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E2A EVIDENCE TO ACTION
for Strengthened Reproductive Health

EXPANSION OF FAMILY PLANNING METHOD MIX THROUGH THE INTRODUCTION OF COMMUNITY-BASED PROVISION OF STANDARD DAYS METHOD USING CYCLEBEADS IN SHINYANGA REGION OF TANZANIA

AUGUST 2017



About E2A

The Evidence to Action Project (E2A) is USAID's global flagship for strengthening family planning and reproductive health service delivery. The project aims to address the reproductive health care needs of girls, women, and underserved communities around the world by increasing support, building evidence, and leading the scale-up of best practices that improve family planning services. A Cooperative Agreement awarded in September 2011, E2A will continue until September 2019. E2A is led by Pathfinder International in partnership with ExpandNet, IntraHealth International, Management Sciences for Health, and PATH.

Contact Information

E2A Project
1250 23rd Street NW
Suite 475
Washington, DC 20036

Tel. 202-775-1977
Fax 202-775-1988
www.e2aproject.org

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The SDM and CycleBeads report authors consisted of: Dr. Gwendolyn Morgan, E2A Deputy Director, Management Sciences for Health; Dr. Hadija Kweka, Consultant; Allison Schachter, E2A Monitoring and Evaluation Technical Advisor, Pathfinder International; and Hellen Magige, Monitoring and Evaluation Director, Pathfinder Tanzania.

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Acronyms

CHW	Community Health Worker
CYP	Couple Years of Protection
E2A	Evidence to Action for Strengthened Family Planning and Reproductive Health Services for Women and Girls
FP	Family Planning
HMIS	Health Management Information System
IEC	Information, education, and communication
IUD	Intrauterine Device
M&E	Monitoring and Evaluation
MOH	Ministry of Health
NGO	Non-Governmental Organization
RH	Reproductive Health
SDM	Standard Days Method
USAID	United States Agency for International Development
WHO	World Health Organization

Executive Summary

Building on Pathfinder International's existing community-based program in five districts of Shinyanga region, Tanzania, the USAID-funded Evidence to Action (E2A) Project, from 2014-2016, pilot-tested the provision of Standard Days Method® (SDM) through use of CycleBeads. Community health workers (CHWs) counseled on SDM using CycleBeads as part of the wider contraceptive method mix they had been offering at community level: combined oral pills, progesterone-only pills, and male and female condoms. They also continued to refer clients who opted for clinical methods (implants, IUDs, injectables, permanent methods) to a health facility. To assist clients with becoming confident using SDM/CycleBeads, the program included features that ensured CHWs' ongoing follow-up with clients.

This technical report describes a study E2A and Pathfinder undertook, which documented the programmatic approach applied for effective provision of SDM and corresponding results. Findings included in this report will inform national policies and strategies for inclusion of SDM in the contraceptive method mix offered in communities and at health facilities, and programmatic requirements for scale-up of SDM to all regions of Tanzania.

Context & Rationale for Pilot-test of SDM

The Shinyanga region of Tanzania is a rural community with a large Catholic population. Sociocultural issues, poor and weak health infrastructure impede women's access to FP services. The total fertility rate in the Lake Zone, where Shinyanga is located, at 6.4 children per woman, exceeds the national average of 5.2.⁴ children per woman. This region is among those with the lowest modern contraceptive use rates in Tanzania and high HIV prevalence rates. SDM was introduced to expand the contraceptive method mix offered at community level in Shinyanga to, in turn, increase contraceptive prevalence, especially in Catholic communities that are opposed to other methods of contraception.

Programmatic Approach

Pathfinder and E2A recruited and trained 230 CHWs, 119 females and 111 males, to pilot-test provision of SDM. All CHWs received refresher training using national FP curricula to counsel on the full range of contraceptive methods including SDM and to offer pills, condoms, and CycleBeads at community level. CHWs learned how to apply the Balanced Counseling Strategy developed by the Population Council for provision of FP services. CHWs used the mobile application to help them counsel using the Balanced Counseling Strategy. The mobile application was also used for: real-time performance tracking; reminding CHWs to follow up with clients; documentation of CHWs' activities with GPS and time-stamped entries; and assistance with supervision, data collection, and making electronic to payments to CHWs based on their performance. The pay-for-performance system rewarded CHWs for meeting targets of new clients counseled and followed up, and adhered to stipulations of the Tiahrt Amendment.

