Using a Quality Improvement Approach to Improve Contraceptive Security in Tanzania

BACKGROUND

For family planning (FP) service providers and program planners, the supply chain between the district and the facility is often referred to as “the last mile.” Yet for clients, the facility or a community-based distributor is not their “last mile,” but their first step to accessing family planning. Helping clients meet their fertility intentions is the ultimate goal of all contraceptive security efforts—and continues to be a challenge for many health systems in developing countries.

Contraceptive security is defined as being the condition in which all people are able to choose, obtain, and use the contraceptive methods and services they desire, from a full range of potential methods (short-acting, long-acting, and permanent) (Wickstrom & Jacobstein, 2011). If FP programs are to be able to provide a full range of methods, three basic elements must be consistently available at a service delivery point: the contraceptives themselves; the necessary medical equipment, instruments, and expendable supplies; and trained staff able to provide each method. If a service delivery point lacks any one of these elements, the method cannot be offered, and therefore contraceptive security is not achieved.

In Tanzania, the Ministry of Health and Social Welfare (MOHSW) has made great strides toward achieving contraceptive security at the national and zonal levels, by improving the consistency and range of FP methods available in country. However, contraceptive security is weaker at lower-level health facilities, due to stock-outs of contraceptives and their related supplies, as well as human resource constraints.

The COPE® Approach for Contraceptive Security (COPE® for CS) was developed by EngenderHealth for global use and was tested in Tanzania to address clients’ rights and choices for FP and the health care systems that serve them (RESPOND Project, 2013). Over the past two decades, EngenderHealth has used and adapted the COPE® approach for many programmatic applications (e.g., HIV and AIDS, maternal and child health, and community engagement). COPE® (which stands for “client-oriented, provider-efficient”) is a set of tools and processes that enable staff from all levels of a facility to examine how they perform their daily tasks,
analyze their challenges, create and implement their own action plans to address challenges, and resolve problems using local resources. COPE® for CS uses self-assessment guides and facility checklists to guide facility staff in thinking through all of the necessary elements to support contraceptive security.

**THE INITIATIVE**

**Objectives**
The RESPOND Project worked with local partners to implement COPE® for CS in two districts in Tanzania (Newala in Mtwara Region, and Meru in Arusha Region). The partnership included the MOHSW, the Medical Stores Department (MSD), EngenderHealth’s ACQUIRE Tanzania Project (ATP), and USAID|DELIVER. One objective of the activity was to document how COPE® for CS can improve district and facility ownership and capacity to manage FP forecasting, budgeting, requisition, and inventory control. A second goal was to test the effectiveness of the new COPE® for CS tool at increasing access for all FP methods, including the requirements for the long-acting and permanent methods of contraception (LA/PMs).

**Project Start-Up**
To define the COPE® for CS goals, objectives, and activities, in March 2011 the MOHSW convened a stakeholders meeting that included the Tanzanian International Planned Parenthood Federation member association (UMATI), USAID|DELIVER, Pathfinder International, and ATP. Stakeholders named a point person from each district for project implementation. A total of 26 facilities (13 from each district) were selected by the District Reproductive/Child Health Coordinators (DRCHCOs) and District Medical Officers (DMOs) to participate in the activity: 20 dispensaries, four health centers, and the two district hospitals.

RESPOND and ATP staff implemented COPE® for CS in the two pilot districts between July 2011 and July 2012. In July 2011, RESPOND and ATP staff completed baseline facility audits using checklists designed to capture contraceptive security information at each participating facility and to assess their readiness to provide quality services for each FP method. The checklists covered the presence of a trained provider and all contraceptives, service delivery supplies, and essential equipment and instruments needed for each method and for infection prevention. RESPOND then mapped the results of the baseline assessment to geographic information system (GIS) coordinates to visually locate the availability of trained staff, contraceptives, expendable supplies, and essential equipment. The checklist and mapping exercises were repeated in July 2012, to evaluate local progress.

**COPE® Workshops**
COPE® has been used for many years in Tanzania for FP services and for services to prevent mother-to-child transmission of HIV. With this base of experience, RESPOND engaged existing COPE® trainers within the MOHSW to introduce the tools focusing on contraceptive security.

In accordance with the COPE® approach, facilities convened all staff for the COPE® for CS workshops. Staff at each facility identified barriers impeding clients’ full access to and use of FP. District and facility teams identified local problems, developed individualized action plans, and worked over a period of several months to resolve their most pressing challenges. These action plans prioritized the following issues: proper arrangement of drugs in the facility medical stores, to improve invento-
ry control; adherence to the first expired–first out (FEFO) logistics convention; clarification and designation of responsibilities vis-à-vis ordering; and adherence to MOHSW and MSD guidelines. Beyond logistics management issues, many facilities also chose to focus on building staff skills and on conducting community outreach, to better address clients’ FP needs.

