IFPP research staff administering the supportive supervision checklist also managed the informed consent process. Before starting the supportive supervision checklist, the service provider was assured of confidentiality that participation in the study was completely voluntary, and that there was no penalty for refusing to participate. The participants were given opportunities to ask questions before completing the informed consent process.

Study Limitations

There are three main study limitations related to the study design, methods, and approach used in this study.

- During data collection, accessibility to one health facility in Sofala province was markedly curtailed due to heavy rains that severely damaged the main roads leading to the health facility. In the remaining 18 study sites, data collection continued, though the downstream effect of Hurricane Idai adversely affected data collection in six Sofala study sites for a bit

over three weeks (March 15 to April 10, 2019). Nonetheless, despite these data collection challenges, the total number of LARCs removals documented over the six months period was 795, a reasonable number to assess the usefulness of including the six additional LARCs removal columns in the national FP registers and HMIS/DHIS2.

- Over the six-month study duration, four difficult removals referred to a district or center hospital were documented in the FP register Addendum (Normal Removals). Despite careful follow-up by the study team, it was not possible to track the difficult removal clients to the referral health facilities, due to the inability of tracking the medical record number and/or referral form. The study team, therefore, believe that the substantial effort needed to track difficult removal referrals routinely will not yield useful information. In addition, the total number of difficult removals requiring referrals as documented in the FP Register Addendum (Normal Removals) over a six months period is negligible (under 1%).

- Reasons for seeking removals may have resulted in over- or under-estimation of specific reasons. For example, nearly 30% of clients reported "on-schedule/expired" for seeking removals, whereas duration of use documented 17.1% on-schedule/delayed (n=113; on-schedule=68; delayed=45) removal clients. The study team recommends probing to offset either provider or client bias in eliciting and documenting reasons for seeking removals.

Despite these limitations, the study team believes this assessment yielded adequate information to answer all pertinent feasibility study questions.

FINDINGS

This study introduced six LARC removal indicators to the national FP registers and assessed service providers' perceptions of the benefits and challenges in recording the additional removal suite of indicators. The study's findings are presented below.

This section is divided into five subsections:

1. Overview of the RH client load, FP client load, and method uptake over the six-month study period
2. Reason for client visit, reason for seeking removal, removal outcome, reasons for referral, and duration of use
3. Examination of the demographic characteristics of the LARCs removal clientele
4. Description of FP services offered and FP uptake
5. Review of service providers' perceptions regarding the feasibility of including the LARCs removal indicator suite

Overview RH and FP Client Load

Table 5 provides a summary of the RH client load at the central hospital (n=2), district hospitals (n= 4); urban (n = 4), and rural (n = 8) HCs. The client load data, extracted from the HMIS Integration Registration Form, registers FP clients attending FP integration clinics[c] as well as FP units, providing a comprehensive overview of RH and FP client load per facility.

Table 5 shows the following:

- Over the course of the six-month study period, a total of 63,444 RH consultations were recorded, with relatively fewer, in absolute numbers, recorded for Nampula (44%) as compared to Sofala (56%).

- During the same period, there were 71,027 FP consultations for initiating (new acceptors) or continuing (repeat acceptors) a contraceptive method. FP client load was comparable to the RH client load (44% for Nampula and 56% for Sofala), though the number of FP consultations was higher, reflecting the total number of FP clients attending services at FP integration clinics[d] plus FP units

- Nearly 60% of FP clients were new acceptors, either accepting a method for the first time or switching to another method. The preferred FP method was injectables (48%), followed by oral contraceptive (33%) and implants (16%). Nampula clients largely favored injectables (64%) and less so implants (10%), whereas Sofala FP clients' method preference varied a bit (37% favored injectables, and 20% favored implants).

The catchment population of WRA, as expected, is higher for urban (n=60,204) as compared to rural (n=49,729) HCs. In absolute numbers, urban HCs had a higher client load for RH and FP consultations when compared with rural HCs. The proportion of RH/FP and FP clients seeking services to WRA catchment population at urban HCs (SFH/FP=57.5%; FP=55.7%) is higher as compared to rural HCs (SFH/FP=35.3%; FP=38.1%). RH/FP visits at urban HCs were more frequently reported in Nampula (59%) as compared to Sofala (51%), though such provincial level differentials were not noted for hospital RH/FP consultations. (See Appendix D: Catchment Population)

- Overall, nearly 71% of new acceptors sought RH/FP services at HCs, with more in urban (n=16,043) than rural (n=13,840) HCs. However, the proportion of FP new acceptors to WRA catchment population is similar across urban and rural HCs (26.6% urban and 27.8% rural HCs) (See Appendix D: Catchment Population).

[c] FP integration clinics: immunization, HIV clinics, and antenatal care clinics (counseling)

Table 5: Percent distribution of reproductive health and family planning client visits, Nampula and Sofala; December 2018–May 2019

RH and FP Client Visits	Nampula		Sofala		TOTAL	
	n	**%**	**n**	**%**	**N**	**%**
RH/FP Visits						
Central Hospital	647	2.0	1046	3.0	1,693	3.0
District Hospitals	4,270	15.0	5271	15.0	9,541	15.0
Urban Health Centers	16,576	59.0	18069	51.0	34,645	55.0
Rural Health Centers	6,636	24.0	10929	31.0	17,565	28.0
FP Clients*						
Central Hospital	1,475	5.0	955	2.0	2,430	3.0
District Hospitals	5,778	18.0	10,358	26.0	16,136	23.0
Urban Health Centers	16,095	51.0	17,412	44.0	33,507	47.0
Rural Health Centers	7,949	25.0	11,005	28.0	18,954	27.0
FP New Acceptors**						
Central Hospital	757	5.0	675	3.0	1,432	3.0
District Hospital	3,604	22.0	7,279	28.0	10,883	26.0
Urban Health Centers	6,218	38.0	9,825	38.0	16,043	38.0
Rural Health Centers	5,770	35.0	8,070	31.0	13,840	33.0
Method Type						
Oral Contraceptives	3771	23.0	10,060	39.0	13,831	33.0
Injectables	10,502	64.0	9,572	37.0	20,074	48.0
IUD	504	3.0	1,074	4.0	1,578	4.0
Implants	1,554	10.0	5,144	20.0	6,698	16.0
Tubal Ligation	11	0.1	1	0.0	12	0.0

*Total FP Clients: New and repeat acceptors

**FP new acceptors (includes switchers)

LARCs Removal Clients

This section describes findings related to the removal suite of indicators among all clients seeking removals (n=795) and assesses the duration of use and LARCs method removed among the 679 clients with successful removals. (see Table 6)

- 795 clients accessed the 18 study HFs during the six-month period with the primary purpose of seeking LARCs removal (336 in Nampula, and 459 in Sofala).

