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Maternal and Child Survival Program

An Analysis of Contributions to Expanding Access to and Uptake of Quality Family Planning Services in Five States of India

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The Maternal and Child Survival Program (MCSP) is a global, $560 million, 5-year cooperative agreement funded by the United States Agency for International Development (USAID) to introduce and support scale-up of high-impact health interventions among USAID's 25 maternal and child health priority countries,* as well as other countries. The Program is focused on ensuring that all women, newborns and children most in need have equitable access to quality health care services to save lives. MCSP supports programming in maternal, newborn and child health, immunization, family planning and reproductive health, nutrition, health systems strengthening, water/sanitation/hygiene, malaria, prevention of mother-to-child transmission of HIV, and pediatric HIV care and treatment.

* USAID's 25 high-priority countries are Afghanistan, Bangladesh, Burma, Democratic Republic of Congo, Ethiopia, Ghana, Haiti, India, Indonesia, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Nepal, Nigeria, Pakistan, Rwanda, Senegal, South Sudan, Tanzania, Uganda, Yemen and Zambia.

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

September 2019

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Acronyms

ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
BCC	Behavior Change Communication
BP	Blood Pressure
CA	Contribution Analysis
CSC	Clinical Safety Checklist
CTU	Contraceptive Technology Update
DQAC	District Quality Assurance Committees
ECP	Emergency Contraceptive Pill
FDS	Fixed Day Static
FP	Family Planning
FLW	Frontline Health Worker
GoI	Government of India
HMIS	Health Management Information System
IDI	In-Depth Interview
IEC	Information, Education, and Communication
IRB	Institutional Review Board
IUCD	Intrauterine Contraception Device
IVRS	Integrated Voice Response System
JSY	Janani Suraksha Yojana
LHV	Lady Health Visitor
MCSP	Maternal and Child Survival Program
mCPR	Modern Contraceptive Prevalence Rate
MoHFW	Ministry of Health and Family Welfare
MOIC	Medical Officer In Charge
MPR	Monthly Progress Report
NFHS	National Family Health Survey
NHM	National Health Mission
OCP	Oral Contraceptive Pills
OPD	Outpatient Department
OT	Operating Theater
POP	Progestin-only Pills
PPFP	Postpartum Family Planning
PPIUCD	Postpartum Intrauterine Contraception Device
QA	Quality Assurance
QC	Quality Circle
QI	Quality Index

RKS	Rogi Kalyan Samiti
RMNCH	Reproductive, Maternal, Newborn, and Child Health
SOP	Standard Operating Procedure
SQAC	State Quality Assurance Committee
TFR	Total Fertility Rate
ToC	Theory of Change
USAID	United States Agency for International Development
VC	Verification Criteria

Executive Summary

The United States Agency for International Development (USAID)'s flagship Maternal and Child Survival Program (MCSP) supported the work of the government of India's (GOI) Ministry of Health and Family Welfare (MoHFW) to expand the contraceptive basket to include newer proven modern family planning (FP) methods, progestin-only pills, and Centchroman, and improve the quality of FP service provision at select public health facilities in five states of India (Telangana, Odisha, Chhattisgarh, Assam, and Maharashtra). In addition to addressing the supply side, a key MCSP focus area was strengthening the ecosystem for delivering quality services.

In partnership with the MoHFW, MCSP evaluated the impact of FP interventions supported by the program in five states of India using a "Contribution Analysis" (CA) methodology to explain the results within the complex adaptive systems within which they were achieved. This report summarizes the programmatic achievements and implications and offers recommendations for future program and policy directions and uses of CA.

CA is a methodology whereby cause-and-effect relationships between activities and results were explored against theories of change to make credible claims about the contributions made by MCSP [7]. CA provided a framework for compiling and assembling evidence to tell a cohesive, robust story about MCSP's contributions. This framework allows evaluators to explore possible cause-and-effect relationships between activities and results as an approach for making credible claims about the contribution being made by an intervention or set of activities, based on confirming the theory of change for an intervention. This approach, also applied by MCSP in Burma and Rwanda, is new for evaluating the impact of complex MNH programs although it has been applied to other development sectors.

The analysis set out to answer the following contribution questions and to assess evidence to support the program's contribution claims:

1. How and to what extent did MCSP contribute to the expansion of basket of FP methods in 52 program-supported public sector facilities in seven districts of five states: Odisha, Chhattisgarh, Maharashtra, Telangana and Assam?
2. How and to what extent did MCSP contribute to increased voluntary uptake of postpartum FP services in 52 program-supported public sector facilities in seven districts of Odisha, Chhattisgarh, Maharashtra, Telangana and Assam?
3. How and to what extent were the providers better skilled and competent to provide quality female sterilization services through MCSP's support in 186 facilities in 17 districts across the five program-supported states?
4. How and to what extent did MCSP contribute to a shift from provider centric to client centric female sterilization services in 186 public sector facilities in 17 districts in the five program-supported states resulting in improved client satisfaction?

A limitation of the CA approach is that, although it is rigorous, it is not as rigorous as a traditional impact evaluation that uses an experimental or quasi-experimental design to measure impact. Impact evaluations are impractical in many settings, however, because of resource constraints and the problematic nature of collecting data from health facilities or communities that are not receiving any interventions.

In this comprehensive analysis, MCSP's contributions were documented quantitatively (through routine monitoring and study data) and qualitatively (through key informant interviews with stakeholders), linking back to key elements in the program's theory of change. Findings revealed that MCSP support and activities conducted in partnership with GoI contributed to four major achievements:

- Expansion of the basket of FP methods in 52 program-supported public sector facilities in seven districts of five states: Odisha, Chhattisgarh, Maharashtra, Telangana, and Assam.
- Increased uptake of postpartum FP services in 52 program-supported public sector facilities in seven districts of Odisha, Chhattisgarh, Maharashtra, Telangana, and Assam states.

- Improved surgical skills and compliance with female sterilization standards among providers in 186 facilities in 17 districts across Odisha, Chhattisgarh, Maharashtra, Telangana, and Assam states.
- A shift from provider-centric to client-centric services resulting in improved client experience of care.

Improvements are needed in a few areas of the program implementation to achieve greater gains and when considering expanding these interventions. For example, counseling on FP options as well as side effects and instructions on how to take the selected method (e.g., POPs and Centchroman) should be improved. In addition, with respect to the quality of female sterilization services, availability of GoI recommended drugs for sedation and analgesia is still widely lacking, and providers need more support on how to calculate the proper dose of local anesthesia based on the patient's body weight.

Introduction

The Maternal and Child Survival Program (MCSP) evaluated the impact of family planning (FP) interventions supported by the program in five states of India using a "Contribution Analysis" (CA) methodology to explain the results within the complex adaptive systems within which they were achieved. This report summarizes the programmatic achievements and implications and offers recommendations for future program and policy directions and uses of CA.

Context

India has implemented a national FP program for more than half a century. The approaches during this period have ranged from those driven by population stabilization goals to a greater recognition of reproductive health and rights and its integration within the broader reproductive, maternal, newborn, and child health continuum.[1,2] Significant gains have been made during the past 50 years. The proportion of currently married women age 15 to 49 years using modern contraceptive has risen from 41.5% (National Family Health Survey [NFHS]-1, 1992-1993) to 47.8% (NFHS-4, 2015-2016). Results across the country have been uneven, however. An important characteristic of India is the vast variation across its regions and states, as well as the urban and rural differential. Though the southern states and a few northern states have achieved replacement levels of fertility, many of the northern states, despite some progress, continue to have a high total fertility rate (TFR). According to the National Family Health Survey (2015-2016), national total fertility rate is at 2.2, national unmet need for limiting family size is 7.2% and for spacing is 5.7%. But among states, unmet need for FP ranges from 14.2% for Assam to 7.3% for Telangana, reflecting the need for tailored and targeted approaches across states (NFHS-4, 2015/16). Furthermore, the quality of FP services measured in NFHS-4 indicates that nationally on average only about 17.7% of health workers talked to female non-users about FP and only 46.5% of current users were told about side effects of their current method. India has pledged to drive access, choice, and quality of FP services to increase modern contraceptive usage to 54.3% and to ensure that 74% of the demand for modern contraceptives is satisfied by 2020.[3] Realizing this goal will result in significant reductions in unintended pregnancies and maternal and neonatal deaths. Recent policy shifts and schemes such as Janani Suraksha Yojana (JSY)—a conditional cash transfer scheme—have led to a huge increase in the number of institutional deliveries (from 38.7% in 2005-06 [NFHS-3] to 78.9% in 2015-16 [NFHS-4]) and are providing a unique opportunity to expand postpartum FP services and strengthen the quality of services in facilities.

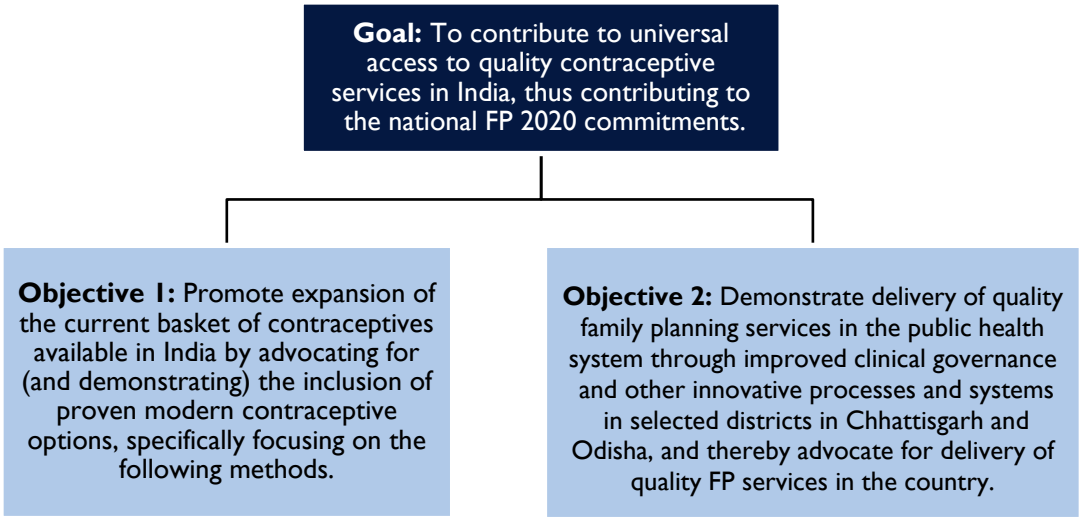
The basket of contraceptive choice in India is still limited, and there are many methods that have either not found a place in the national FP program or have been included very recently, such as progestin-only pills (POPs) and injectables. In terms of the range of current contraceptive use, female sterilization continues to be the most common FP method among currently married women ages 15-49 (36%, with total modern contraceptive use 47.8%, NFHS-4, 2015-2016). Female sterilization has largely been conducted in a "camp approach" (mobile temporary services) to ensure services are provided in areas where women do not have access to institutional services. This approach though has been criticized for circumventing prescribed service standards.[4,5,6,7]

There have long been concerns and debates regarding the quality of the FP services provided through the public health system in India. The Government of India (GoI), recognizing the need for better quality, established a mechanism to assure quality at the state and district levels and released the revised manual on Standards and Quality Assurance in Sterilization Services and Other Services in 2014.[8] Though these national guidelines are comprehensive and reflect almost all the aspects of sterilization services, such as those concerning standards, quality assurance (QA), skilled service provision, logistics and supplies, indemnity coverage, and monitoring protocols, their operationalization is incomplete by program managers and service providers.

MCSP India Program and Interventions

In India, for nearly a decade the United States Agency for International Development (USAID)'s flagship Maternal and Child Survival Program (MCSP) and its predecessor Maternal and Child Integration Program (MCHIP 2009-2014) provided technical assistance to GoI to expand access to quality FP services and contribute to India's FP2020 commitments—providing FP services to 48 million additional women and sustaining the current coverage of more than 100 million users till 2020—with the ultimate goal of preventing maternal and child deaths. Expanding the basket of contraceptive choice and improving quality within the FP program can act as major drivers to achieving India's commitments to FP2020 goals. Building upon the success of MCHIP, MCSP set out to provide technical assistance to GoI to expand the contraceptive basket to include newer proven modern contraceptive methods, progestin-only pills, and Centchroman, and demonstrate quality FP service provision at select public health facilities in five states of India (Telangana, Odisha, Chhattisgarh, Assam, and Maharashtra). In addition to addressing the supply side, a key MCSP component is strengthening the ecosystem for delivering quality services. Below are the objectives and goal of the project (Figure 1).

Figure 1: Goal and Objectives of the Program



MCSP implemented evidence-based strategies and interventions to strengthen the delivery of quality services. The program was built on the tenets of informed choice, respectful care, gender sensitivity, and community participation in FP services. To promote and advocate for the expansion of the current basket of contraceptives available in India, MCSP undertook a demonstration at selected sites in one district in each of five selected states.[A] Proven modern contraceptive options were introduced to test the feasibility of delivery of these methods through the public health system. Evidence and data from these sites were used to guide and inform policy and scale-up efforts. To strengthen the quality of services, MCSP focused on improving the quality of Fixed Day Static (FDS)[B] services and demonstrated the approach in 17 districts in the five focus states, in consultation with state and national governments. The resulting incremental changes in in providers' skills and competence, logistics and supply management, record keeping, and infrastructure set in motion at the facility level were expected to improve the quality of FP services and strengthen governance to promote respectful care throughout the continuum of care. Across the five states, while the overarching programmatic approach and strategy have been similar, there have been differing timelines and variations in inputs and activities that are discussed in subsequent sections. Tables 1 and 2 show the geographic scopes of the project's Objectives 1 and 2.

[A] During the project period, Medak district in Telangana state was trifurcated by the state government. Hence the original number of districts increased to 7 and 17 respectively for Obj#1 and Obj#2 intervention.
[B] FDS (Fixed Day Static) approach in sterilization services is defined as "providing sterilization services in a health facility by trained providers posted in the same facility, on fixed days, throughout the year in a regular and routine manner."