Technical Assistance and Opportunities for Cross-Learning
RESPOND and ATP staff provided ongoing technical assistance to MOHSW staff in the two districts and at the 26 facilities to support implementation of action plans. This proved instrumental in maintaining district-wide interest in addressing CS issues. Capitalizing on opportunities for cross-learning, staff shared information, ideas, and local innovations for surmounting persistent challenges during technical assistance visits and follow-up meetings.

The COPE® for CS process yielded important changes related to contraceptive security, as well as to facility-related management issues. For example, facility staff at Makiba Dispensary continued to struggle with electrical power limitations, which prevented them from providing services when natural light was not sufficient. The COPE® process connected them with the nearby Kitangali Dispensary, which had advocated with the government to use Community Health Funds to install solar panels. Makiba staff were equally successful in getting such funds for solar panels. Participants reported that these positive results due to cross-learning encouraged staff to invest their energy in the COPE® for CS process.

COPE® for CS Best Practices Meeting
In April 2012, six months after facilities started to implement their action plans, RESPOND brought representatives from each district together for a three-day meeting to discuss experiences and successes, as well as to address persistent challenges. Facility representatives shared their strategies and approaches for resolving storage, infection prevention, and human resource challenges and provided recommendations to colleagues on how they resolved issues.

With broader participation from the MOHSW, the DRCHCOs, the Reproductive Health Coordinators, the DMOs, the District Pharmacist, USAID|DELIVER, and an MSD representative, staff from facilities and the district were able to tackle the most pervasive challenge yet—poor communication between the MSD and the facilities, and the resulting persistent and prolonged discrepancies between stocks requested and stocks received. This discussion enabled facility and MSD staff to open new communication channels and to clarify their mutual roles for FP-related stocks monitoring, requisition, and deliveries.

Endline Evaluation
To assess the effect of the COPE® for CS activity in the two districts, in July 2012 RESPOND conducted an endline evaluation that included:

- Focus group discussions with representatives of all facilities
- Interviews with service providers from selected facilities and partners
- Collection and analysis of FP service statistics
- Endline facility audits using COPE® for CS checklists
RESULTS

Contraceptive Security before COPE®

Providers expressed their frustration with the situation prior to the COPE® exercises, particularly the lack of certainty concerning FP stocks. They explained that both providers and clients faced difficulties when stock levels for contraceptives, equipment, and expendable supplies are erratic. Providers claimed that MSD deliveries were often at odds with their requests, which led providers to question the utility of submitting reporting and request (R&R) forms1 in a timely manner. According to key informants, to meet their short-term needs, many simply bypassed the system by calling the district hospital to request supplies on an ad-hoc basis. District hospitals tried their best to meet these “emergency” needs, but they also faced the challenge of managing their own stocks, exacerbating the problem of irregular and unpredictable stock levels.

Audit data showed that facilities in both districts struggled with contraceptive stock-outs at baseline. While nearly all facilities could provide male condoms on the day of the audit, fewer could provide the pill (62%) or injectables (39%), and even fewer were able to provide long-acting methods (27% each for the intrauterine device [IUD] or hormonal implant). Disruptions were also noted in providing Tanzania’s most widely used contraceptive, the injectable. For example, only three out of the 13 participating health facilities in Meru District had all of the requirements for providing injectables at baseline. Implants had similar limitations, with seven facilities having trained implant providers but only two having implants in stock.

Consequently, for many clients in these two districts, contraceptive choice meant choosing the male condom or hoping that the pill or injectables would be available at the clinic on the day of their visit. Since IUDs and implants usually were not available, clients interested in these methods needed to have the motivation, knowledge, time, and money to travel to the district hospital. While some local facilities actually had stocks of long-acting methods or a trained provider on-site, few had both at the same location at the same time. Focus group participants recognized this disconnect and reported that providers and community members alike were often confused, frustrated, and distrustful of their health care system.

Contraceptive Security after COPE®

According to service providers, the COPE® process and tools helped them to identify problems, create action plans, solve problems on-site, and discuss problems that they could not solve alone with their supervisors and/or with district health staff. After adopting COPE® for CS, providers reported an overall increase in teamwork and shared responsibility. During the COPE® workshops, staff clearly articulated their needs for contraceptive technology

“...we didn’t have anything to explain to the client [when methods were not available]. Often we made excuses, like ‘maybe my doctor has not brought the methods….’ It could be very uncomfortable.”