- Health providers, including obstetricians, are trained to offer FP services including removals, and are deployed at central and district hospitals and HCs. The most frequently accessed health facilities in both provinces were urban HCs (59.6%), followed by district hospitals (18.7%) and rural HCs (14.2%). Central hospitals of both provinces serve as referral sites, catering to fewer RH/FP clients, including removal clients (7.7%).

- The three most frequent perceived reasons for seeking removals were on-schedule/expired (29.5%), followed by side effects[d] (25.8%) and desire to be pregnant (22.9%). Small, non-statistically significant differences were noted between the provinces: in Nampula, side-effects (29.4%) was the most frequently reported reason, followed by on-schedule/expired date (28.2%) and desire to be pregnant (17.8%). In Sofala, on-schedule/expired date (30.5%) was the most frequent, followed by desire to be pregnant (26.7%) and side-effects (23.1%). Misconceptions (5.6%) and social norms (3.2%) also influenced the decision to seek removals. Misconceptions were more frequently cited by Nampula LARC removal clients (9.8%, n=32) as compared to Sofala clients (n=11, 2.5%).

- As per LARCs removal guidelines, clients seeking removals are counseled initially with respect to removal reasons (referred to in this report as "initial targeted counseling session"), and subsequently after successful removals (referred to in this report as "post-removal FP session"). It is interesting to note that among the 177 clients seeking removals to get pregnant, 7 women removed and switched to a short-acting method and 11 changed their minds and decided not to remove following the initial targeted counseling session.

- Among the 795 women seeking LARC removals, 112 women (14.1%) opted not to remove following the initial targeted counseling session and 664 (83.5%) were successfully removed with no difficulty. Among the remainder (n=19), removals were either difficult though successfully removed at the same facility (n=10), incomplete (n=5) or referred (n=4). There were no cases recorded of significantly difficult removals in the FP register addendum (Normal Removals). LARCs removals were most often implants (Jadelle,® n=591, Implanon NXT,® n=21).[e] Significantly fewer were IUD removals (n=67), mirroring LARCs uptake distribution.

- Four clients (IUD=3; Implants=1) were referred for difficult removals. Reasons for referral included IUD string not visible, equipment/consumables unavailable, and removal too complicated/implant not palpable. The FP register addendum (Difficult Removals) employed at district and central hospitals to track referrals and successful removal did not record any difficult removals, including referrals from urban and rural HCs.

- The study team calculated duration of use among the 661 women who had LARCs removed at the 18 study health facilities. As previously mentioned, the data were classified into six broad categories dependent on effectiveness period for Jadelle (n=576); Implanon NXT (n=19) and IUD (n=66). Overall, the duration of use pattern was skewed to removals within the first two years (n=363; 54.9%) with fewer on-schedule removals (n=68; 10.3%). Among Jadelle users, there was nearly equal proportion of clients at one-year interval (n=145; 25.2%) as compared to the second-

[d] Side effects: vaginal bleeding, headache, vaginal discharge, interferes with body natural process

[e] Implanon NXT insertion commenced in 2018 (first quarter)

year interval (12–23 months; n=168; 29.2%). On the other hand, many more Jadelle clients sought removals within the first six months post-insertion (n=82; 14.2%), as compared to the second six-month interval (n=63; 10.9%). There were fewer IUD removal clients at 12–23 months (n=15; 22.7%) as compared to first year post-insertion (n=21; 31.8%). It is important to note that 6.8% of all removals were categorized as delayed—more frequently for Jadelle (n=44) than Implanon NXT (n=1). A larger number of very early removals was reported from Nampula (n=62; 21.2%) as compared to Sofala (n=47; 12.8%) study health facilities. It is important to note that 6.8% of all removals were categorized as delayed—nearly all were Jadelle (Nampula: n=22; Sofala: n=22). (see Table 7)

Table 6: Percent distribution of clients seeking LARCs removals (n=795) and LARCs successfully removed (n=679), Nampula and Sofala; December 2018–May 2019

LARCs Removal Clients	Nampula		Sofala		TOTAL	
	N	**%**	**n**	**%**	**N**	**%**
Facility Category (n=795)						
Central Hospital	32	9.5	29	6.3	61	7.7
District Hospital	35	10.4	114	24.8	149	18.7
Urban Health Center	227	67.6	247	53.8	474	59.6
Rural Health Center	42	12.5	69	15.0	111	14.2
Reasons for Removal*						
On-schedule/expired	92	28.2	136	30.5	228	29.5
Side-effects**	96	29.4	103	23.1	199	25.8
Desire to be pregnant	58	17.8	119	26.7	177	22.9
Switch method	29	8.9	32	7.2	61	7.9
Misconceptions***	32	9.8	11	2.5	43	5.6
Social Norms****	6	1.8	19	4.3	23	3.2
Method failure	5	1.5	8	1.8	13	1.7
Others	8	2.5	18	4.0	26	3.4
Removal Outcome (n=795)						
Not removed	38	11.3	74	16.1	112	14.1
Removed: no difficulty	294	87.5	370	80.6	664	83.5
Removed: with difficulty	4	1.2	6	1.3	10	1.3
Removed: incomplete	0	0.0	5	1.1	5	0.6
Removed: significant difficulty	0	0.0	0	0.0	0	0.0
Not removed: referred	0	0.0	4	0.9	4	0.5
Successful Removals (n=679)						
Method Removed (n=681)						
Implants: Jadelle® and Implanon NXT®)	261	87.5	353	92.1	614	90.4
IUDs	37	12.4	30	7.8	67	9.8
Duration of Use, Months (n=661)						
Very Early	62	21.2	47	12.8	109	16.5
Early	36	12.3	47	12.8	83	12.5
Early mid-schedule	77	26.3	114	31.0	191	28.9
Mid-Schedule	65	22.2	100	27.2	165	25.0
On schedule	31	10.6	37	10.1	68	10.3
Delayed	22	7.5	23	6.3	45	6.8