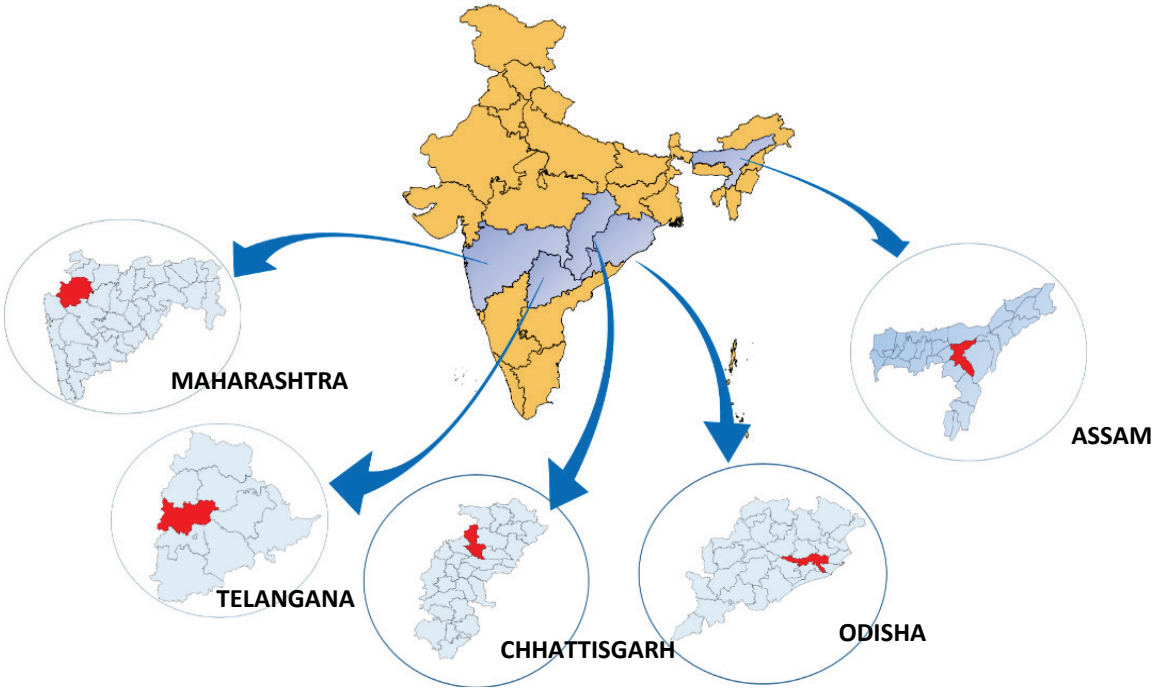
Table 1: Geographic scope of Objective 1

Telangana	Maharashtra	Odisha	Chhattisgarh	Assam	Total
3 districts[C]	1 district	1 district	1 district	1 district	7 districts
9 facilities	12 facilities	11 facilities	12 facilities	8 facilities	52 facilities

Table 2: Geographic scope of Objective 2

Telangana	Maharashtra	Odisha	Chhattisgarh	Assam	Total
3 districts	1 district	6 districts	6 districts	1 district	17 districts
14 facilities	12 facilities	108 facilities	44 facilities	8 facilities	186 facilities

Figure 2: Program Focus States



Rationale for Using Contribution Analysis

Contribution analysis (CA), developed by John Mayne in 2001, is an evaluation approach used to examine the extent to which observed results from a program are due to the program's activities rather than other factors.[9] The use of this method allows evaluators to explore cause and effect relationships between activities and results as an approach for making credible claims about the contribution being made by an intervention or set of activities, based on confirming the theory of change for an intervention.[10] This method also helps to answer the following question: "In light of the multiple factors influencing a result, did the intervention make a noticeable contribution to an observed result and in what way?"[11]

One distinctive feature of CA is that it offers a more systematic way to be able to make credible claims of impact. A strength of CA is its ability to unpack impact in a way that explicitly examines multiple actors and influences and answers questions about what worked and why.[12] Another key advantage of using CA in the context of MCSP is that routine program data, both qualitative and quantitative, can be used to support causal claims rather than more elaborate evaluation designs that are not feasible to undertake because of time and resource constraints. It is important to note that while incorporating use of CA from inception of the program is favorable, the approach can also be used midway or toward the end of implementation, as was done with the MCSP India program.

[C] In Telangana, MCSP started working in Medak district, which was later trifurcated into Medak, Sangareddy and Siddipet districts during the program in 2016.

Methods

MCSP used CA as the primary analytical approach to guide causal inference analysis. Mayne's method uses a six-step process designed to test the theory against logic and evidence to construct an "impact story." These steps build evidence necessary to demonstrate a program's contribution to change while also considering other factors that affect this change. This section will discuss the methodology that was applied in the six-step process.

1. Set out the cause-effect issue to be addressed

Based on a series of consultations and a three-day in-country workshop (February 2018), a decision was made to focus on the entire package of interventions offered by the program, rather than singling out one, given the interrelated nature of the interventions. Hence the project selected to focus on the expansion of method choice and improved quality of female sterilization services, underpinning both of which is the greater institutionalization of quality. The analysis set out to answer the following contribution questions and to assess evidence to support the program's contribution claims:

5. How and to what extent did MCSP contribute to the expansion of basket of FP methods in 52 program-supported public sector facilities in seven districts of five states: Odisha, Chhattisgarh, Maharashtra, Telangana and Assam?
6. How and to what extent did MCSP contribute to increased voluntary uptake of postpartum FP services in 52 program-supported public sector facilities in seven districts of Odisha, Chhattisgarh, Maharashtra, Telangana and Assam?
7. How and to what extent were the providers better skilled and competent to provide quality female sterilization services through MCSP's support in 186 facilities in 17 districts across the five program-supported states?
8. How and to what extent did MCSP contribute to a shift from provider centric to client centric female sterilization services in 186 public sector facilities in 17 districts in the five program-supported states resulting in improved client satisfaction?

2. Develop the theory of change

The theory of change model that was used for this analysis is the "COM-B" theory of change (ToC). The COM-B model was developed by Michie, Stralen, and West and is based on their extensive synthesis of behavior change models in the literature, where behavior (B) occurs as the result of interaction among three necessary conditions: capabilities (C), opportunities (O), and motivation (M).[13] The COM-B ToC model was used because most interventions at some level involved changing the behavior of different target populations within the program.

The theories of change developed for this analysis built upon the logic model that was included in the original MCSP/India work plan at the beginning of the project. When developing the theories of change, program staff looked at the inputs, activities, changes to capacity, knowledge and skills, changes in behavior and practices, policy and resources, unanticipated results, direct benefits, and overall well-being impact. The theories of change also identified external influences, assumptions, and factors that, even if unrelated to the intervention, could have positive or negative effects on the activities and subsequent results.

The project was based on the premise that maternal and child deaths will be averted and unmet need for FP will be met if the basket of contraceptive choices was expanded and the quality of FP services was improved, addressing thereby both supply and demand of services. There will be increased client satisfaction and facility use when quality of services is improved, including female sterilization services, which constitutes the most prevalent contraceptive method used. If providers' skills and services are strengthened regarding female sterilization, then there will be a decrease in number of complications and failures after female sterilization.

MCSP's interventions and expected results are summarized in the two ToCs in Annex 1. The first ToC is on the expansion of basket of contraceptive choice, specifically the addition of POPs and Centchroman at select public health facilities, including postpartum family planning (PPFP). The second ToC is on improved quality of female sterilization services through appropriate clinical governance and innovative tools.

The ToCs illustrate the pathway of change as envisaged in MCSP. Changes in providers' skills (clinical and counseling) and competence, combined with the capacity building of frontline workers for greater community engagement in FP service delivery, strengthening of service infrastructure, and creating a functional monitoring and accountability mechanism, with community involvement, throughout the service delivery chain are expected to lead to the expansion of basket of contraceptive choice, voluntary and informed decision-making by the clients, improved quality of FP service provision, and greater client satisfaction.

Assumptions can make explicit why program implementers think their interventions can and will work. During the CA workshop, participants identified and articulated assumptions they believed to be true and would underlie the change processes shown in the ToCs. When possible, evidence was collected to support or refute the assumptions. There were similarities and some overlap between the assumptions in each contribution statement.

Three major theories of change were created: we based two of the ToCs on the two objectives of the Program, and a third umbrella theory of change on quality of FP was developed under which the two other theories of change are "nested." Please refer to Annex 1 and the Findings section of this report for the two comprehensive ToCs developed pertaining to objectives one and two of the program.

In addition to these three ToCs, on Dr. Mayne's recommendation, simpler TOCs were developed for each contribution statement in the CA story. These ToCs went through several iterations until agreement was reached within the program team and other key MCSP staff. They are presented in the findings section after each contribution statement.

3. Gather the existing evidence on the theory of change

Based on the theory of change developed, data sources were mapped out to identify existing evidence and identify areas that required additional information and data. Key data sources included:

- Annual, quarterly program reports, supervision reports, monthly progress reports
- FP performance standards assessment, including for female sterilization. Conducted at multiple points: baseline (between May 2016 and June 2017 for different facilities/states), first follow-up assessment (November 2017), second assessment (March 2018), third assessment (July 2018), and fourth assessment (December 2018)
- National health management information system (HMIS)

The team reviewed and analyzed multiple primary and secondary routine and periodic data sources (see Table 3 below).

In addition to routine program data, MCSP also integrated key iterative learning within the program to answer some key questions about the quality of FP services and the expansion of FP methods. Each of the learning questions below include a more systematic plan for data collection and tracking.

- Demonstration of progestin-only pills (POP) and Centchroman in the public sector: What is the feasibility, acceptability, and program effectiveness of introducing new and approved modern contraceptive methods in the existing FP basket at government health facilities in five states?
- How effective is the intervention on improving perception of quality of FP services? Is there a change in client/provider's perspectives about quality of FP services provided?
- Which FP quality indicators and data visualization and sharing approaches are useful for informing FP quality improvement efforts?

Table 3: List of Routine and Study Data Sources Used for CA Story

Data Source	Type	Description of Associated Tools, Methods, and Content
Training participant attendance form	Routine primary data	The source for training data is participant attendance sheets. The data from the attendance sheet is transferred to the MCSP program MIS (section of a larger Jhpiego MIS) analysis and reporting purposes.
National HMIS: oral contraceptives and IUCD	Routine secondary data	• MCSP collates data from the national HMIS related to acceptance of FP methods and follow-up of FP clients captured in the FP register, and counseling captured in the counseling register. IUCD/PPIUCD follow up data is captured in the HMIS from respective GoI-approved registers. • Service delivery data for POP and Centchroman services provided by MCSP-supported facilities are recorded in the "Oral Pills Register," which has been accorded approval by GoI as well as the state governments for implementation in the five focus states. • MCSP developed a structured monthly progress report (MPR) format (Excel spreadsheet) that is completed by all MCSP-supported health facilities to supply routine program data every month. All supported facilities maintain a printed and signed copy (by facility in-charge) of the same at the facility. MPR data from all MCSP facilities is collated by MCSP staff for monthly review by the project. • Data on FP users from government HMIS for last year from non-intervention facilities is used for comparison purposes (GoI has an online HMIS portal that can be accessed).
Clinical Safety Assessments for female sterilization	Routine primary data	• Clinical safety checklist (CSC) for female sterilization procedure. This observation checklist was developed by MCSP and has four sections, known as 4 pause points. CSCs are completed by facility staff during female sterilization services. • Data are analyzed to understand improvements in key practices by service providers.
National HMIS: Female sterilization client follow-up register	Routine secondary data	• This structured register was developed by MCSP and approved by the GoI. The register has two components for each client: a) details of sterilization services provided and b) follow-up information for the same client. • Facility staff and frontline workers conduct follow-up visits for female sterilization clients. Clients are evaluated for their fitness before discharge from the facility. Time of discharge could vary from 4 hours after surgery (as mandated by GoI) to 7 days once stitches are removed. All findings are then recorded in the sterilization register. If discharged before 48 hours after the surgery, then follow-up visits are done at home by the ASHA or ANM. The findings are entered in the client card. The final follow-up at 1 month is done at the Fixed Day Static (FDS) facility where surgery was performed, and findings were recorded in the sterilization register. • Client follow-up data is compiled at facility level and reported to MCSP through the MPR. • This register is also used to confirm which dates FDS female sterilization services were held compared with the planned FDS days as per the approved month's calendar for the facility (FDS calendar approved for a particular month in a given district).

Data Source	Type	Description of Associated Tools, Methods, and Content
		• FDS data are entered into a FDS services planning, compliance, and quality Excel spreadsheet. MCSP state teams compile FDS related data in this spreadsheet and share it with the office in New Delhi along with the MPR every month. Main data elements are: FDS planned, FDS held, number of the pre-registered client, number of clients who came with client card to seek female sterilization service, number of clients who received female sterilization services in a facility. The spreadsheet also includes data from the IVRS (see below).
Integrated Voice Response System for female sterilization client scheduling and feedback	Routine primary data	Integrated Voice Response System (IVRS) for female sterilization client scheduling and feedback (Odisha and Chhattisgarh only) 1. MCSP developed the IVRS as a web-based system. 2. It has feature for client scheduling for female sterilization on FDS and clients received FP services from MCSP facility can provide feedback. 3. Willing clients get preregistered for sterilization service on FDS day through respective auxiliary nurse midwives (ANMs) 4. Facilities can see the number of clients preregistered on a scheduled FDS day. 5. Clients can provide feedback by using their mobile on quality of service and respectful care they experienced.)
Objective 1 study: Expansion of FP basket of choice by including POP and Centchroman	Periodic primary data	POP and Centchroman client follow-up interview responses regarding their knowledge of FP and experience using the method selected.
Objective 2 study: AMS quality of FP	Periodic primary data	Direct observation of the quality of the provision of female sterilization services by external assessors. The research tool incorporates the critical elements of the clinical safety checklist in use at study facilities.
Performance Standards for Quality of FP Services	Routine primary data	• This observational tool was administered jointly performed by MCSP and facility staff on about a quarterly basis at MCSP-supported health facilities in the five states. The Standards Assessment tool used an "All or None" scoring method. Each standard has multiple specific verification criteria (VC), and all had to be performed correctly for the standard to be achieved. • In facilities where counseling could not be observed with an actual client, role play sessions were conducted by MCSP program team with the FP counselor to assess their knowledge and skills. • The FP service delivery performance standards tool has five thematic areas: facility profile, FP counseling (general and method specific), surgical procedure (including client screening and infection prevention), follow-up and management, and QA of female sterilization services at the FDS facility. In the updated version, section on assessment of other FP services, such as IUCD/PPIUCD/oral pills and injectables, has been added. • The first round of data collection is treated as baseline. Subsequent quarterly assessments and data collection are compared with baseline data to assess progress under the program in different areas and standards achieved. A facility action plan is made based on areas yet to be achieved.