— Provider, Newala District

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1 The R&R forms list more than 100 essential drugs and supplies and are used by facilities to request items from the MSD.
“Before, we would wait until the contraceptives ran out before we thought about filling out the R&R and requesting new drugs. Timeliness was not on our minds. Now, after COPE®, we understand our own responsibility to order. We didn’t understand before that the shortages and stock-outs were our fault.”

— Provider, Newala District

updates, training, infrastructure and equipment improvements, and facilitative supervision visits.

In both districts, providers described their successes in adhering to the principles of FEFO, of proper drug storage, and of improved infection prevention procedures. Facilities that previously struggled with cleanliness set up infection prevention committees. At one facility in Newala District, the committee transformed an unused waiting bay (previously suffering from a bee infestation) into an area where reproductive health and FP talks could be held for waiting clients. These successes fueled further improvements. As their work processes around FEFO, storage, and infection prevention improved, providers became more aware of how to manage stock levels and regained confidence in R&R submission.

“With COPE®, you work with confidence that if you counsel a client for a method, it will be available and not expired. I can communicate with clear language to the clients. I know when the method will arrive, because I have ordered it....”

— Provider, Newala District

providers were prepared to advise clients when the method would be available. Providers reported that better method availability led to an increase in the number of clients and in mutual confidence and respect between the community and the facility.

Service statistics and data from the facilities’ supplies checklist corroborated service providers’ perceptions of an improvement in contraceptive stock levels and an increase in FP clients. Indeed, after COPE® was implemented, contraceptive security at lower-level facilities improved: The percentage of facilities that had either the progestin-only pill or combined oral contraceptives rose from 62% at baseline to 92% at endline; likewise, the proportion with injectables in stock rose from 39% to 92% (Table 1). Implant availability increased slightly; how-

During the focus group discussions, service providers emphasized their increased confidence after implementing COPE® for CS. With stock-outs decreasing, providers could now counsel clients on all FP methods available at the site, with certainty that the client’s selection would be in stock and not expired. In the event that a method was not available that day,

TABLE 1. PERCENTAGE OF FACILITIES ABLE TO PROVIDE EACH METHOD THAT HAD ITEMS IN STOCK, AT BASELINE AND AT ENDLINE

<table>
<thead>
<tr>
<th>Method</th>
<th>Baseline</th>
<th>Endline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male condom</td>
<td>96.2</td>
<td>96.2</td>
</tr>
<tr>
<td>Female condom</td>
<td>0.0</td>
<td>3.8</td>
</tr>
<tr>
<td>Progestin-only pill or combined oral contraceptives</td>
<td>61.5</td>
<td>92.3</td>
</tr>
<tr>
<td>Both progestin-only pill and combined oral contraceptives</td>
<td>50.0</td>
<td>65.4</td>
</tr>
<tr>
<td>Injectables</td>
<td>38.5</td>
<td>92.3</td>
</tr>
<tr>
<td>Fertility awareness beads</td>
<td>3.8</td>
<td>0.0</td>
</tr>
<tr>
<td>IUD</td>
<td>70.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Implants</td>
<td>50.0</td>
<td>58.5</td>
</tr>
</tbody>
</table>

It should be noted that contraceptive availability improved in general in Tanzania during the one-year period in which the COPE® activity took place.
ever, more providers were trained to provide implants, thus increasing capacity within the district.

Participating facilities also showed improvements in stocks of equipment for infection prevention. While 46% had either an autoclave and drums or a steam sterilizer at baseline, 85% had one of these types of sterilization equipment at endline.

Providers attributed these improvements to facilities’ focus during the COPE® workshops on timely and correct submission of the R&R forms. Providers noted that their facility teams were able to identify and surmount impediments to calculating projections, forecasting facility needs, and adhering to proper drug storage and labeling. As stock levels improved, staff gained more confidence in the system and greater self-efficacy in their own role in the process. The result was not only improved contraceptive security, but also better work processes and systems at the facilities. Additionally, staff reported that stock levels for other drugs improved as a result of the COPE® activity.