*Multiple responses possible **Side-effects: Vaginal bleeding, vaginal discharge, headache, interferes with body natural process
***Misconceptions: Arm discomfort/pain, back pain ****Social Norms: Husband/in-law opposition, mother opposition
Missing information: Nampula: Duration of Use=4; Sofala: Method outcome= 2. Duration of Use =21

Table 7: Percent distribution of Implanon NXT, Jadelle and Cu-T IUD removal clients (n=661) and duration of use, Nampula and Sofala; December 2018–May 2019

Duration of Use, Months	Nampula		Sofala		TOTAL	
	N	**%**	**n**	**%**	**N**	**%**
Implanon NXT (n=19)						
Very Early	4	44.4	2	20.0	6	31.6
Early	3	33.3	2	20.0	5	26.3
Early mid-schedule	1	11.1	2	20.0	3	15.8
Mid-Schedule	1	11.1	3	30.0	4	21.1
On schedule	0	0.0	0	0.0	0	0.0
Delayed	0	0.0	1	10.0	1	5.3
Jadelle (n= 576)						
Very Early	42	17.0	40	12.2	82	14.2
Early	27	10.9	36	10.9	63	10.9
Early mid-schedule	68	27.5	100	30.4	168	29.2
Mid-Schedule	59	23.9	94	28.6	153	26.6
On schedule	29	11.7	37	11.2	66	11.5
Delayed	22	8.9	22	6.7	44	7.6
Cu-T IUD (n=66)						
Very Early	16	43.2	5	17.2	21	31.8
Early	6	16.2	9	31.0	15	22.7
Early mid-schedule	8	21.6	12	41.4	20	30.3
Mid-Schedule	5	13.5	3	10.3	8	12.1
On schedule	2	5.4	0	0.0	2	3.0

Demographic Characteristics

This section describes the demographic (age, parity, and marital status) characteristics of all clients seeking removals, as well as among the 112 subset of clients who opted not to remove.

Table 8 shows the following:

- Over the study period, a total of 795 clients (Nampula n=336; Sofala n=459) sought services at any of the 18 study sites with the intention of removing implants or IUDs.

- 42.6% of the 791 removal clients were younger than 25 years of age, with minimal age differences between Nampula (41.5%) and Sofala (43.6%).

- Overall 43.9% were married, and 43.8% were never married or co-habiting. However, there were statistically significant provincial level marital status differentials: Nampula – 26.3% married and 59.1% never married or co-habiting; Sofala 56.9% married and 32.6% never married or co-habiting (p-value ≤0.000).

- Regarding parity, half of the clients who sought removals had one to two children – nearly 58% in Sofala and 43% in Nampula. Overall, 11.2% were nulliparous; with non-statistically significant provincial level parity differences (Nampula:17.8 %; and Sofala: 6.8 %.

Table 8: Percent Distribution of demographic characteristics of the 795 removal clients, Nampula and Sofala; December 2018–May 2019

Removal Clients	Nampula		Sofala		TOTAL	
	n	**%**	**n**	**%**	**N**	**%**
Age in Years (n=791)						
≤19	46	13.7	52	11.4	98	12.4
20 – 24	93	27.8	147	32.2	240	30.2
25 – 29	94	28.1	121	26.5	215	27.2
30 – 34	51	15.2	71	15.6	122	15.4
≥35	51	15.2	65	14.3	116	14.7
Marital Status (n=792)						
Married	88	26.3	260	56.9	348	43.9
Living in union	40	11.9	36	7.9	76	9.6
Divorced/separated/widowed	9	2.7	12	2.6	21	2.6
Never married or co-habiting	198	59.1	149	32.6	347	43.8
Parity (n=794)						
Nulliparous	58	17.8	31	6.8	89	11.2
1 – 2	143	42.6	264	57.6	407	51.3
3+	135	40.2	163	35.6	298	37.5

Missing information:
Nampula: Age = 1; Marital Status = 1
Sofala: Age = 3; Marital Status = 2, Parity = 1

Table 9 describes the demographic characteristics of the sub-set of women who retained LARCs post-targeted initial counseling.

- 112 (14.1%) of all of the clients (n=795) who sought LARC removal changed their mind after initial targeted counseling by the health provider.

- More than half (55.4%) were under 25 years of age with non-statistically significant provincial level differentials in age pattern (Nampula: 41.2%; and Sofala 62.1%)

- Overall, most of women were married (47.3%); slightly fewer were never married or co-habiting (41.1%). However, this masked striking statistically significant provincial-level differential: 21.1% were married in Nampula, while significantly more were never married or co-habiting (55.3%); whereas in Sofala 60.8% were married, and 33.8% were never married or co-habiting (p-value ≤ 0.000).

- Regarding parity, nearly 60% of women had one or two children, with statistically significant provincial level parity differentials noted (Nampula: 42.1%; and Sofala 64.9%; p-value ≤ 0.01).