Data Source	Type	Description of Associated Tools, Methods, and Content
NFHS	Periodic secondary data	• National Family Health Survey (NFHS/DHS), Round 4, is • a national household survey conducted at an interval of 5 years covering reproductive, maternal, newborn, and child health (RMNCH) indicators. It provides estimates at district, states and national levels.

4. Assemble and assess the contribution claim and challenges to it

The evaluation team, during the workshop in New Delhi with MCSP staff, identified top results/impact contribution statements based on the theory of change as well as related assumptions (see Annex 2 for details on assumptions). Results from the stakeholder consultations together with the mapping against data sources and triangulating data assisted in identifying data gaps that could be filled by program monitoring data and by additional primary data collection such as stakeholder interviews. The evidence was subsequently gathered, contribution statements elaborated, and the evidence organized by contribution statement, and the contribution statements were refined.

5. Seek out additional evidence

Initial plans at the CA workshop included the need to conduct additional small-scale qualitative data collection with key informants. Because of time constraints with getting institutional review board (IRB) approval, however, this was not pursued further. Where relevant, other program data sources were used, including qualitative findings from the formal learning studies mentioned above in step 3.

6. Revise and strengthen the contribution story

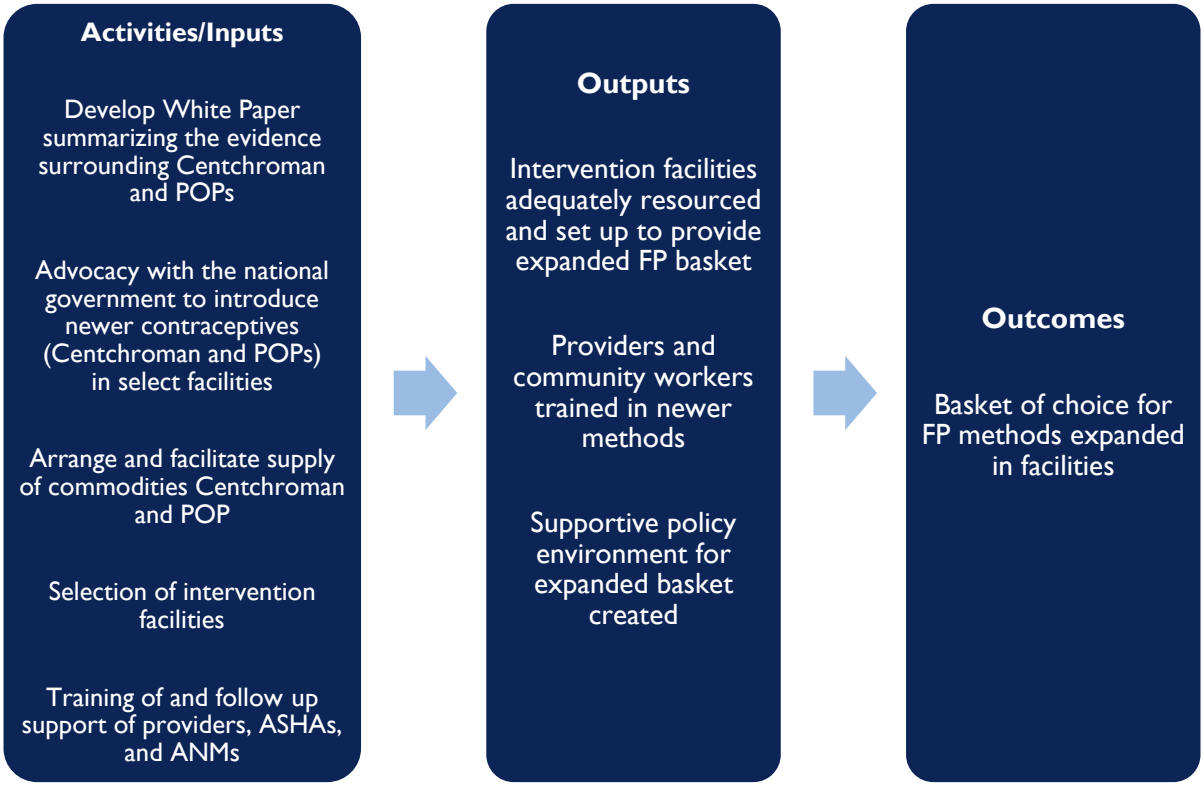
Strengthening the CA story required an iterative process, whereby the contribution statements, associated evidence, and theories of change were reviewed by program staff and program stakeholders, including USAID and GoI partners.

Findings

Based on a thorough review of the program's activities, all available data, and literature reviews, we conclude that:

1. MCSP contributed to the expansion of the basket of FP methods in 52 program-supported public sector facilities in seven districts of five states: Odisha, Chhattisgarh, Maharashtra, Telangana, and Assam.

Figure 3: Detailed ToC for Contribution Statement 1



MCSP's advocacy and planning efforts contributed to a more supportive policy environment for introduction of newer contraceptives (POPs and Centchroman)

Expanding the basket of contraceptive choice can act as one of the major drivers to the achievement of India's commitments to FP2020 goals. Advocacy efforts to expand the contraceptive options have been going on in India for the past decade, but with limited success. With a view to expand the limited basket of contraceptives offered in India's public health system, the USAID Mission in India engaged with the Ministry of Health and Family Welfare (MoHFW) to expand the basket of FP methods offered in India's public health system. The focus was on exploring the possibility of introducing two newer methods (i.e., POPs and Centchroman) in select public health facilities on a pilot basis to generate learning for use in implementation at scale, including public sector budgeting and supply procurement.

As an advocacy tool, MCSP developed a white paper, "Modern Methods of Contraception in India: The Potential of Progestin-Only Pills and Centchroman, April 2016". This paper presented the global and national historical experience with POPs and Centchroman as credible methods of reversible contraception. It provided a summary of the scientific evidence to support the safety, efficacy, and acceptability of these products. It also explored the programmatic opportunities and issues, for

consideration, for taking these methods to scale in the country. The white paper was also used to advocate for the introduction of POPs and Centchroman as a PPFP method.

MoHFW, GoI selected the states and districts to carry out the pilot based on their Modern CPR (mCPR), TFR, and unmet need. At the state level, after an informational letter of support was sent from GoI regarding pilot of POPs in Chhattisgarh, Odisha, Assam, Maharashtra and Telangana, MCSP advocated with the government of respective states. MCSP convened meetings with key officials in the five states and districts to choose 52 high delivery caseload public health facilities at which the pilot would be undertaken.

On the commodity supply side, the program held a consultation with the representatives of pharmaceutical companies to review the current POPs production in India and identify the potential manufacturers to take stock of the production capacity in the country and the cost of the commodity. The consultation was held to inform GoI's decision regarding scale-up of POPs in the public health system. POPs, though approved by the MoHFW, GoI for introduction into the public health system, is not yet procured or distributed through the public health system. Therefore, to fulfill the assumption regarding availability of commodities, MCSP supplied POPs at the selected 52 focus facilities. MCSP sourced POPs through an arrangement it had with Mylan pharmaceuticals to donate POPs to the program. The supply of Centchroman, however, was ensured at the facilities through the GoI supply chain.

Intervention facilities adequately resourced and set up to provide expanded FP basket

A baseline assessment of the 52 focus facilities revealed the following results:

- All the selected 52 health facilities in the five states have sufficient number of human resources (inclusive of medical officers, nurses, auxiliary nurse midwives [ANMs])
- Counseling services is a weak area in the FP program in all five states as only 23% (12/52) health facilities had RMNCH/FP counselors.
- Only a few providers in two of the five states engaged in FP service provision had received a Contraceptive Technology Update (CTU) in the past two years.
- Only 20% facilities had information, education, and communication/behavior change communication (IEC/BCC) materials on permanent methods, and 44% facilities had IEC/BCC materials on spacing methods.

In response to the baseline findings, various cadres of facility staff were trained, including medical superintendents, medical officers, staff nurses, pharmacists, laboratory technicians, counselors, data entry operators, housekeeping staff, Lady Health Visitor (LHVs), and others, across the 52 facilities in service provision of oral contraceptives, including the newer methods-combined oral contraceptives, POPs, emergency contraceptive pills (ECPs) and Centchroman. Further, MCSP conducted two-day, all-staff orientations at these facilities in the five states on the two newer contraceptives added to the FP basket—POPs and Centchroman. These orientations served as a platform to discuss the way forward for establishing quality service provision and address the identified gaps at baseline for each focus facility. The facilities were given an overview of the two new methods, including the mechanism for action, timing of initiation, management of missed pills, and side effects of POPs and Centchroman. Another key aspect for rollout was the integration of training on these newer methods through existing state level training structures. For example, in Chhattisgarh, the training was conducted through the State Health Resource Centre (SHRC),[D] by integrating the module developed by MCSP into the state's routine training program. In Odisha, the training was also conducted with the support of National Health Mission). MCSP trained the master trainers in the state, who in turn trained the frontline health workers. MCSP was also allowed to update the service registers maintained at the demonstration facilities to include information about POPs and Centchroman acceptors. MCSP trained 98.6% (8,095 of 8,212) of the

[D] The State Health Resource Centre, Chhattisgarh, is an autonomous organization set up to provide additional technical support to the state department of health and family welfare for improving the access, quality, and equity of the public health system.

accredited social health activists (ASHAs) and ANMs attached to the demonstration facilities in the five states, in key messages about FP methods including the newly introduced POPs and Centchroman. In addition, to address the lack of information and job aids available, MCSP developed key IEC materials aimed at discussing a range of contraceptive options and job aids such as algorithms for client follow-up.

Basket of choice for FP methods expanded in facilities

The impact of expanding contraceptive choice on improving contraceptive use and maternal health outcomes is well established in global health literature and research. For each additional contraceptive method made widely available in a country, the percentage of married women using contraception increases by an average of 3.3 percentage points (according to analysis of data from demographic and health surveys in 44 countries).[14] Analysis of evidence from 1982 to 2009 shows that use of modern contraception increases when newer methods are made available because more methods means more options for more women and couples with differing needs. Increasing availability of one new method can increase contraceptive prevalence by 8 percentage points.[15] At the same time, data collected from married women in demographic and health surveys (DHS)conducted in 34 countries (including India) between 2005 and 2010 showed that 38% of the women estimated to have unmet need had used a contraceptive in the past, but later discontinued it despite not wanting a pregnancy (DHS and NHFS). Expanding contraceptive choice can substantially reduce discontinuation of contraceptives by encouraging women/couples to switch to another method if they are not satisfied with their current method. Greater contraceptive choice with the addition of one new method or its equivalent was associated with an 8 percentage-point decrease in contraceptive discontinuation.[16,17]

As of January 2019, all 52 demonstration facilities were offering the additional methods of Centchroman and POPs as FP options. These facilities serve a population of 2,309,197 women of reproductive age (Source: Census 2011). In addition to the 52 demonstration sites, approximately 139 facilities also benefitted from the training, materials, and supervision. As a result, Centchroman services were expanded in at least 68 facilities, taking the total to 120 project facilities, with more than 1,796 new Centchroman acceptors.

MCSP undertook a study to generate evidence and learnings to inform the scale-up of the newer contraceptive methods piloted in the program. The study sought to understand the perspectives of users and providers regarding the introduction of POPs and Centchroman into the FP basket. The quantitative part of the assessment was meant to describe the 6-month continuation rates of POPs and Centchroman, which is an indicator of quality and acceptability. The qualitative part involved in-depth interviews (IDIs) with government health officials at district and state levels, health service providers (doctors, staff nurses), and FP counselors at the demonstration facilities to learn the providers' perceptions of facilitators and barriers to the introduction of POPs and Centchroman. IDIs also were conducted with the users of the two methods about their experience of using the newer methods of contraception. The 6-month continuation study could successfully follow up 143 POP users and 142 Centchroman users from an original recruitment sample of 200 POP and 200 Centchroman clients. The study found that the majority of users were postpartum women in the 18-25 age group, and among the study participants 76.2% accepted POP and 59.9% Centchroman. Of the acceptors, 84.5% of Centchroman and 83.9% of POP were in the 1-2 living children group. About 80% of women were housewives from lower middle class. The majority of POP (86.7%) and Centchroman (83.1%) users were first-time FP users. Our findings indicate that these new pill methods have the potential to serve as "gateway" methods to attract first-time users of contraception into the program. Continuation rates for both methods look similar over time; the 6-month continuation rate for Centchroman was 40.8% and for POP 41.3%. There was some evidence to show, however, that counseling was inadequate. More research will be needed to determine whether use of a pill such as Centchroman, POP, or even oral contraceptive pills (OCPs) is associated with higher likelihood of eventual use of other methods regardless of early discontinuation. Other recent studies have found that prior use of contraception is associated with uptake of methods.[18,19,20] When asked about their history of using FP method, knowledge about FP methods, awareness about side effects of the selected method, and family support:

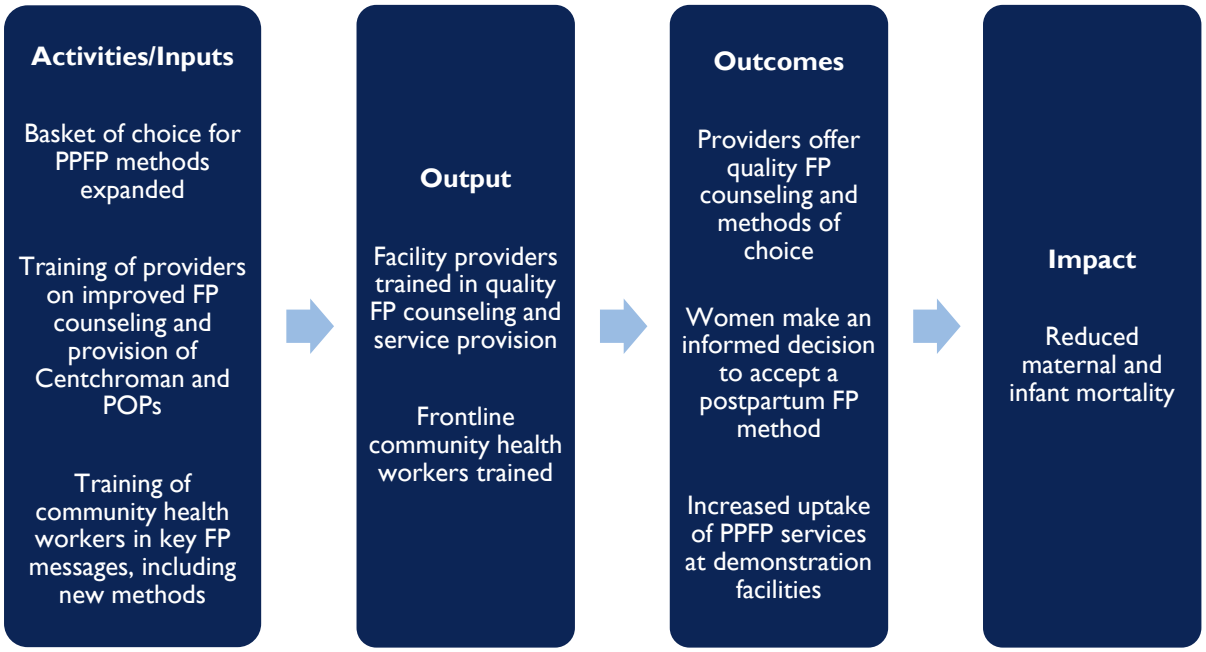
- The majority of the study participants were new to FP, 83.1% (Centchroman) and 86.7% (POP) never having used a method before