Mindful that contraceptive stocks are just one element of contraceptive security, several facilities also focused on strengthening staff capacity to provide long-acting methods. At the COPE® for CS Best Practices Meeting, providers from Kitangali Dispensary in Newala District shared their successes in using district outreach days to train health staff to provide implants. Upon returning to Meru District, colleagues from Makiba Dispensary arranged for on-the-job training during a similar district outreach day. After being trained over several days with the skilled outreach team, the nurse-in-charge was confident enough in her implant insertion and removal skills to be able to train new staff at Makiba Dispensary. Other facilities followed suit. Through this simple intervention, the number of participating facilities with providers trained in implant provision rose from 13 at baseline to 17 at endline. Likewise, the number of facilities in Meru District with both an implant provider and contraceptives increased from two (15%) at baseline to six (46%) at endline.

By the endline assessment, full contraceptive security for implants (a trained health care provider, the contraceptive implant, and all necessary supplies and equipment) had been achieved at only one facility in Meru. Figure 1 shows the extent of improvement in the availability of providers and implants.

![Figure 1: Availability of trained health care providers, implants, and required supplies in Meru District, baseline and endline](image)

**Baseline**
- 7 facilities with a trained provider
- 2 facilities with implants in stock
- 0 facilities with all requirements

**Endline**
- 9 facilities with a trained provider
- 6 facilities with implants in stock
- 1 facility with all requirements
from baseline to endline. Clearly, further work is needed to ensure that all elements for providing FP are in place, especially for LA/PMs—such as medical instruments (e.g., forceps).

“Before, when a method was out of stock, by and by the user would give up and discontinue use. Now those who need a method do not go back without one. Now, when they are asked in the community ‘Did you get a method?’ they respond ‘Yes.’ ‘So it’s available?’ ‘Yes.’ This encourages more clients to come.”

— Provider, Meru District

Improvements in overall contraceptive security resulted in increases in the numbers of new FP users. As providers gained confidence that contraceptives and supplies would be available when they needed them, they were able to see more clients and were inspired to conduct community outreach to increase knowledge and use of FP services.

At participating facilities, the total numbers of new FP users increased by 61% between April–June 2011 (the quarter in which COPE® was first implemented) and April–June 2012, rising from 2,341 new users to 3,779 (Figure 2).

LESSONS AND CONCLUSIONS
The experience in Tanzania demonstrates that COPE® for CS is an effective and low-resource intervention to mobilize facility staff to identify and to begin to resolve challenges to contraceptive security. The activity brought together stakeholders to build a common understanding of the issues and to ensure cohesiveness of efforts. Key informants and staff noted that the COPE® for CS activity was beneficial for many of the participating facilities; it offered a structured opportunity to discuss and resolve issues as a team. For nearly all who participated in the COPE® for CS Best Practices Meeting, this was also the first time that they had presented their expertise before an audience of peers and received feedback to improve their individual work. While not inherent to the COPE® process, this cross-learning opportunity proved highly successful in facilitating outcomes through the exchange of ideas and innovations.

Facilities incorporated a variety of improvements as a direct result of participating in the COPE® activity, ranging from on-the-job training to community engagement to improved communication of contraceptive needs. COPE® for CS was successful in increasing the availability of FP at many participating facilities—and more importantly, providers’ and clients’ confidence that FP methods would be available at their local facility. COPE® also improved the availability of other drugs for curative and preventive health care.

The intervention had a limited effect in addressing shortages of essential supplies, such as scalpels and forceps. While facilities were able to make strides in improving contraceptive availability and staff capacity to provide contraceptives, accessing the necessary medical equipment, instruments, and expendable supplies remained an ongoing challenge. This critical element of contraceptive security is particularly important for LA/PM service availability.

RECOMMENDATIONS
On the basis of the improvements noted above and district agreement to focus on improving expendable supplies for long-acting methods, the MOHSW and EngenderHealth are discussing ways to institutionalize the COPE® for CS tools into ongoing supervision systems.
Elements of COPE® for CS that should be included in future applications include:

- **Technical assistance from COPE® facilitators and supervisors:** Technical assistance was vital not only in keeping staff motivated to make progress on their action plans, but also in linking staff with peers facing similar challenges and identifying potential solutions.

- **Cross-learning opportunities:** By connecting facilities from the two districts through technical assistance and the larger Best Practices Meeting, staff from the facility, district, and zonal levels were able to share innovative ideas for improving the availability of FP services. COPE® facilitators and supervisors should continue to identify opportunities for cross-learning, perhaps by matching facilities and peers through mHealth technologies, on-the-job training, and/or district-level best practices meetings.

- **Coordination among multiple stakeholders:** A key to the successes of COPE® for CS in Tanzania was that stakeholders collaborated to identify and solve problems as a team. This teamwork ensures positive results.

**REFERENCES**