Table 9: Percent distribution of demographic characteristics of the 112 women who retained implant or IUD after initial targeted counseling for perceived side-effects, Nampula and Sofala; December 2018–May 2019

Demographic Characteristics	Nampula		Sofala		TOTAL	
	n	**%**	**n**	**%**	**n**	**%**
Age (n=112)						
≤19	8	21.1	18	24.3	26	23.3
20 – 24	8	21.1	28	37.8	36	32.1
25 – 29	8	21.1	15	20.3	23	20.5
30-34	8	21.1	6	8.1	14	12.5
≥35	6	15.8	7	9.5	13	11.6
Marital Status (n=112)						
Married	8	21.1	45	60.8	53	47.3
Living in union	8	21.1	2	2.7	10	8.9
Divorced/separated/widowed	1	2.6	2	2.7	3	2.7
Never married or co-habiting	21	55.3	25	33.8	46	41.1
Parity (n=112)						
Nulliparous	8	21.1	4	5.4	12	10.7
1 – 2	16	42.1	48	64.9	64	57.1
3+	14	36.8	22	29.7	36	32.1

The relationships between parity and perceived removal reasons, duration of use, and marital status are displayed in Table 10 and indicate the following:

- As reported earlier, the top three reasons for seeking removals were on-schedule/expired, side-effects, and desire to be pregnant. The study team noted that parity influenced perceived reason for seeking removal. Multiparous women least often sought LARCs removals for a desire to get pregnant (15.6%) as compared to nulliparous women (26.5%) or women with one or two children (27.6%). On the other hand, side effects were most frequently reported by nulliparous women (31.3%), whereas on-schedule/expired was most frequently mentioned by multiparous women (35.5%).

- Regarding duration of use, statistically significant differentials are noted for parity: 39.7% of nulliparous women sought removals very early or early, followed by women with one to two children (31.4%), and multiparous women (23.1%), indicating the importance of differential counseling targeting client needs with healthy timing and spacing of pregnancy (p-value ≤0.002).

- Marital status was related to parity though parity differentials were not statistically significant. Nulliparous women (75.8%) were more often never married as compared to women with one or two children (44.6%) or multiparous women (32.4%).

Table 10: Percent distribution of removal reasons, duration of use and marital status by parity, Nampula and Sofala; December 2018–May 2019

Variables	Nulliparous		Parity 1 -2		Parity 3+	
	n	**%**	**n**	**%**	**n**	**%**
Removal Reasons (n=771)						
On-schedule/expired	21	25.3	104	26.1	102	35.5
Side effects	26	31.3	100	25.1	73	25.3
Misconceptions	5	6.0	18	4.5	20	6.9
Social norms	3	3.6	14	3.5	8	2.8
Desire to be pregnant	22	26.5	110	27.6	45	15.6
Method failure	0	0.0	8	2.0	5	1.7
Switch method	4	4.8	28	7.0	29	10.0
Others	2	2.4	17	4.3	7	2.4
Duration of Use in Months (n=660)						
Very early	24	32.9	60	18.1	25	9.8
Early	5	6.8	44	13.3	34	13.3
Early mid-schedule	22	30.1	98	29.5	73	28.6
Mid-schedule	14	19.2	82	24.7	66	25.9
On schedule	3	4.1	30	9.0	35	13.7
Delayed	5	6.8	18	5.4	22	8.6
Marital Status (n=793)						
Married	16	17.6	191	47.0	141	47.6
Living together	6	6.6	30	7.4	42	14.2
Divorce/Widowed	0	0.0	4	1.0	17	5.7
Never married	69	75.8	181	44.6	96	32.4

Family Planning Services

Family planning services (counseling and service provision) are, per LARC removals guidelines, offered to all clients seeking LARCs removals. These services initially focus on the specific reasons for removals during the "initial targeted counseling session". Another session, "post-removal FP session," is conducted after successful removals). This section describes family planning counseling and services offered to 781 women (missing information=14) seeking removals. Table 11 shows the following:

- Post-removal FP counseling and services offered and accepted varied. Nearly a third (n=233; 29.8%) accepted a method, with short-acting reversible contraceptives being most common (n=186; 24.1%). A relatively small number opted to continue with LARCs. However, many women (n=188; 24.1%) were not counseled. Of these most (n=127) desired a pregnancy.

- The study team's findings illustrate non-statistically significant provincial level differentials. In Nampula, among the 302 post-removal women, 13.7% were not counseled, 42.0% accepted, and 28.9% refused a FP method. On the other hand, for Sofala (n=371), many more were not counseled (n=142, 32.0%); and fewer (20.7%) accepted a method.

Table 11: Percent distribution of the 673 LARC removal clients offered family planning services, Nampula and Sofala; December 2018–May 2019

Family Planning Services	Nampula		Sofala		TOTAL	
	n	**%**	**n**	**%**	**n**	**%**
Post Removal FP Services Offered						
Not counseled	46	13.7	142	31.9	188	24.1
Counseled only	16	4.8	36	8.1	52	6.7
Accepted a method	141	42.0	92	20.7	233	29.8
Referred for a method	2	0.6	1	0.2	3	0.4
Refused a method	97	28.9	100	22.5	197	25.2
Post Removal FP Status						
Non-User	193	57.8	349	79.3	542	70.0
LARCs (Continuers)	18	5.4	21	4.8	39	5.0
SARCs (Switchers)	116	34.7	70	15.9	186	24.0
Tubal Ligation (Switchers)	7	2.1	0	0.0	7	0.9

FP health providers are trained to deliver targeted counseling to offset concerns regarding side effects, particularly vaginal bleeding—a commonly encountered side effect of any hormonal method. We examined the relationship between vaginal bleeding and FP status. As mentioned previously, vaginal bleeding was reported by 166 clients seeking removals. Of these, 44 clients decided not to remove and post-removal, 61 switched to another hormonal method (31 to oral pills, 27 to injectables) (See Table 12).