- 27.5% (Centchroman) and 42.7% (POP) of participants reported knowing of no FP methods, other than the method used
- Only 12.6% (Centchroman) and 8.4% (POP) of participants reported knowing of 3+ FP methods, other than the method used
- Only approximately 50% of acceptors reported that they were informed about the side effects of the method adopted

Nearly half of acceptors of both methods were not informed of the side effects of the method opted by them. This could have led to poor continuation among the users of each method. Though only a handful of both POP and Centchroman users reported problems while taking pills, only about 10% users of both methods were aware of the method-related side effects such as bleeding/menstrual related, headache, abdominal pain, mood changes, etc. This is similar to what has been observed in other studies. Women's knowledge of what to expect from the methods they were taking was inadequate and points to gaps in counseling and quality of care, although these were partially remediated by telephonic follow-up. However, 63% of women who discontinued for method-related or unspecified reasons switched to another method, something we did not see in our study.

2. MCSP contributed to increased uptake of PPFP services in 52 program-supported public sector facilities in seven districts of Odisha, Chhattisgarh, Maharashtra, Telangana, and Assam states.

Figure 4: Detailed ToC for Contribution Statement 2



Providers and frontline community health workers have improved capacity to offer quality FP counseling, leading women to accept newer FP methods in postpartum

The MCSP baseline assessment found that the uptake of institutional level PPFP was very low in all states—15% each in Chhattisgarh and Odisha, followed by 12% in Maharashtra and 9% in Telangana, with negligible to none in Assam. In addition, the PPFP method-mix offered was limited only to postpartum sterilization and PPIUCD. To focus on the postpartum period, the selection of appropriate providers was very critical. Hence those providers who were posted in labor rooms, involved in delivery and postpartum care, and likely to be most in contact with women coming to the facility for delivery were identified and trained.

With the objective to prepare women for postpartum contraception use, the FP counselors were encouraged to reach out to women in the antenatal period and assist the women in making an informed and voluntary decision about the type of contraceptive they would like to choose in postpartum. The counselors also reached out to women when they came to the facility for delivery as well as in immediate postpartum until they were discharged. Additionally, women who came for the immunization of their children and any walk-in FP clients were also counseled. MCSP advocacy with the state and district governments resulted in 85% of the intervention facilities (44 of 52 facilities) having a dedicated FP counseling area and 92% of the demonstration sites (48 of 52 facilities) having at least one FP counselor trained in the two newer methods (POPs and Centchroman). Results show that from PPIUCD and sterilization being the primary methods chosen postpartum, there was a re-distribution of method uptake with the introduction of new methods. During an 18-month period, of the 173,216 women delivering in the 52 facilities, 2.4% accepted POPs, 2.8% accepted Centchroman, 9.4% accepted PPIUCD, and 4% accepted sterilization. Of the women who accepted POPs or Centchroman, 98% and 72% respectively had received counseling either during the antenatal period or during the postpartum period (Source: HMIS data). Sixty-nine percent of the women who accepted a contraceptive in postpartum (sterilization/PPIUCD/POPs/Centchroman) were counseled at the time of antenatal check-up (Source: HMIS December 2018). Quality counseling services with a dedicated counseling area, trained counselor, and user-friendly counseling tools helped the clients to understand the importance of PPFP, the various available options, and choosing the appropriate method for themselves. The literature has shown that when women are provided comprehensive counseling and are offered a range of contraceptive choices as part of delivery care, 20% to 50% of them will leave the facility with a method.[21] MCSP study results suggested there were gaps in some cases in the counseling information provided, however, so there is still room for improvement.

To reinforce messages, the program refreshed the knowledge of ASHAs/ANMs on FP and trained them on key messages, including the newer contraceptives being introduced in the public sector basket. Program training data show that 98.6% of all ASHAs and ANMs in all five states were either directly trained by MCSP or through the respective state governments. ASHAs and ANMs are the first point of contact at the community level and act as a link between the community and facility level services and thus assumed to be important influencers with regard to service uptake by women from the public health system. Hence the program leveraged the access that ASHAs and ANMs have to the community, particularly women in the reproductive age group, to share information about PPFP methods. An indicator that shows not only the clients but that their families are also part of the decision-making process to use newer contraceptives is: 'Spouse or an important family member of the client included in counseling, with the client's consent'. This increased from 42% at baseline to 79% at the time of fourth assessment (n=47, as the assessment using the service delivery standards, is carried out in only objective 2 facilities, of which 47 overlap with objective 1 facilities) (Source: Service delivery standards—baseline 2016 and fourth assessment 2018). The results from the learning study among women who agreed to be contacted by phone after method initiation showed that 90.1% of Centchroman users and 85.3% of POP users had spouses/family members who were supportive of their decision to use these methods.

Increased uptake of PPFP services

An analysis of 47 DHS datasets from low- and middle-income countries found that short preceding birth intervals (less than 18 and 24 months) have higher odds of neonatal and under-5 mortality.[22] It has been estimated that FP can avert more than 30% of maternal deaths and 10% of child mortality if subsequent pregnancies are more than 2 years apart.[23] Closely spaced pregnancies within the first year postpartum are the riskiest for mother and baby, resulting in increased risks for adverse outcomes, such as preterm, low birth weight and small for gestational age.[24] In developing countries, the risk of prematurity and low birth weight doubles if conception occurs within 6 months of a previous birth, and children born within 2 years of an elder sibling are 60% more likely to die in infancy than are those born more than 2 years after their sibling.[25]

The proportion of clients accepting any method of FP immediately postpartum (prior to discharge from the facility after birth) rose steadily from 10% to 17% to 21% between April to December 2016, April to December 2017, and April to December 2018, respectively, with nearly 5% being the contribution of POPs and Centchroman as per the latest data (April to December 2018) (See Figure 5, below). The

popularity of POPs and Centchroman also may be attributed to the two being non-invasive, client-oriented PPFP methods unlike the others (PPS and PPIUCD), which are invasive and provider dependent. Proportion of women accepting PPIUCD also shows a considerable increase from 8.1% in April to December 2016 to 11.5% in April to December 2018 (HMIS/MPR). Results show that the addition of newer contraceptives led to an increase in the total number of FP users at the demonstration facilities during the program period as well as greater method-mix (See Figure 6, below). The results from the learning study also found, however, that though the program successfully created new users for Centchroman and POP in focus facilities, the 6-month continuation study findings suggest that quality of counseling services needs greater attention. 60.8% of POP users and 49.3% Centchroman users were not aware of what to do in case of missed pills. The switching pattern among women who discontinued POP and Centchroman before 6 months: 83.3% of POP and 72.0% Centchroman users did not switch to any method. The majority of those who switched to other methods opted for less effective methods (condoms, withdrawal).

Figure 5: Increasing PPFP initiation/acceptance prior to discharge after birth

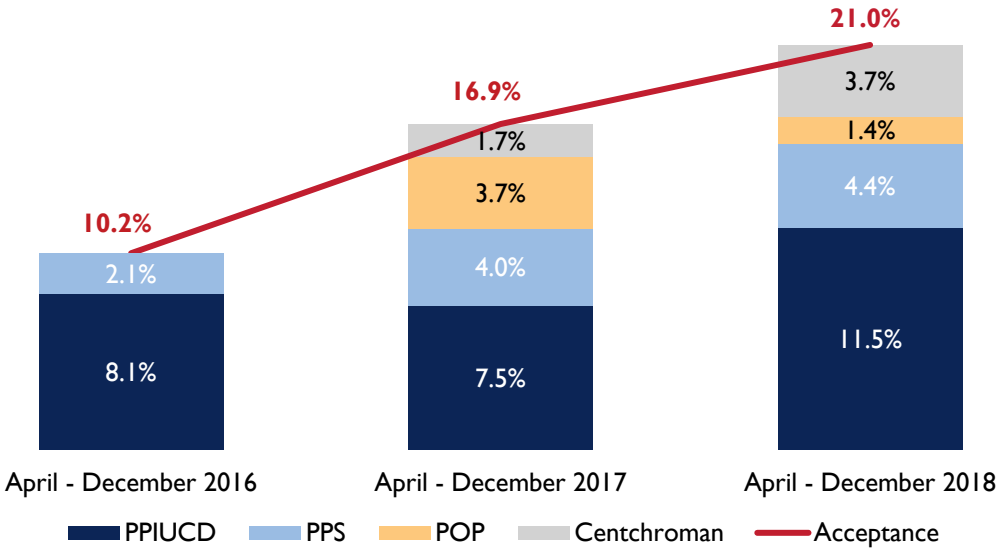
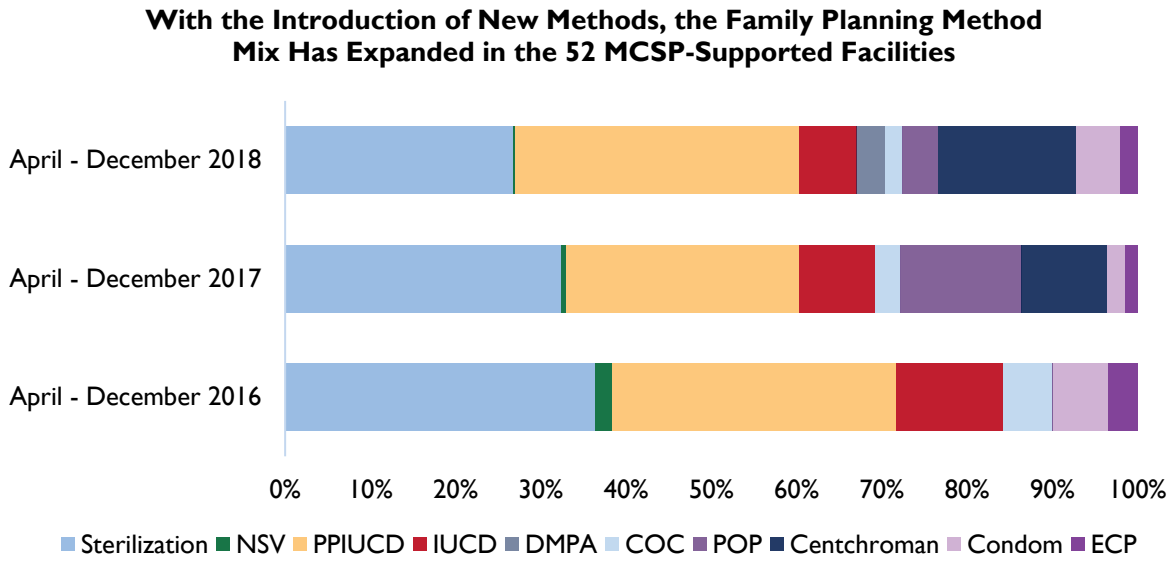
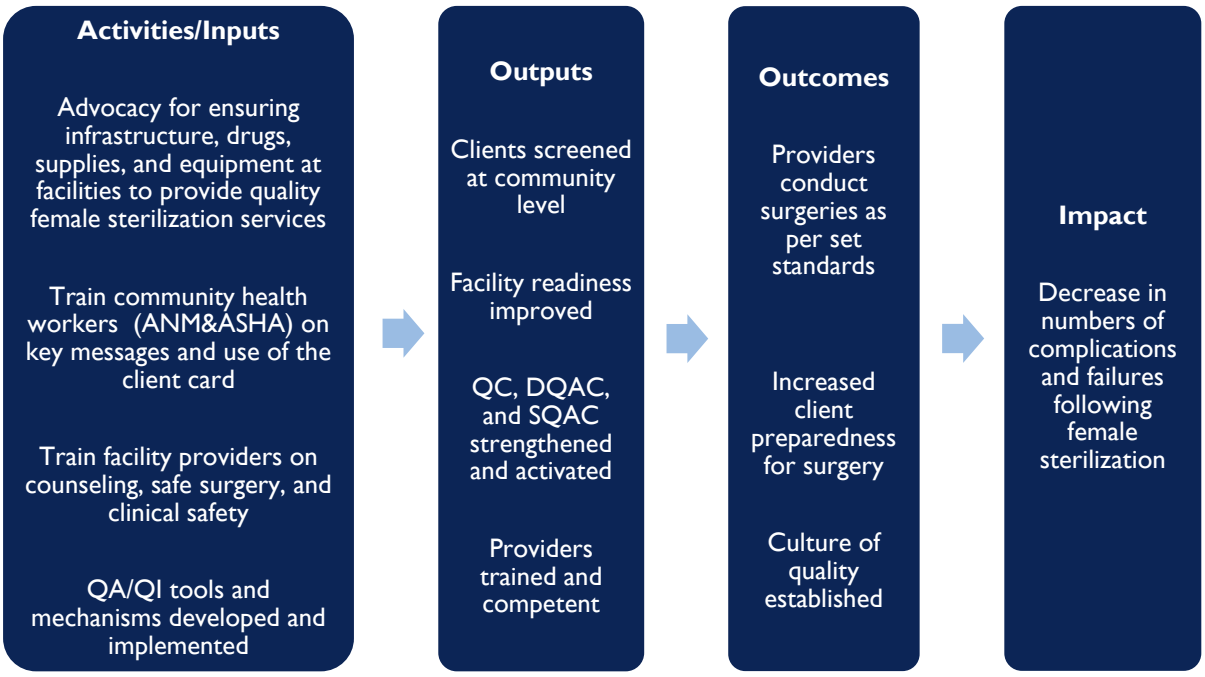


Figure 6: FP method mix at 52 facilities



3. Providers' surgical skills and compliance with female sterilization standards improved with MCSP's support in 186 facilities in 17 districts across Odisha, Chhattisgarh, Maharashtra, Telangana, and Assam states.