Table 12: Percent distribution of family planning status among the 166 LARC removal clients who sought removals for vaginal bleeding, Nampula and Sofala; December 2018–May 2019

Family Planning Services	Nampula		Sofala		Total	
	n	**%**	**n**	**%**	**n**	**%**
Not removed (Continuers)	14	17.5	30	34.9	44	26.5
Post-removal FP Services						
Counseled only	3	3.8	2	2.3	5	3.0
Accepted a method	34	42.5	29	33.7	63	38.0
Referred for a method	1	1.3	0	0.0	1	0.6
Refused a method	28	35.0	25	29.1	53	31.9
Post-removal FP Status						
Non-User	45	56.3	57	66.3	102	61.4
LARCs (Continuers)	2	2.5	1	1.2	3	1.8
SARCs (Switchers)	33	41.3	28	32.6	61	36.7
Tubal Ligation (Switchers)	0	0.0	0	0.0	0	0.0

Assessing Service Providers' Perceptions Regarding Feasibility

Routine supervisory visits include facility-level data review and discussion and feedback geared to drafting a plan of action on improving any service delivery or quality gaps identified. These plans are then transmitted to the District Health Office for appropriate follow-up action. At the 18 study facilities, the study team conducted 64 routine supportive supervisory visits over the six months period. In addition to their routine supervision tasks, they also reviewed and provided feedback on the past month's addendum register and identified and solved problems related to removals. On-call service providers also shared their perceptions regarding the feasibility of introducing the LARCs removal indicator suite. This section describes service providers' perceptions regarding the ease and additional time spent in recording the requested information, benefits and burdens, and recommendations for including or excluding any of the six removal indicators. Table 13 displays the following findings:

- Over the course of the study period (December 2018–May 2019), 64 supervisory visits (33 in Nampula and 31 in Sofala), were conducted. At each supervisory visit, the senior study team member administered the checklist to the on-call service provider at the central and district hospitals, and the sampled urban and rural HCs.

- ***Ease in recording:*** Overall, service providers reported no challenges in recording the requested information in the FP addendum register (Normal Removals). Providers explained that the clarity and guidance offered during training and in the addendum offset any initial recording challenges. Over time, any recording challenges decreased as service providers became familiar with the codes:

> ***"Easy to fill with the help of the codes."*** —Urban Health Center, Nampula
>
> ***"In the beginning…[it] was difficult but after the explanation it is easy."*** —District Hospital, Nampula
>
> ***"Yes, […they…] are easy because I'm already familiarized …with the recording format and codes…"*** —Urban Health Center, Nampula

- ***Time taken****:* Of the 64 supervision contacts, many service providers reported completing the six-removal suite of indicators within two minutes (9 in Nampula and 20 in Sofala) or between three to five minutes (17 in Nampula and 8 in Sofala). Very few reported needing six to nine minutes (6 in Nampula and 0 in Sofala).

- ***Perceived benefits:*** Some of the perceived benefits of including the indicators were: gaining a better understanding of the reasons for removal and quality of FP services offered and documenting the number of removals.

Perceived burden: By and large, service providers stated that the additional removal indicators were effortless to complete (Nampula=32, Sofala=31). Assessing duration of use was, at times, challenging because dates of insertion were difficult to ascertain.

> **"*All fields* [columns in the FP register addendum (normal removals)] *are easy* [to enter required information]"** —Rural Health Center, Sofala
>
> **"*The date of insertion field* [is difficult to record accurately] *when women forget to bring the FP card.*"** —Urban Health Center, Nampula
>
> ***"Yes, the fields are easy because it is already familiarized with them."*** —Urban Health Center, Nampula

- ***Indicators (inclusion/exclusion)****:* Overall, service providers did not recommend excluding any of the six removal indicators (Nampula=32, Sofala=31). However, some suggested additional indicators. For example, one provider from an urban health center in Nampula said we "*should have a field to record the method women want removed but after the counseling changed their mind*." Others' suggested indicators related to HIV status and reason for switching methods. It is important to note that HIV status is included in the RH/FP consultation forms.

Table 13: Number of supervisory visits conducted, ease in filling, time taken, perceived benefits and burden in recording, Nampula and Sofala, December 2018–May 2019

Variables	Nampula	Sofala	TOTAL
	n	**n**	**N**
# of Visits	33	31	64
Central Hospital	4	6	9
District Hospitals	8	4	12
Urban Health Centers	12	6	18
Rural Health Centers	9	15	24
Ease in filling			
No problems	27	31	58
Difficulty	3	0	3
Time Taken (minutes)			
≤2	9	20	29
3 - 5	17	8	25
6 – 9	5	0	5
Burden in Recording			
No burden	32	31	63
Burden	1	0	1
Benefits of Recording			
No benefits	0	0	0
Benefits	5	8	13

Missing information:
Nampula: Ease in filling = 1; Time taken = 1; Benefits = 28
Sofala: Benefits = 23; Time taken = 3

Conclusions and Recommendations

The primary goal of this study was to determine the usefulness of including six LARCs removal indicators in the national FP registers and HMIS reporting forms maintained at all health facilities, as advocated by the LARCs removal task force. Efforts were made to identify the LARCs removal load at HCs, district, and central hospitals; and to disaggregate this by timing, reasons for removal, post-removal FP services offered, and FP user status. In addition, the number and referral tracking of difficult removals were ascertained to construct a holistic picture of normal and difficult LARCs removals from the FP registers and HMIS.

Key Findings

- Demand for RH and FP services is higher in urban HCs as noted by the absolute number of clients seeking RH/FP consultations. Nearly 71% of new acceptors sought services from HCs, with proportionately more new acceptors in urban (n=16,043) than rural (n=13,840) HCs. However, the proportion of FP new acceptors to WRA catchment population is similar across urban and rural HCs (26.6% urban, 27.8% rural).

- Over the six-month study period, 795 LARC clients sought FP services for removals. A considerable proportion (14.1%) decided not to remove following the initial targeted counseling session offered per LARCs removal guideline to all removal clients. Of the total number, 83.5% were successfully removed. The remainder (n=19) were categorized as difficult but removed at the same facility (n=10), incomplete (n=5), or referred (n=4). Nearly 60% of 679 clients sought removal services within two years. Significantly fewer (10.1%) sought on-schedule/expired removals.

- Four clients (IUD=3; Implants=1) were referred for difficult removals, with IUD string not visible being the main referral reason. Tracking referred or incomplete removals to referral facilities was challenging.

- The three most frequently reported removal reasons were side effects (25.8 %), desire to be pregnant (22.9%), and on-schedule/expired (29.5%).

- Women under 25 comprised nearly 43% of removal clients. Among them, 44% were never married or co-habited, and 32% had three or more children. Parity influenced perceived reasons and duration of use. Multiparous women least often sought LARCs removals due to a desire to get pregnant (15.6%). Nulliparous women most frequently reported side effects as the reason for seeking removal (31.3%)

- Per LARCs removal guidelines, FP counseling and service provision are offered to all clients following successful removal. FP counseling and service provision (the post-removal FP session) showed a mixed pattern of service provision and outcome. While a substantial number (n=232)

were counseled and accepted a method, most often a short-acting method (n=186), a considerable number (n=188) were not counseled. Most of these (n=127) desired a pregnancy.

- Service providers overwhelmingly perceived that the additional LARCs removal columns in the national FP register were useful and effortless to record. Perceptions of usefulness pertained to documenting the number and timing of removals, recognizing reasons for removals, and insights regarding quality of services. A service provider remarked, "*It shows that if the health provider does proper counseling at the insertion, subsequent visits and proper management of side effects, method retention could be higher.*" The most significant challenge reported was ascertaining date of insertion.

Conclusions

Challenges to recording information in the FP addendum registers included duration of use and tracking of difficult removals. Recording duration of use, while perceived to be useful, was challenging largely due to women not bringing their FP cards, which are needed to validate duration of use. Nonetheless, accurately ascertaining duration of use, when possible, did clarify client misperceptions regarding overdue duration. It was not possible to track the referred difficult removal clients (n=4) to the referral facilities or incomplete removals (n=5) to assess the removal outcome.

Difficult removals were rarely recorded (under 3%). Among them, many (n=10; 1.5%) were still successfully removed at the same facility. There were no cases recorded of significantly difficult removals in the FP register normal removal addendum.

In relation to LARCs removals, routine family planning counseling and service provision are offered at three points of contact: pre-insertion, initial targeted counseling session, and post-removal FP session. Our study identified the need for enhanced and/or refresher FP counseling training at these points of contact. These included appropriate assessment of clients' desire to get pregnant within two years, particularly among nulliparous women (pre-insertion); balanced counseling for informed decision making; and strengthened counseling approaches, particularly for side-effects and misperceptions. In particular, it is important to improve service providers' awareness of vaginal bleeding as a known side effect of hormonal methods with appropriate counseling **at each of the three points of contact.**

Additional LARCs removal columns in the national FP register were perceived as useful, effortless to record, and providers were generally able to complete the additional requested information within two minutes. Providers perceived utility of the additional indicators which documented the number and timing of removals, the reasons for removals, and insights to quality of FP services. A service provider remarked that "*It shows that if the health provider does a proper counseling at the insertion, subsequent visits and proper management of side effects, method retention could be higher*". The most significant challenge reported was ascertaining date of insertion. However, these findings should be interpreted with caution as they represent service providers' perceptions offered during monthly supportive supervision visits and not observations recorded during removals.

Recommendations

The results from this assessment suggest that inclusion of additional columns in the national FP register to document data on LARCs removals is useful and does not add significantly to the service providers' workload. We recommend including the following columns with clear and concise description of the indicators, its categories and recording instructions, noting that the current FP register includes a reason for client visit with the coding option of LARCs removal. The additional columns proposed to be added to the register include:

1. Reason for seeking removal
2. Method removed, by LARCs type
3. Removal outcome: Not removed (counseled); removed (no difficulty, with difficulty, incomplete, significant difficulty)
4. Reasons for referral: Trained provider unavailable, equipment/consumables unavailable, Implant not palpable, IUD string not visible, incomplete removal, removal complicated (additional equipment/expertise required), client requested referral

The study team deemed it particulary important to include reason for removal and removal outcome in the DHIS2 to enable the tracking of social barriers influencing LARCs uptake and assessing whether side effects are being efficiently addressed by the providers. Furthermore, inclusion of these indicators will strengthen facility-based monthly discussions and analysis, including calculating duration of use per LARCs method type and health provider performance. This will enable the development of strengthened plans of action to address identified gaps pertaining to LARCs removals. However, the assessment team recommend that tracking difficult and/or incomplete removals should be excluded, noting that currently normal removals are not being well addressed. Consequently, tracking difficult removals and organizing difficult removals referral sites that are efficiently tracked in the DHIS2 will be more cumbersome. On the other hand, ascertaining reasons for referrals provides useful quality of care for LARCs removal information. For example, equipment/consumables unavailable or trained provider unavailable alerts the health facility to take appropriate measures.

Engage stakeholders in technical discussions about the rationale, usefulness, and ease of including the additional columns to strengthen Mozambique's ambitious LARCs/FP programs, particularly the programmatic implications of including the suite of removal indicators for forecasting removal load and quality of care. It is also important to engage a broad swathe of stakeholders from the public sector and implementing partners at different levels (national and provincial) in these technical discussions.

Develop a timetable for rolling out the revised FP national registers, initially considering health facilities with a reasonably high demand for FP services and a pool of LARCs-trained public sector staff to train service providers.

Quality of FP counseling and services must be strengthened, with focused refresher trainings including on-job trainings targeting difficulties/gaps particularly on counseling techniques, balanced counseling, knowledge of side effects, and misperceptions to allay early removals and LARCs retention.