Figure 7: Detailed ToC for Contribution Statement 3



MCSP first undertook a baseline assessment across all 186 demonstration facilities using the Performance Standards for Quality Family Planning Services' tool. The assessment included five thematic areas (facility profile, counseling method and skills, surgical procedure, client follow-up, and management system for quality assurance). The main objectives of the baseline were:

- To assess readiness of facilities for organizing FDS days to provide quality of FP services
- To identify the gaps in service provision of FP services to be addressed for improving quality in FP services
- To assess respectful care and voluntarism of clients accepting female sterilization services
- To understand management for quality of FP services.

The Standards Assessment tool used an "All or None" scoring method. There were 24 standards. Each standard has many verification criteria (VC). Against each VC there were three options for data collection—first option was "Yes" if the VC was found achieved, second option was "No" if the VC was found not achieved, and third option was "Not applicable" if the VC was not relevant for the facility. If all the VCs of a standard has "Yes" or "NA," then the standard assigned score "1". If any VC was found "No" among all the VCs of a standard, then the standard assigned score "0". In facilities where counseling could not be observed, role play sessions were conducted with the FP counselor to assess the knowledge and skills.

Improved provider skills and compliance with female sterilization standards led to improved quality of care

MCSP introduced a QA tool called the clinical safety checklist (CSC) to standardize the clinical practices to be followed while conducting female sterilization as per GoI guidelines. CSC provides stepwise guidance to the surgical team for pre-, intra- and post-surgery practices to ensure safe surgery and respectful care to the clients. It enlists service delivery measures that are essential and non-negotiable to follow for each client as a matter of their rights, including aspects that the clients themselves may not be aware of or know the importance of. The CSC has been implemented in all 186 demonstration facilities across five states. A comparison of baseline and fourth assessment findings from the 186 facilities shows improvements in several key areas, including clinical procedures and infection prevention practices.

Clinical Safety Checklist

1. Organized by four pause points, reflecting client's journey from admission to discharge
2. Consists of 22 critical steps to ensure adherence and standardization of pre-, intra-, and post-procedure tasks
3. Promotes shared teamwork and reduced reliance on memory

Some of the documented incorrect practices conducted during female sterilization in India are shaving or clipping the hair at the operation site, which significantly increases the chances of infection, enema, and use of bicycle pumps instead of an insufflator to introduce air into the women's abdomens.[26,27,28] The competency-based training of providers carried out by MCSP built their capacity not only to adopt best practices, but also to stop performing incorrect, non-essential and harmful practices while conducting female sterilization. Observations by MCSP staff on FDS days and analysis of the baseline and fourth assessments carried out using the female sterilization service delivery standards observation checklist revealed reductions in the use of multiple antiseptics for abdominal skin preparation, crushing of tubes, routine use of unnecessary investigations, use of non-absorbable sutures, use of undiluted local anesthetic not calculated as per body weight and routine use of drug cocktail before surgery.

Table 4: Changes in infection prevention practices during female sterilization services during the program period

S.No.	Desired Practice	Baseline assessment (2016) % facilities (n 186)	Fourth assessment (2018) % facilities (n 186)
1	The surgical team/operation theater (OT) staff change into OT slippers/shoes, cap, mask upon entering the OT	31	35
2	A functional hub cutter and sharps container used in the OT	35	72
3	Surgical dressing periodically checked for any soakage (oozing or bleeding)	24	26
4	Biomedical waste is segregated at source and disposed in color-coded bins	27	75
5	Gloves/utility gloves (preferable) are used for cleaning OT floor, instruments and linen	13	69
6	Three steps of instrument processing (decontamination, cleaning and rinsing, HLD/autoclaving) are followed	24	74
7	Used instruments immersed in 0.5% chlorine solution for 10 minutes after each case	22	33
8	Surgeon and assistant discard used gloves in 0.5% chlorine solution	12	33

S.No.	Desired Practice	Baseline assessment (2016) % facilities (n 186)	Fourth assessment (2018) % facilities (n 186)
9	Surgeon and assistant clean hands with surgical spirit between each case	4	32

Data Source: Performance Standards for Quality Family Planning Services assessment

Table 5: Change in clinical practices during the program period

S.No.	Desired Practice	Baseline assessment (2016) % facilities (n 186)	Fourth assessment (2018) % facilities (n 186)
1	Ensures that the client is eligible and medically fit for sterilization operation by confirming that pregnancy has been ruled out, reviewing client's records for relevant medical history, physical examination findings, and lab investigations (per GoI Sterilization guidelines)	33	41
2	2% plain xylocaine is diluted to make 1% xylocaine before infiltration	21	32
3	Surgical steps are followed: • Abdomen is opened in layers using correct instruments for each layer • Fallopian tube is held with Babcock forceps and identified by tracing up to fimbrial end • Chromic catgut (preferably 1-0) is used • Tube is transfixed and 1 cm of the tube is cut • Stumps are checked for hemostasis • Same procedure is repeated on the other side	22	28
4	The client was asked to empty her bladder just before beginning the procedure and received sedation and analgesia using injections fortwin and phenargan in appropriate dosages	22	31

Table 6: Reduction in incorrect practices as implied by improvement in corresponding correct practices

S.No.	Desired Practice	Baseline assessment (2016) % facilities (n 186)	Fourth assessment (2018) % facilities (n 186)
1	Use of readily absorbable sutures (Incorrect practice—Use of non-absorbable sutures for tubal ligation)	56	70
2	Use of diluted local anesthetic as per body weight (Incorrect practice—Use of undiluted local anesthetic that is not calculated as per body weight)	21	33
3	Use of GoI recommended drugs for sedation and analgesia (Incorrect practice—Routine use of drug cocktail before surgery)	24	31

Though we did observe some decline in prevalence of these incorrect practices during the sterilization procedure from baseline to fourth assessment (Table 6), incorrect practices such as administering undiluted local anesthesia without accounting for body weight and non-use of GoI recommended drugs for sedation and analgesia were still observed in more than 50% of facilities during the fourth assessment. Non-use of GoI recommended drugs for sedation and analgesia could be attributed to non-availability of these drugs in the majority of the facilities. The resource availability data at fourth assessment shows that both fortwin and phenargan (GoI recommended drugs for sedation and analgesia) were available in only 43.5% and 38.7% facilities, respectively. Regarding the practice of not calculating the dose of local anesthesia as per body weight, our programmatic experience suggests that this is one of the rigid practices that requires a behavior change of service providers and therefore would need more time to change.

To promote minilaparatomy surgery as the preferred and less invasive method of female sterilization and standardize the sterilization procedure as per the MoHFW, GoI's guidelines, MCSP conducted refresher minilap standardization training. Of the 186 demonstration facilities, 58 facilities did not have trained providers to conduct minilap surgeries at baseline. As a result of the MCSP efforts, 13 of the 58 facilities that did not have trained minilap providers earlier, now have trained providers. Because of a shortage of providers, MCSP also made arrangements to assign a provider to a facility where there is no trained provider available from the nearby facility to conduct scheduled FDS days. Also, the proportion of facilities having empaneled providers for minilap increased from 55% to 77%.

Table 7: CSC data shows improvement in clinical practices

	Jan to Mar 17 (N 2,163)	Oct to Dec 18 (N 2,107)
Is the client prepared for the surgery?	73%	81%
Has sedation and analgesia been given?	49%	57%
Has the incision site been scrubbed adequately and sterile drapes used?	68%	81%
Have fresh pair of sterile gloves been used for this case?	67%	83%
Is surgery done under local anesthesia (LA)?	57%	80%
Is client's status monitored and recorded during the surgery?	62%	80%
Is recommended surgical technique for minilap followed?	63%	73%

Clients examined by the provider before discharge increased from 57% to 73% between January and March 2017 (N=2,163) and October and December 2018 (N=2,107), respectively. The same assessment showed that advice on discharge explained verbally and in writing to client and attendant increased from 57% to 71% (Source: CSC). The proportion of clients who received post-surgery follow-up services at the prescribed intervals increased between January and March 2017 and October and December 2018 for all three follow-ups. The first follow-up, which is to be conducted within 48 hours of the procedure, increased from 46% to 82%; the second follow-up, done at 7 days, rose from 32% to 62%; and the third follow-up increased from 5% to 9% (Source: MPR). An analysis of the CSCs filled for 2,163 client surgeries between January and March 2017 showed that the client's status was monitored and recorded during surgery in 62% cases, which increased to 80% when the similar analysis was repeated for 2,107 client surgeries conducted between October and December 2018. The proportion of clients in whom the surgery was conducted under local anesthesia increased from 57% in January and March 2017 to 80% in October and December 2018. The same assessment showed an increase from 59% to 72% in the number of clients observed for at least four hours post-surgery (Source: CSC).

According to GoI directives, Quality Assurance Committees (QAC) are required to be formed by all states at the state and district levels, to ensure that the standards set by GoI for female and male sterilization are followed in respect of pre-operative measures, operational facilities, post-operative care, etc. GoI also suggests the formation of a facility level committee, comprising service providers from the facility itself, at each service delivery site to periodically monitor and review the sterilization service. This

committee, called the Quality Circle (QC), is expected to undertake a process of self-assessment that will identify issues related to quality improvement, help in resolving the identified problems, recommend solutions, and ensure that high-quality services are provided. MCSP advocated for the formation of QCs at all 186 demonstration facilities and for their meetings to be held quarterly as per GoI guidelines. As a result, QCs were formed at 182 of 186 facilities during the program period. MCSP team completed facility level indicators based on the monthly progress report, to be presented in the form of a dashboard to enable QCs to use data for decision making for improved service provision. QCs in 81% (151 of 186) of the facilities monitored sterilization services in their respective facilities (Source: PMP December 2018). This indicates a fairly high ownership of the facility staff to ensure quality of sterilization services at their respective facilities.

MCSP advocated with the respective Medical Officers In Charge (MOICs) to address the gaps identified at their facilities during the baseline assessment so that the trained providers would have an environment that was conducive to providing quality services. This included improving the infrastructure of the health facilities, the readiness of the operation theatres, gaps in the equipment and supplies, and essential drugs required for female sterilization. For additional resources required to fill the identified gaps, MCSP raised the issue at different meetings such as during Rogi Kalyan Samiti (Patient Welfare Committee/Hospital Management Society) (RKS) meetings, District Quality Assurance Committees (DQAC) and State Quality Assurance Committee (SQAC) meetings, as well as during other state and district level meetings held every year. Results show improvements in infrastructure, as well as in availability of drugs, supplies, and equipment between baseline and the fourth assessment conducted by MCSP.

Table 8: Improvement in infrastructure and supplies at health facilities

S.No.	Indicator	Baseline assessment (2016) % facilities (n 186)	Fourth assessment (2018) % facilities (n 186)
1	There is an examination room/space equipped with examination table, mattress, foot stool, light source, and curtain, for performing client assessment	14	68
2	There is an area for giving sedation and analgesia to the female client(s) before taking her inside the OT	39	83
3	The OT is closed and well ventilated with an air conditioner	52	74
4	OT table for female sterilization available with head tilt provision (to assume Trendelenburg position), if required	58	69
5	Protective surgical attires such as cap, mask, aprons, and gloves available in adequate quantity	53	77
6	Functional shadow-less lamp available	47	66
7	15 minilap kits available for one FDS day at the facility	8	22
8	Emergency medicine tray with all essential non-expired drugs	8	44
9	Sterilized linen and consumables in dressing drum available	66	82
10	There is a facility of running water through elbow tap or bucket and tap available in OT area	55	80
11	There is a conveniently located area for decontamination, washing, and cleaning of used instruments followed by HLD or autoclaving them	37	78

Quality starts with conducting of FDS to client pre-registration to service provision at facility as per GoI guideline to client feedback about the service received and to regular feedback mechanism for improvement by a system. Here DQAC and QC play a critical role to assure quality services. Program data shows that average compliance on FDS days was 48% (838 of 1,751) for the period October and December 2017 and 77% (1,180 of 1,536) for October and December 2018, indicating improved

compliance during the program. Planned FDS increased from 39% to 75%, and unplanned services decreased from 61% to 25% from January 2018 to December 2018. This indicates that more sterilization services are being provided through the FDS approach and that ad-hoc unplanned procedures are declining.

MCSP introduced client cards and established an integrated voice response system (IVRS) to increase community involvement in FP service delivery, including female sterilization, in the two states of Chhattisgarh and Odisha. The IVRS provides three kinds of services and can be integrated with GoI's "*MeraAspatal*" application to ensure sustainability. IVRS provides information on different methods of contraception- Information about the various methods of contraception is recorded on the IVRS in a story telling format to make it interesting for the listeners. One can dial in and listen to information on the method(s) of one's choice. Promotion of voluntarism and informed decision making in choice of contraceptive was one of the key thrust areas of all trainings and technical assistance from MCSP. Pre-registration for female sterilization services was also made possible through this platform.

Client pre-registration was carried out at 86% (71 of 83) facilities in December 2018 compared with 77% (53 of 69) facilities in August 2018. In Odisha and Chhattisgarh, 1,283 FP clients gave feedback through IVRS on services they received. During the period there is an improvement in regularization of DQAC meeting. Meeting minutes of DQACs are being uploaded on a government-designated website. DQACs are discussing the quality issues as they were traditionally focusing to indemnity. In Nasik, DQAC passed a resolution to all facilities to conduct QC meeting regularly and share the meeting minutes to DQAC. In Dhamtari, DQACs issued a letter to adapt ranking of facilities by using Quality Index (QI) developed by MCSP to be rewarded best performing facility in terms of quality. QI is a MS Excel-based tool that has indicators from GoI's HMIS and client feedback received through the IVRS platform. MCSP developed the QI with the intention of shifting focus from the individual and to the facility as a driver for quality change. The QI ranks MCSP focus facilities on their FP program performance, quality of FDS services provision, and client feedback on the quality of service providers (using the IVRS platform). It is evident that meetings of DQACs and QCs and use of IVRS together have emerged as an institutional mechanism to monitor quality.