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Appendix A.I: Family Planning Register Addendum (Normal Removals)

Province:_____ **District:**_____ **Name of HF:**_____

Month:_____ **Total of SRH consultation :**_____ **Total number of new PF acceptors:**_____ **Total numbers of PF repeat acceptors:**_____

Initiators pills:_____ **Initiators of injectable:**_____**Initiators of implantes:**_____**Initiators of IUD:**_____**Tubal ligation:**_____

#	ID	Date of current visit	Age	Marital status	Parity	Reasons for removal	Date of insertion	Removal outcome	Date of removal	Method removed			Name of referral facility	Reasons for referral	Family planning	FP method uptake	Name of HP
										Jadele	Implanon	IUD					

CODES:

Marital Status:
1. Married
2. Living in union
3. Divorced/Separated
4. Widowed
5. Never married/never lived

Reasons for Removal:
1. Has expired
2. Change to another method
3. Opted to get pregnant
4. Vaginal bleeding (spotting, heavy)
5. Vaginal discharge (severe)
6. Arm discomfort/pain
7. Headache
8. Back pain
9. Husband/in-laws opposition
10. Mother's opposition
11. Infrequent or no sex
12. Reduces sexual pleasure
13. Interferes with body natural processes
14. IUD/Implant failed (got pregnant)
15. IUD expulsion/partial expulsion
16. Others (Specify)

Removal outcome:
1. Not removed - counseled
2. Removed - No dificulty
3. Removed - with dificulty
4. Removed - but incompleted
5. Removed – significant difficulty (U/S; surgery)

Family Planning:
1. Not Removed – counseled
2. Not Removed – referred
3. Not counselled
4. Counseled only
5. Counseled and accepted a method
6. Counseled and referred for a method

Date of insertion:
1. Copy date from client record
2. If client dont have record ask month and year of insertion
3. If client does not remember ask how many months ago
4. Does not know the date of insertion

Reason for referrals:
1. Trained provider unavailable
2. No equipment/consumables available
3. Implant not palpable
4. IUD String not visible
5. Incomplete removal
6. Removal too complicated (additional equipment/expertise required)
7. Client requested referral

FP Method Uptake:
1. Female condom
2. Oral contraceptive
3. Injectable
4. Emergency Contraceptive
5. IUD
6. Implant (Jadelle)
6. Implant (Implanon)

Appendix A.II: Family Planning Register Addendum (Diifficult Removals)

Province:_____ **District:**_____ **Name of District/Central Hospital:**_____

Month:_____ **Total of SRH consultation :**_____ **Total number of new PF acceptors:**_____ **Total numbers of PF repeat acceptors:**_____

Initiators pills:_____ **Initiators of injectable:**_____ **Initiators of implantes:**_____ **Initiators of IUD:**_____ **Tubal ligation:**_____

#	ID	Date of current visit	Reason for referral	Name of referral facility	Age	Marital status	Parity	Date of insertion	Removal outcome	Date of removal	Method removed			Servide provider			Family planning	FP method uptake	Name of HP
											Jadele	Implanon	IUD	Dctor	Nurse	Others			

CODES:

Reason for referrals:
1. Referred - Trained provider unavailable
2. Referred - No equipment/consumables available
3.Referred - Implant not palpable
4.Referred - IUD String not visible
5. Referred - Incomplete removal
6. Referred - Removal too complicated
7. Referred - Client requested referral

Marital Status:
1. Married
2. Living in union
3. Divorced/Separated
4. Widowed
5. Never married/never lived together

Removal outcome:
1. Removed no difficulty
2. Removed with difficulty
3. Removed with significant difficulty
4. Not removed counseled

Family planning:
1. Not Removed – counseled
2. Not Removed – referred
3. Not counselled
4. Counseled only
5. Counseled and accepted a method
6. Counseled and referred for a method
7. Counseled and refused a method

FP Method Uptake:
1. Female condom
2. Oral contraceptive
3. Injectable
4. Emergency Contraceptive
5. IUD
6. Implant (Jadelle)
6. Implant (Implanon)
8. Tubal ligation

Date of insertion:
1. Copy date from client record
2. If client dont have record ask month and year of insertion
3. If client does not remember ask how many months ago
4. Does not know the date of insertion

Appendix A. III: Supportive Supervision Checklist

My name is_____ and I am a Monitoring and Evaluation Officer with the Integrated Family Planning Project at Pathfinder International. As part of the Implant Removal Study, we are including a short checklist to enable us to understand the ease and/or difficulty you might have faced in completing the FP addendum register for normal removals.

You are requested to take part as the service provider responsible for implant removals in this facility. The checklist will take up to five to ten minutes. There are no right or wrong answers. We will take notes. You are free to choose whether to take part in responding to the checklist. If you choose not to take part, you will not be negatively affected in any way. If you choose to participate, you may stop at any time without any penalty. We will protect all information about you and your participation in responding to this checklist to the best of our ability. We will not take your name. Your name will not appear in any report.

Statement of Consent: I have read/heard the above information and have received answers to any questions I asked. I consent to take part in responding to the checklist.

Your Name (printed) _____

Verbal consent taken (for interview): YES NO

SUPPORTIVE SUPERVISION GUIDELINE

1. During the past month, there were ___ removals at your health facility.

[*M&E Officer: Please verify the total number of removals during the past month; disaggregated by implants and IUD by reviewing the FP NORMAL REMOVALS addendum register*]

1 (a). In your own words, describe how you managed the ___ implant removals. Did you refer? If yes, why did you refer.

1(b). In your own words, describe how you managed the ____ IUD removals. Did you refer? If yes, why did you refer.