Culture of quality improvement created through improved structures and mechanisms

MCSP continued to apply the Performance Standards for Quality Family Planning Services' tool across all 186 demonstration facilities during the project to assess changes in quality and progress toward creating an institutionalized culture of quality improvement. The assessment included five thematic areas (facility profile, counseling method and skills, surgical procedure, client follow up, and management system for quality assurance). As per GoI guidelines, the state and district level QACs for FP services are prescribed to be made functional whereas QCs are only "suggestive." Program advocacy efforts at the state and district levels have led to issuance of necessary directives to have facility level QCs constituted and made functional. With constant support, MCSP program teams have worked with QCs at focus facilities to bring in the understanding on concepts of local management, increased ownership, and have during the project strengthened them. The progress of QCs is also a matter of assessment at the level of district by DQACs. A culture of quality improvement has evolved in facilities with QCs with regular review of FP program progress using dashboard as well as quality of FDS strategy and client feedback through IVRS (in Odisha and Chhattisgarh).

Improved adherence to standards and increased client preparedness

As a result of training and support provided by MCSP, providers adopted best practices such as checking for client's fasting status, asking her to void urine just before beginning the procedure to minimize risk of bladder injury, ensuring that GoI recommended drugs for sedation and analgesia were given in recommended dose, route and time, dedicated areas were made available for making clients wait comfortably until the drugs had the desired effect before surgery, and ensuring that an informed consent had been taken before giving sedation. These measures improved client preparedness so that surgery could be carried out smoothly. At the time of baseline, the client was prepared for surgery by being asked to empty her bladder just before beginning the procedure and was given sedation and analgesia using

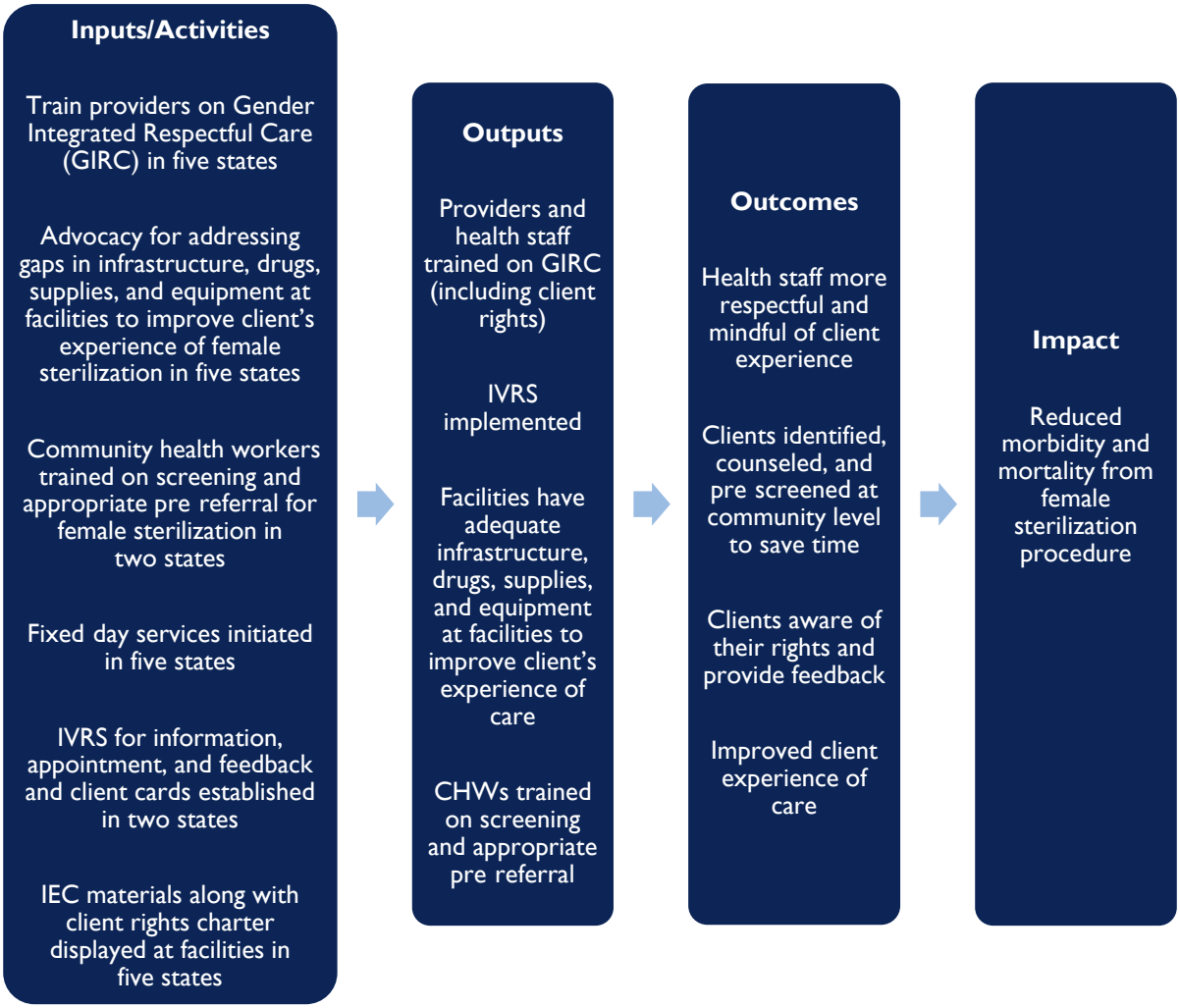
injections of fortwin and phenargan in appropriate dosages in 22% of the facilities. This increased to 31% at fourth assessment.

MCSP also introduced a client card that was a tool to link the community level services with the facility level services and to ensure that follow-up protocol was conducted while keeping a record of proceedings for future reference. The client brings the client card when she visits the facility for sterilization. The staff nurse at the facility records the following information in the client card: type of procedure conducted (minilap/laparoscopy), timing of the procedure (postpartum/interval), type of anesthesia given, any complications during or after the procedure, and name of the operating surgeon. The staff nurse gives the duly filled client card back to the client at the time of discharge and explains to her the do's, don'ts, and warning signs post-surgery. At the time of each of the three follow-up examinations, the ASHA/ANM/facility staff record whether the client has any postsurgery complication in the client card. During the third follow-up, conducted one month after the procedure, FDS facility staff deposit the client card at the facility and issue the sterilization certificate after ruling out pregnancy. The card thus acts as a tool to link the community level services with the facility level services. The client card was introduced only in Odisha and Chhattisgarh because the program had greater presence in these two states. As a result of the counseling and pre-screening at the community level, better client preparedness was observed when the clients came for sterilization. Instructions given to the clients by FLWs for the scheduled day of surgery also led to better client preparedness. FLWs informed the clients not to eat anything at least 6 hours before the surgery, remove all jewelry, bathe, and wear clean, loose fitting clothes. Results show a high percentage of clients were fasting for six hours before surgery (97% in October and Dec 2018), as is the clinically recommended practice.

The percentage of female sterilization clients who experienced a complication after the procedure stayed about the same 35 (of 3,820 sterilizations, or 1%) in 2017 and 18 (of 1,909 sterilizations, or 1%) in 2018-2019 in Chhattisgarh and Odisha states. During the same period, the number of facilities at which female sterilization clients experienced complication after the procedure reduced from 12 to six in the two states (Source: HMIS, MoHFW, GoI 2017-2018 and 2018-2019). In general, the number of sterilization clients has dropped from year to year nationally. Female sterilization as a percentage of the FP method mix has dropped from NFHS-3 to NFHS-4 from 37.3% to 36%. Among our focus states, this is especially true for Odisha, where cases dropped from 103,320 in 2014-2015 to 77,705 in 2018-2019 (Source: National HMIS).

4. MCSP contributed to a shift from provider-centric to client-centric services, resulting in improved client experience of care.

Figure 8: Detailed ToC for Contribution Statement 4



MCSP supported improvement in female sterilization services in five states—Assam, Telangana Maharashtra, Chhattisgarh and Odisha—but the latter two received extra support and applied additional interventions.

Health staff more respectful and mindful of client needs led to greater client satisfaction

As mandated by GoI's Quality Assurance Guidelines, MCSP assisted the facilities in organizing FDS service days, which includes preparation of FDS service calendars based on expected client load, line listing of pre-registered clients, mobilization of the provider if required, and preparation of the duty roster for FDS day. As a client, there is great uncertainty regarding receiving a desired service on the day of visit to a public health facility because of various existing systemic challenges. There have been multiple instances where the clients have been denied sterilization services because of an unexpected large turnout of clients and/or non-availability of sufficient number of surgeons to undertake the required number of procedures. To avoid this kind of situation and streamline service delivery, the facility prepares a line list of pre-registered clients. The surgical team prepares accordingly. A duty roster is prepared for the FDS day, and if required a surgeon is mobilized from outside the facility.

MCSP guided the facilities to optimize their resources to best meet their client load while ensuring quality of care. The frequency of FDS service days is decided based on the expected caseload of a facility and GoI criteria of maximum of 30 surgeries per surgeon per day. MCSP also supported the facilities' use of a manager's checklist to confirm the preparation for FDS day. A block program manager or a person appointed by the facility-in-charge uses the manager's checklist to check the preparations in advance, such as FDS roster prepared, surgeon confirmed, clients pre-registered, laboratory services organized, examination room, pre-op, OT, post-op area organized, etc. This ensures that if there are any gaps, the facility-in-charge would have time to address them before the FDS service day. In Odisha and Chhattisgarh, the facilities share their respective FDS calendars with the district health authorities who prepare a compiled calendar for the whole district. In Maharashtra, facilities prepare their FDS calendars once a year and inform their respective FLWs about it. FLWs maintain a record of eligible couples in their catchment area along with their current contraceptive usage and need. FLWs confirm at the facility one week before the scheduled FDS day and, based on their record, contact couples for sterilization. FLWs facilitate the admission of clients into the facility one day before FDS, thereby ensuring only planned services are provided on the FDS day.

The MCSP intervention thus enabled the health facilities to organize and prepare better for FDS service provision, leading to improved access and assurance of services per the FDS calendar. Eighty-three demonstration facilities across the five states provided FDS services in December 2018, compared with 69 demonstration facilities in August 2018. In January 2018, 44% of the total sterilization clients (1,877 of 4,270) were pre-registered, and by December 2018, this increased to 88% (3,716 of 4,223).

Table 9: Change in practices critical to providing respectful care

S.No.	Indicator	Baseline assessment (2016) % facilities (n 186)	Fourth assessment (2018) % facilities (n 186)
1	Confirms that the client has made a voluntary informed choice for this method	19	42
2	Encourages the client to ask questions/express concerns, if any, and listens to her carefully without displaying a stigmatizing or judgmental attitude	17	42
3	Female attendant present in the examination room/space if client assessment done by a male provider	19	66

At baseline, the provider answered questions asked by the client or her companion in 42% of the facilities, whereas at fourth assessment it was in 79% facilities. At baseline, 59% of providers at the demonstration facilities ensured that the client/couple who chose sterilization has information about other FP options available, whereas at fourth assessment it was in 75% facilities (Source: Service delivery standards—baseline 2016 and fourth assessment 2018).

Change in the attitude of providers can be gauged by the 90% of the clients who sought services at the demonstration facilities and gave feedback using IVRS said they were comfortable asking questions to the providers (1,201 clients of 1,329 who responded to this question on IVRS). The majority of IVRS respondents said the providers answered their questions/concerns adequately/satisfactorily (1,190 clients of the 1,316 clients who responded to this question). At the time of follow-up visit, the proportion of providers who asked the client if she had any problem and addressed her queries/concerns rose from 38% at baseline to 66% at the time of fourth assessment (Source: Service delivery standards—baseline 2016 and fourth assessment 2018).

Female sterilization recovery area, Endline (Odisha state).Photo credit: Dr. Jogi Bhaskar Patra they are from the facility CHC Kalampur, Kalahandi District, Odisha.

Female sterilization recovery area, Endline (Odisha state). Photo credit: Dr. Jogi Bhaskar Patra.

Results also showed an increase in the number of clients who were counseled and informed of potential complications before the procedure to confirm the client's choice to undergo sterilization. Baseline assessment conducted using the CSC in 2,163 client surgeries between January and March 2017 found that the client reconfirmed her decision for sterilization in 86% cases before the procedure was conducted. This increased to 98% of cases between October and December 2018 when a similar assessment was repeated in 2,105 client surgeries (Source: CSC).

The medical officer examines the client before discharge, and the duly filled client card is given back to the client. The purpose of recording all the information in the client card is to provide a brief summary of the procedure to facilitate follow-up care in case the client does not return to the same FDS facility and seeks follow-up elsewhere within the health system. The client and her attendant are instructed about follow-up care and visits. Of the 857 clients who underwent sterilization (as of 22 February 2019) and gave feedback on IVRS, almost 78% (671 of 857) reported that the post-procedure instructions were explained satisfactorily, including three follow-ups and do's and don'ts, to them or their companion (Source: IVRS Reports as of 22 February 2019).

Facility improvements and adjustments resulted in an improved client experience

MCSP emphasized the strengthening of health facilities, including the functionality of operation theatres for improved client experience and respectful care. The program advocated for infrastructure and services to be provided, keeping the client at the center of the process. This included advocating for:

- Reception area: Facilities to have seating arrangement for the clients who come for sterilization, drinking water, and separate clean toilets with running water for male and female clients.
- Pre-operative care: Space for examination with adequate privacy and equipment for initial assessment of clients to be earmarked, along with a dedicated area where clients could receive sedation.
- Operation theater: OTs to be well organized and adequately equipped for safe surgery and infection prevention. The MOICs were provided the necessary support to ensure that OTs had the required equipment such as sterile surgical drums, surgical trolley with instruments, examination table with mattress, footstep, shadow-less lamp, etc., by mobilizing resources through the RKS, DQAC and SQAC, if required.
- Post-operative care: Facilities to make arrangements for clients to be shifted from OT to the post-operative ward on trolleys or wheelchairs and ensure that all clients get an independent bed for recovery post-surgery.

A comparison of the data collected at the time of baseline in 2016 and fourth assessment conducted in 2018 shows the following improvement in the number of demonstration facilities having infrastructure and practices important to ensure client-oriented services and respectful care (See Table 10, below).