2. The Family Planning NORMAL REMOVALS register has the following six fields that we feel are important to understand for removal clients:

i. Date of insertion
ii. Date of removal
iii. Reason for current visit
iv. Reason for removal
v. Removal outcome
vi. Reason for referral

[*M&E Officer: Please show the service provider the above six fields in the FP NORMAL REMOVALS register*]

With regards to these six fields, in your opinion, would you or your colleagues:

a. Consider that these six fields are easy to complete?
b. How much extra time was needed to complete these fields?
c. What are the burdens and benefits for you or your colleagues in completing these six fields?
d. Were there any of these six fields that you or your colleagues found difficult to complete? If yes, please describe, in your own words, why they were difficult to complete.
e. Are there any fields that you would suggest changing? If yes, please probe for which one.
f. Are there any fields that you would suggest including? If yes, please probe for additional fields.

Concluding Remarks:

- Those are all the questions we have for today.
- Please let me know if you have any additional information, issues, concerns and questions.
- Thank you again for your participation!

Appendix B: Field Study Teams

Nampula

Dr. Adalgisa V. Ronda (Senior Field Study Team)
Mr. Alberto Manhica
Mr. Abdul Faquira
Ms Nilza Ferrao

Sofala

Ms. Ana Jacinto (Senior Field Study Team)
Ms. Janete Matias
Mr. Severino Ngole
Mrs Justina Zucule

Appendix C: Stepped Down Training: Trainees List (Nampula and Sofala)

CATEGORY	NAME	DESIGNATION
	Graciana de Jesus Pita	Provincial Health Department
Sofala Province	Muanda Fernando Pinho	Provincial Health Department
	Maria Almija	Provincial Health Department
	Heiton Americano	District Health Department
	Faustina Azarias	District Health Department
	Lina Ivete Duvane	District Hospital
	Jacinta Mateus Vasco	District Hospital
	Luisa Filipe Chiambiro	District Hospital
District: Buzi/Sofala	Hercia Medina Texeira	Guara Guara - Health Center
	Luisa Filipe Chiambiro	Guara Guara - Health Center
	Virginia Biute Maconha	Rio Buzi - Health Center
	Ivone Faustino	Chissinguana - Health Center
	Rainha Fernando Chibae	Gruja - Health Center
	Natalia Benjamim	District Hospital
	Justino Americo	District Hospital
	Hauage Ussene	District Hospital
	Inês Vilanculos	District Hospital
	Zaida Penina	District Hospital
District: Caia/Sofala	Isaura Francisco	District Hospital
	Chana Francisco Feche	District Hospital
	Alaica de Celestino	District Hospital
	Helena Comissario	Sena - Health Center
	Diolinda Castigo Meque	Sena - Health Center
	Ana Mafuta Chirairo	Sena - Health Center
	Edna Octavio	Deve - Health Center
	Marta Damiao	Central Hospital Beira
	Rosalina Isabel	Central Hospital Beira
	Luciana Campira	Central Hospital Beira
	Lucinda Buzica Jaime	Central Hospital Beira
	Lurdes Possir	Central Hospital Beira
	Heldo	Central Hospital Beira
District: Beira City/Sofala	Pita Tomas	Central Hospital Beira
	Cizalia Figueira	District Health Department
	Joana Ferro	District Health Department
	Edna Chirindza	Munhava - Health Center
	Justica Teofilo	Munhava - Health Center
	Olga Manjate	Munhava - Health Center
	Euridice	Munhava - Health Center
	Ausentina Biombo	Provincial Health Department
Nampula Province	Florentino Rosário	Provincial Health Department
	Barata	Provincial Health Department

	Rosemer Félix	Provincial Health Department
	Pedro Benjamin	District Health Department
	Ancha Alves Assane	District Health Department
	Maria de Lurdes Simões	District Health Department
	Saide Félix Issufo	District Hospital
District: Moma/Nampula	Argentina Fiel	District Hospital
	Maria de Lurdes Simões	Chalaua - Health Center
	Saide Rodrigues Rocha	Chalaua - Health Center
	Razia Amade	Chalaua - Health Center
	Lucinda da Gloria	Micane - Health Center
	Joaozinho Oliveira	Micane - Health Center
	Ayrton Semedo	District Health Department
	Fatima Cobre	District Health Department
	Inocencia Lazaro	District Hospital
	Iyara Mongo	Urbano - Health Center
District: Nacala	Sabina John	Urbano - Health Center
Porto/Nampula	Calton de Jesus	Murrupelane - Health Center
	Lurdes Augusto	Murrupelane - Health Center
	Livra Ismael	Akumi - Health Center
	Amelia Liace	Akumi - Health Center
	Joyce Chiueio	District Health Department
	Firosa Suale	District Health Department
	Judite Adriano	District Health Department
	Calisto Ferreira	Nampula - Health Center
District: Nampula/Nampula	Muapenda Combo	Nampula - Health Center
	Helena Basilio Adamo	Nampula - Health Center
	Herminia de Jesus	25 de Setembro - Health Center
	Ligia Caleane	25 de Setembro - Health Center
	Justina Sulí	25 de Setembro - Health Center

Appendix D: Catchment Population: Nampula and Sofala Urban and Rural Health Centers

Province	Health Facility	Catchment Population	WRA
Sofala	Chissinguana HC (Buzi) *	16,394	4082
	Guara Guara HC (Buzi) *	18,262	4547
	Rio Buzi HC (Buzi) *	7885	1963
	Deve HC (Caia)*	6642	1654
	Sena HC (Caia)*	40710	10137
	Munhava HC (Beira) **	72963	18168
Nampula	Micane HC (Moma)*	23556	4,593
	Chalaua HC (Moma)*	96107	18,740
	Nacala Porto HC (Nacala Porto)**	72206	14.369
	Akumi HC (Nacala Porto)**	32868	6,409
	Murrupulane HC (Nacala Porto)*	44136	8,606
	25 Setembro HC (Nampula City)**	109019	21,258
Sofala	Urban HCs	72,963	18,168
	Rural HCs	89,893	22,383
Nampula	Urban HCs	214,093	42,036
	Rural HCs	140,243	27,346
TOTAL	Urban HCs	287,056	60,204
	Rural HCs	230,136	49,729

HC: Health Center

*Rural HCs

**Urban HCs

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