Table 10: Facilities with infrastructure critical to providing respectful care

S.No.	Indicator	Baseline assessment (2016) % facilities (n 186)	Fourth assessment (2018) % facilities (n 186)
1	There is a reception area to receive clients at the facility	71	98
2	Separate clean toilets with running water for male and female clients	52	82
3	Area for giving sedation and analgesia to the client before taking her inside the OT	39	83
4	Seating arrangement in waiting area	73	95
5	Any area/ward for keeping post-operative clients	69	87
6	Post-operative recovery room has beds with mattresses, sheets and blankets	41	80
7	Staff members assigned to take care of clients in the recovery room	36	71
8	The facility has a counseling room or corner with seating arrangement where privacy is maintained during counseling	26	84
9	The facility has a vehicle/ambulance/vehicles in running condition to return female sterilization clients home after discharge	59	93
10	Clients offered a bed post-surgery	60	70

MCSP also helped revitalize and train Rogi Kalyan Samiti (Patient Welfare Committee/Hospital Management Society) members on their roles and responsibilities as a facility level management structure responsible for QA and improvement in facilities. RKS helped identify solutions to enhance the experience of care, such as additional seating for female outpatient department (OPD)patients, having separate queues for male and female patients at OPD and drug dispensing counters, putting up partition with curtains/screens in counseling areas between OT tables and labor tables for privacy, reviewing client feedback, monitoring out-of-pocket expenditures incurred by patients, cleanliness in facilities and water supply, and procurement of instruments and equipment as required.

MCSP undertook a quasi-experimental observational study in two states of India, Chhattisgarh and Odisha, to assess the adherence of key evidence-based practices that are critical and target the major causes of complications related to female sterilization surgery. It also included practices that are important from the perspective of respectful care, informed consent, and voluntarism. The study compares health service providers' adherence to 20 key evidence-based practices between 12 intervention and 12 comparison health facilities before (baseline) and after (endline) the roll out of MCSP. The study participants included health service providers—doctors, nurses, ANMs—who were providing sterilization related services at the selected facilities during the two rounds of data collection and gave written informed consent to participate in the study. It also included women who sought and underwent female sterilization at the selected facilities during the observation period and consented to participate in the study. The observational data was collected by using a checklist, which included the practices, into four pause points, each of which represents an important stage of sterilization process. The four pause points were: on admission, pre-operative stage, intra-operative stage, and before discharge.

The study findings demonstrate an overall improvement in the postoperative monitoring and care in the intervention facilities. As a measure of the quality of service provision and respectful care, the program

focused on improving the practice of client transfers from the operating theaters to the postoperative ward, monitoring of vitals, and appropriate discharge after prescribed stay of 4 hours with an aim to strengthen timely detection and response to postoperative complications. The observation checklist captures essential elements of postoperative care, such as monitoring and documentation of blood pressure (BP) and pulse. GoI guidelines require client's vitals to be monitored and observed for select danger signs for at least 4 hours after surgery.

It is important that postop clients in a semi-sedated state are provided assisted-support during transfer to the postoperative ward. The practice of shifting clients on a trolley or wheelchair increased at intervention facilities from 45.4% in baseline to 56.2% in endline, whereas in control facilities it decreased 28.3% in baseline to 20.5% in endline. More efforts are needed to improve these practices at the comparison l sites.

Sterilization client being shifted on wheelchair. Photo credit: Dr. Jogi Bhaskar Patra.

The practice of monitoring of vitals—BP and pulse monitored postsurgery—increased from 7.5% in baseline to 28.4% in intervention facilities, while in comparison facilities it decreased from 0.4% in baseline to 0% in endline. Another important practice key to reinforcing the understanding of quality and respectful care for clients and their attendants is giving explicit advice, verbal and in writing, at the time of discharge. In the study this particular practice—duly filled discharge slip or client card with written instructions given to the client—increased significantly (31.7% in baseline to 88.6% in endline) compared with comparison facilities (19.6% in baseline to 10% in endline). In multivariate analysis, it is significantly associated.

Findings from the study demonstrated a significant improvement when the provider briefly explains the procedure to the client and encourages her to ask questions from baseline (22.1%) to endline (33.8%) in intervention facilities, while in control facilities there was a decrease in the practice from baseline (30.4%) to endline (5.5%). This clearly demonstrates the impact of the intervention that focused on orientation and ongoing supportive supervision at the facility and community levels on elements of respectful care and gender sensitization. Orientation of staff to the QA GoI guidelines also has helped facility staff become familiar with guidelines on effective communication and client-centered care. On the other hand, basic aspects of client-provider interaction and respect for women's care are lacking in the control facilities. A client-centered approach and respectful care also differ by women's socioeconomic status and the level of facility they receive services in, and gaps exist in the provision of dignified and supportive care.

Clients identified, counseled, and prescreened at community level to save time

MCSP trained frontline workers attached to the demonstration facilities in Odisha and Chhattisgarh to identify, counsel, and prescreen clients at the community level to confirm their eligibility for female sterilization. Prescreening involves checking the client's BP, hemoglobin level, urine sugar, urine protein, pulse rate, and pregnancy status—the same tests that the ANM conducts as part of routine ANC. Depending on the result of the screening, the ANM informs the client whether she is fit for sterilization. Prevalence of anemia and low hemoglobin levels are common reasons for women being turned away from sterilization services.

The ASHA or the ANM opens a new client card for every female sterilization client at the community level and records the result of the client's prescreening in the card. She informs the client to take the card with her while going to the health facility for sterilization. If a client is not found fit for sterilization, for instance if her hemoglobin is low, the FLW advises her to not go to the facility yet and instead take iron

and folic acid tablets and use another contraceptive method until such time as her hemoglobin reaches an appropriate level. This saves the woman from the inconvenience of going to the facility and then finding out that she cannot get the sterilization service.

A key role of ASHAs is to facilitate visits of her community members to the respective health facility and to ensure that the desired services are provided. Because the ASHA is familiar with the facility environment and the service providers, she is able to negotiate within the facility and ensure quality services for the client. This not only makes the client more confident about visiting the health facility, but also reduces the power asymmetry in the interaction of the client with the health system, thereby contributing to respectful care.

Of the number of clients who had female sterilization on the FDS service days in the demonstration facilities, 69% were accompanied by an ASHA. The figure was lower for Assam (7%), Telangana (11%), and Maharashtra (26%), but it was higher in 12 districts in two states where the client card and IVRS were introduced—77% in Chhattisgarh and 85% in Odisha (Source: HMIS). The difference between the states may indicate that the introduction of the client card and preregistration has led to better links being established between the community level workers and clients seeking facility level services.

The FDS calendar of each facility is uploaded on the IVRS and linked with the mobile numbers of the ANMs attached to that facility. To preregister a client for sterilization service at a particular health facility, the ANM attached to that health facility calls the IVRS from her registered mobile number. The IVRS gives her the FDS service schedule of her facility for the chosen month. The ANM then preregisters the client for a convenient date as per the FDS service calendar. The preregistration also provides advance information to the facility manager about the number of clients expected on the FDS day so that s/he can make adequate arrangements to cater to their service needs.

Improved client awareness and feedback led to improved experience of care

In the current scheme of things, there is negligible involvement of clients and communities in development and delivery of FP services. This leads to poor acceptance and utilization of services, along with a bias toward certain methods. MCSP established the IVRS to increase community involvement in FP service delivery. Program results show that 90% of clients reported on the IVRS that they received information on other available options for FP before deciding on any one FP method. Eighty-six percent (1207 of 1396) of the clients reported that the provider explained to them the benefits and minor problems associated with the chosen method (Source: IVRS Reports as of 22 February 2019). For decades, the permanent method of female sterilization has been the most commonly used FP method in India's public health system with several women not having used any other contraceptive until sterilization. NFHS-4 data shows that only about 17.7% of the health workers ever talked to female non-users about FP. In such a scenario, providers giving clients information about all available methods and helping them make a truly "informed choice" is a much-needed change.

To give feedback for the FP services they have used, clients have to make a missed call on the IVRS and then they are called back. There are 17 questions with multiple choice answers for the clients to respond. Because giving feedback is voluntary, the program has taken measures to inform and encourage the clients to do so. Posters have been put up in the facilities, and client cards are stamped with information about IVRS urging the clients to give feedback. ASHAs also are told to encourage the clients to give feedback on IVRS. Forty-two percent of the facilities across the five states had any system (suggestion/complaint box kept at the facilities or through the IVRS) for collecting clients' feedback/ complaints at baseline, which increased to 89% in fourth assessment (Source: Service delivery standards—baseline 2016 and fourth assessment 2018).

The proportion of facilities at which the provider checked before surgery that written consent had been given by the client after understanding its content rose from 25% at baseline to 41% at the time of the fourth assessment. Of the 799 clients who underwent sterilization in the last 3 months (as of 22 February 2019) and gave feedback on IVRS, 80% (642 of 799) reported that the doctor/nurse/counselor/facility staff read out or asked someone else to read the consent form to them in a language that they understood, or gave it to them before surgery in a language that they understood. Do's, don'ts, and warning signs with regard to care to be taken after sterilization were prominently displayed in the local language in postoperative wards of 186 facilities.

In Odisha, the state government gave approval to operate IVRS in only three districts on a pilot basis (instead of six MCSP districts) and subsequently budgeted for the rollout of IVRS throughout the state in its annual program implementation plan (PIP) 2019-20. In Chhattisgarh, IVRS is operational in all six intervention districts and operates through the existing 104 helpline for integration and sustainability.

As a result of FDS services being preplanned and prescreening conducted by frontline workers at community level using the client cards, fewer women returned from health facilities without availing the sterilization service. Program results show that clients would recommend the same health facility for all FP services, including sterilization services to a friend/relative.

By June 2019, the IVRS had received 18,164 calls of which, 3,630 provided information on FP, 2,663 collected feedback on the quality of FP service provision, and 11,871 calls pre-registered clients to receive FDS services across 103 program facilities. In Chhattisgarh, the IVRS was integrated within the state-owned toll-free helpline for clients. MCSP provided technical and implementation support to the government of Odisha for scale-up of the application across all 30 districts in the state.

Discussion and Conclusion

Lessons learned

Efforts to scale up the expanded basket of FP methods should build on the experience of the pilot demonstration by including the following critical elements:

- A clear statement of intent (policy statement) by the government to scale-up the expanded basket of FP methods along with guidelines to be followed for the scale-up
- Identification of public health facilities where the newer methods are to be introduced. For example, this identification should determine whether to restrict the rollout to higher facilities or to simultaneously rollout at all facility levels and whether to begin rollout in urban or rural areas, or both.
- Adequate budget allocation by the national and state governments for the procurement of commodities and rollout
- Training and supportive supervision of health department staff—FLWs, counselors, providers, program managers, etc.
- Making IEC materials, job aids, and documentation tools available to the relevant personnel and strengthening the quality of counseling through training and follow-up using performance standards
- Materials to clearly explain how to take the pills is critical—especially Centchroman, as we found some women taking it every day
- Ensuring regular supply of FP commodities to the designated health facilities
- Establishing mechanism to seek client feedback and make course correction as required
- Monitoring the quality of service provision including that of follow-up services
- Documenting any significant events that may come to light, such as complications, serious side effects, or failure of contraception experienced by the clients using newer methods and take appropriate corrective/remedial action.

Similarly, for sustaining the improvements in providers' surgical skills and compliance to female sterilization standards, the following key elements would be critical:

- Creating and sustaining a pool of trained service providers for ensuring uninterrupted female sterilization services at FDS sites
- Ensuring that the QA mechanisms, which include quality circles at the facility level, DQACs, and the SQACs, are functional
- Ensuring regular supply of required commodities to designated FDS sites
- Regular monitoring of service provision, including using IVRS data on client feedback
- Strengthening preregistration of potential sterilization clients at the community level
- Strengthening postoperative follow up of sterilized women.

Influence of external factors and unexpected findings

There were several external factors that affected the program, including delays in the supply of POPs and Centchroman, client adherence issues with Centchroman, GoI campaigns, and government's other priorities, such as the measles rubella campaign, epidemics of swine flu and dengue, and state legislative elections in program states; shortages of staff at selected health facilities, which was compounded by repeated transfers of the existing staff; some providers' reluctance to adopt newer practices, and some providers' inability or reluctance to perform female sterilization. Despite being trained, 14 providers in Odisha, Assam, and Chhattisgarh have not been providing FDS services. In Odisha, the surgeons are busy with administrative responsibilities assigned to them because of a shortage of staff, and in other states the providers are reluctant as they fear backlash in case of any mishap during the surgery.

The program had unexpected positive results, such as the adoption of Sterilization, Counseling and Oral pills service registers introduced by MCSP nationally (beyond the intervention area); Government of Chhattisgarh has approved the printing of case sheets/booklets for female sterilization for the entire state. In addition, implementation of the Standard Operating Procedure (SOP) for the prevention and management of complications in female sterilization surgery, incorporating QI tools introduced by MCSP (Clinical Safety Checklist and Client Card) throughout Odisha, and Chhattisgarh state government's decision to continue the supply of POPs in the demonstration facilities from its own resources after MCSP supplies cease.

Implications for sustainability of project interventions

Additional resources were mobilized for FP services at district and state level.

In Chhattisgarh, the District Collector allocated Rs. 7 lakh rupees for OT renovation from the district mineral fund; IVRS has been integrated within the government's 104 platform. MCSP provided technical and implementation support to the government of Odisha for scale-up of the IVRS across all 30 districts in the state. In Assam, LaQshya fund of Rs. 58,000 was used for infrastructure. In Maharashtra, money allocated in PIP for minilap equipment, IEC material (sedation chart and missed pill poster), and cleaning and repair of OT. In 2017, an oral pill manual was printed from the state budget and distributed to all facilities in the state.

Sustainability of quality FP services is demonstrated by the following decisions of the state and national governments: In Chhattisgarh, a policy decision was taken to implement IVRS in integration with the government helpline 104. Printing of case sheets/booklets for female sterilization was approved for the entire state. Chhattisgarh state government also decided to continue the supply of POPs in the demonstration facilities from its resources after MCSP supplies cease. In Odisha, the government approved the implementation of the SOP for the prevention and management of complications in female sterilization surgery, incorporating QI tools introduced by MCSP (Clinical Safety Checklist and Client Card) throughout the state. Budget for printing of the clinical safety checklist and client card for the entire state was approved in Odisha's PIP for 2018-2019. The government of Odisha also designated two MCSP-supported health facilities (i.e., District Headquarter Hospital [DHH] Khordha and City Hospital Cuttack) as the state level centers for conducting minilap Training of trainers for the entire state. It also budgeted for the rollout of IVRS throughout the state in its proposal for PIP 2019-20. The service registers introduced by MCSP to maintain the record of FP clients for all FP methods was approved by GoI.

Limitations of the Analysis

Contribution analysis builds a plausible argument grounded in well-articulated theories of change and associated evidence that the program interventions played a key role in achieving the stated impacts. Though this approach is rigorous, it is not as rigorous as a traditional impact evaluation that uses an experimental or quasi-experimental design to measure impact. Impact evaluations are impractical in many settings, however, because of resource constraints and the problematic nature of collecting data from health facilities or communities that are not receiving any interventions.

As MCSP applied CA toward the end of program implementation, there was a need to rely mostly on existing program data with limitations on collecting additional data to address any gaps. In addition, the strength of the contributions story is dependent on the strength of the theory of change, which can vary across contribution questions. The strength of the story is dependent in part of the amount of data gathered, but it is somewhat subjective as to the amount of data that is adequate.

There were some limitations associated with the study data presented in this analysis. For example, there was likely some selection bias in women enrolled in the PPFP follow-up study because they had to agree to be contacted by phone and perhaps were more likely to have better support or more favorable experiences.

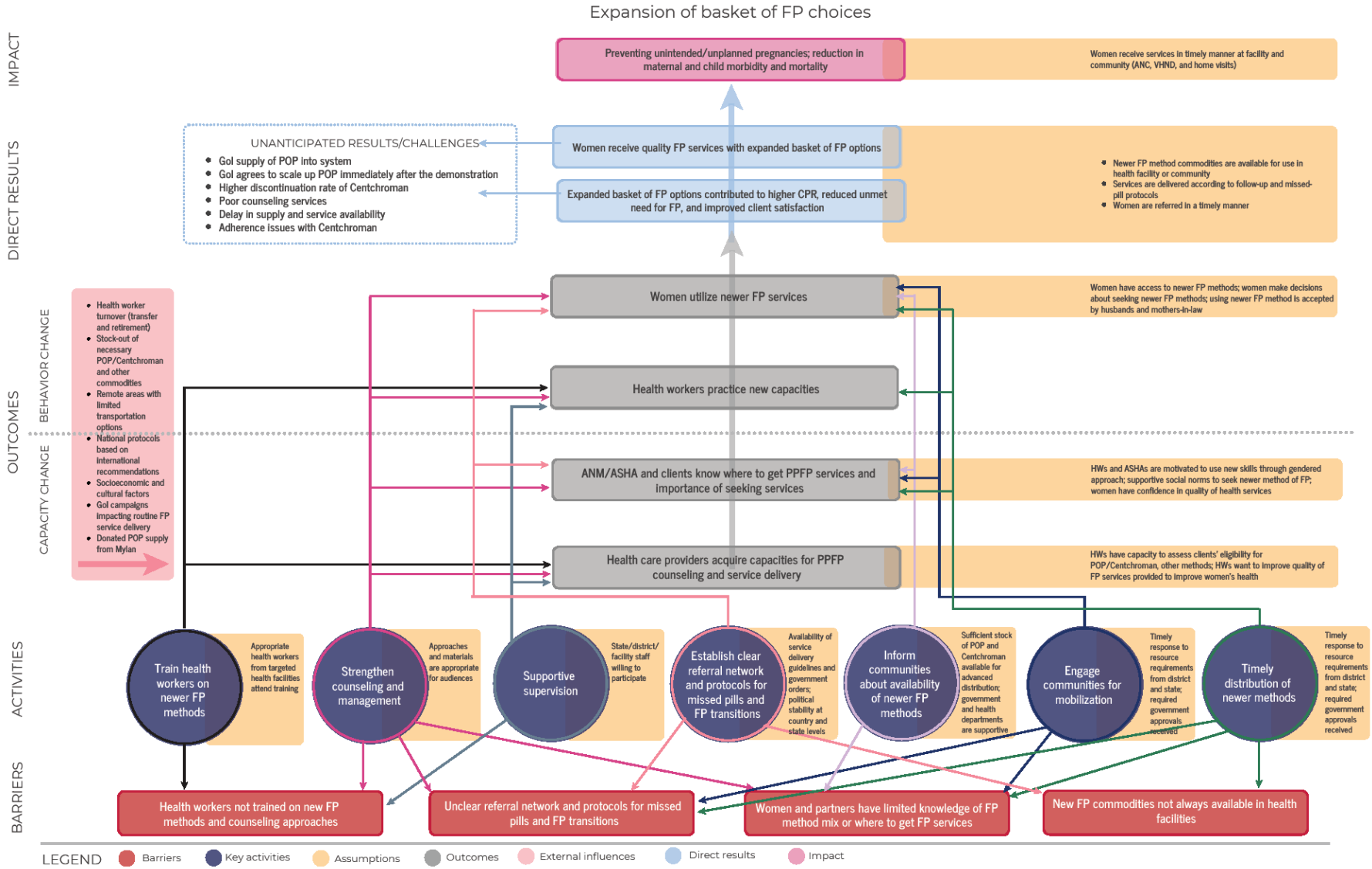
Conclusion

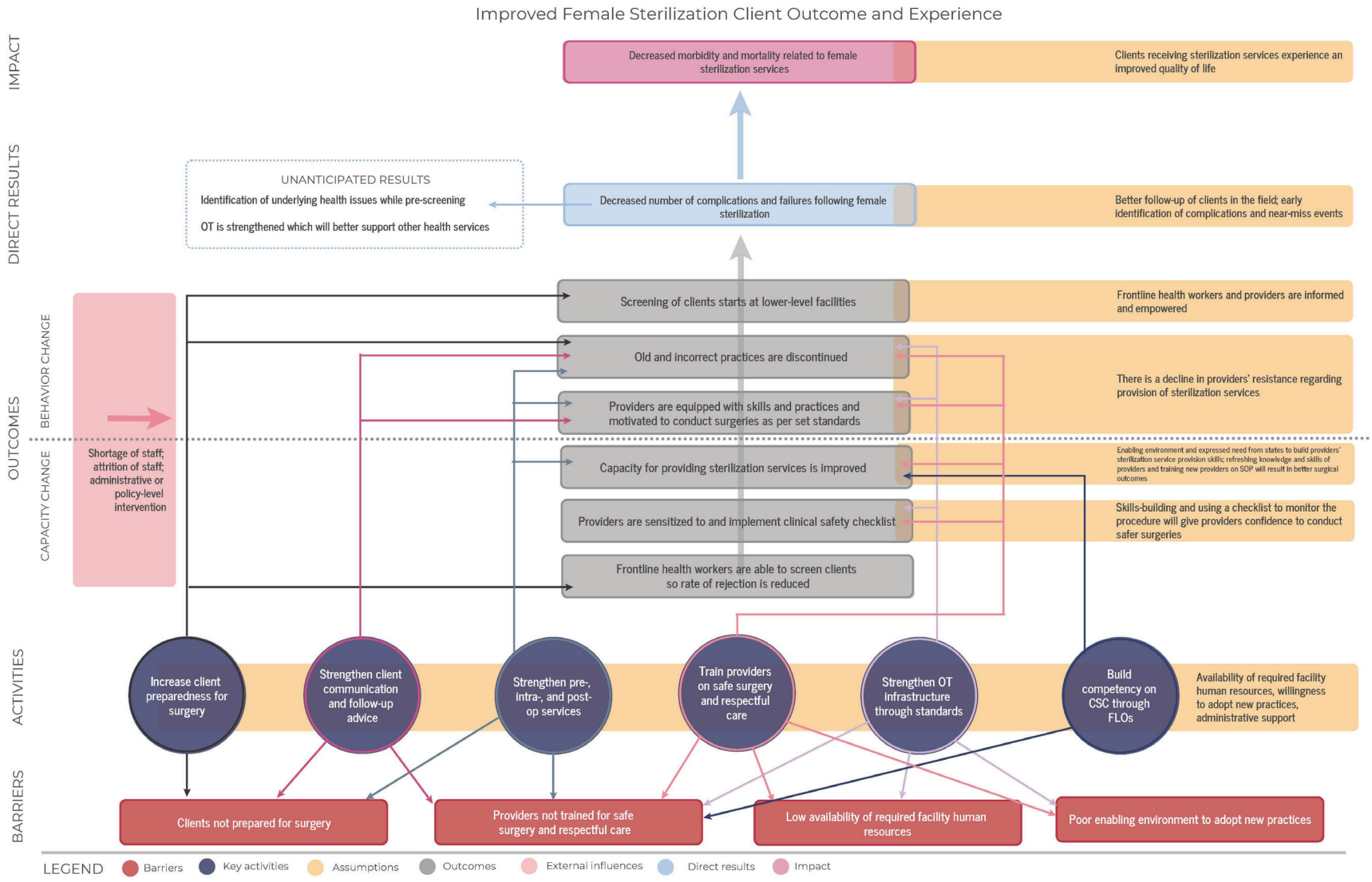
In conclusion, this report presents evidence that MCSP support and activities conducted in partnership with GoI contributed to four major achievements:

1. Expansion of the basket of FP methods in 52 program-supported public sector facilities in seven districts of five states: Odisha, Chhattisgarh, Maharashtra, Telangana, and Assam.
2. Increased uptake of postpartum FP services in 52 program-supported public sector facilities in seven districts of Odisha, Chhattisgarh, Maharashtra, Telangana, and Assam states.
3. Improved surgical skills and compliance with female sterilization standards among providers in 186 facilities in 17 districts across Odisha, Chhattisgarh, Maharashtra, Telangana, and Assam states.
4. A shift from provider-centric to client-centric services resulting in improved client experience of care.

Improvements are needed in a few areas of the program implementation to achieve greater gains and when considering expanding these interventions. For example, counseling on FP options as well as side effects and instructions on how to take the selected method (e.g., POPs and Centchroman) should be improved. In addition, with respect to the quality of female sterilization services, availability of GoI recommended drugs for sedation and analgesia is still widely lacking, and providers need more support on how to calculate the proper dose of local anesthesia based on the patient's body weight.

Annex 1: Detailed Theories of Change




Improved Female Sterilization Client Outcome and Experience
IMPACT
DIRECT RESULTS
OUTCOMES
BEHAVIOR CHANGE
CAPACITY CHANGE
ACTIVITIES
BARRIERS
Decreased morbidity and mortality related to female sterilization services
Clients receiving sterilization services experience an improved quality of life
UNANTICIPATED RESULTS
Identification of underlying health issues while pre-screening
OT is strengthened which will better support other health services
Decreased number of complications and failures following female sterilization
Better follow-up of clients in the field; early identification of complications and near-miss events
Screening of clients starts at lower-level facilities
Frontline health workers and providers are informed and empowered
Old and incorrect practices are discontinued
Providers are equipped with skills and practices and motivated to conduct surgeries as per set standards
There is a decline in providers' resistance regarding provision of sterilization services
Shortage of staff; attrition of staff; administrative or policy-level intervention
Capacity for providing sterilization services is improved
Enabling environment and expressed need from states to build providers' sterilization service provision skills; refreshing knowledge and skills of providers and training new providers on SOP will result in better surgical outcomes
Providers are sensitized to and implement clinical safety checklist
Skills-building and using a checklist to monitor the procedure will give providers confidence to conduct safer surgeries
Frontline health workers are able to screen clients so rate of rejection is reduced
Increase client preparedness for surgery
Strengthen client communication and follow-up advice
Strengthen pre-, intra-, and post-op services
Train providers on safe surgery and respectful care
Strengthen OT infrastructure through standards
Build competency on CSC through FLOs
Availability of required facility human resources, willingness to adopt new practices, administrative support
Clients not prepared for surgery
Providers not trained for safe surgery and respectful care
Low availability of required facility human resources
Poor enabling environment to adopt new practices
LEGEND
Barriers
Key activities
Assumptions
Outcomes
External influences
Direct results
Impact

Annex 2: Assumptions Table

Assumption	Expansion of basket of FP choices	Improved female sterilization client outcome and experience	Assumptions impacting both
Reach, Policy, Resource	• Appropriate health workers from targeted health facilities attend training • Approaches and materials are appropriate for audiences • State/district/facility staff willing to participate • Availability of service delivery guidelines and government orders • Political stability at country and state levels • Sufficient stock of POPs and Centchroman available for advanced distribution • Government and health departments are supportive • Timely response to resource requirements from district and state • Required government approvals received	• Availability of required facility human resources • Willingness to adopt new practices • Administrative support	• Staff available to be trained • Appropriate staff trained/part of intervention • Commitment of higher-level personnel to implementing interventions • Required resources and supplies made available by district and sate
Capacity Change	• HWs and ASHAs are motivated to use new skills through gendered approach • Supportive social norms to seek newer method of FP • Women have confidence in quality of health services • HWs have capacity to assess clients' eligibility for POPs/Centchroman, other methods • HWs want to improve quality of FP services provided to improve women's health	• Enabling environment and expressed need from states to build providers' sterilization service provision skills • Refreshing knowledge and skills of providers and training new providers on SOP will result in better surgical outcomes • Skills-building and using a checklist to monitor the procedure will give providers confidence to conduct safer surgeries	• Health service providers are motivated to learn and use new skills • Health service providers want to improve quality of FP services provided to improve women's health
Behavior Change	• Women have access to newer FP methods • Women make decisions about seeking newer FP methods • Using newer FP method is accepted by husbands and mothers-in-law	• Frontline health workers and providers are informed and empowered • There is a decline in providers' resistance regarding provision of sterilization services	• Health care providers willing and able to provide quality services

Assumption	Expansion of basket of FP choices	Improved female sterilization client outcome and experience	Assumptions impacting both
Direct Benefits	• Newer FP method commodities are available for use in health facility or community • Services are delivered according to follow-up and missed-pill protocols • Women are referred in a timely manner	• Better follow-up of clients in the field • Early identification of complications and near-miss events	• Better follow-up of clients
Wellbeing change	• Women receive services in timely manner at facility and community (ANC, VHND, and home visits)	• Clients receiving sterilization services experience an improved quality of life	• Clients receive FP services in timely manner and experience an improved quality of life

Annex 3: References

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