Master trainers from the Ministry of Health (MOH) trained 32 facility-based supervisors to oversee and support the work of CHWs, including 41 "champion CHWs." The supervisors were nurses or in-charges at health facilities, and a champion CHW was selected from each of the 41 wards in the five districts to help supervise the remaining 189 CHWs. Each champion had four to eight CHWs to follow.

Study Objectives and Methods

The study conducted by E2A and Pathfinder on effectiveness of the programmatic approach sought to:

1. Assess uptake rates and discontinuation rates of SDM and other FP methods, as well as clients' reasons for choosing SDM, and document their experience with the method.
2. Assess perspectives of clients, service providers, supervisors, and managers on programmatic approaches used (CHWs, mhealth application, performance-based incentives) to introduce SDM.
3. Explore critical factors implemented to enhance scale-up of SDM from the perspectives of clients, service providers, supervisors, and managers.

This study analyzed quantitative data on uptake of all contraceptive methods, including SDM using CycleBeads, extracted from the routine project monitoring data system. For qualitative data, the research team conducted interviews with program participants and clients.

Results & Findings

Out of 230 CHWs initially recruited and trained, 222 CHWs offered balanced counseling to 33,940 clients over the two-year project period.^a Most of these clients received multiple follow-up visits in addition to the initial counseling visit. Nearly 20 percent of these clients were men. Most clients (64 percent) were aged 25-49 years and had three or fewer children, and nearly half (48 percent) were either cohabitating or currently married. Most of the 27,436 female clients (57 percent) reported already using a contraceptive during their first visit with a CHW: Among those women, 20 percent were using injectables, 10 percent an implant, 9 percent combined oral contraceptives, and 2 percent (428) SDM with a calendar, referred to as the “calendar method.”

A total of 933 instances of discontinuation^b took place for all contraceptives provided, including 94 recorded instances where a woman discontinued SDM or chose to switch to a different method. Of the 933 discontinuations, the largest percentage—20 percent—were injectable users. The most common reasons reported for discontinuation were: desire for pregnancy (20 percent), side effects (15 percent), and partner disapproval (12 percent). It is notable that of the recorded 94 clients who discontinued SDM during the two-year period, only 16 did so because they became pregnant while using the method.

Reasons for choosing & experience with SDM

Clients most often reported that they chose to use SDM because it is a natural method. Many SDM clients reported that they had previously used hormonal methods, but that they had experienced side effects, which caused them to discontinue. Low cost was another frequently mentioned reason for selecting SDM. Finally, clients mentioned the additional benefit of SDM being deemed acceptable by dominant religions (Islam, Catholicism). Another advantage mentioned was immediate return to fertility. Some women said they had used SDM previously with a calendar instead of CycleBeads, and referred to it as the “calendar method.” Clients mentioned that using CycleBeads increased their confidence in using SDM, particularly because they must advance the ring on the CycleBeads daily, monitoring “safe” vs. “unsafe” days. There were variations among respondents regarding how long it took for them to use CycleBeads confidently, ranging between three and seven months. Both CHWs and clients noted that SDM was not initially easy for some clients to use.

^a 8 out of the original 230 CHWs dropped out due to reasons beyond the program's management capacity: 3 passed away, 1 had a car accident, 3 moved from Shinyanga, and 1 underperformed due to witchcraft beliefs that people will harm her.

^b Referring to clients who discontinued their method, switched their method, or did not complete a referral and had a reason for not doing so.

Because the method requires use of a secondary method (e.g., condoms) or abstinence during the 12 unsafe days, use of SDM with CycleBeads requires a high level of partner cooperation. Some women described how it was hard to negotiate with their partners on “unsafe days,” particularly when they drank alcohol, while other women said use of SDM increased the bond with their male partner.

Client perceptions of the SDM Project

Clients said CHWs were accessible and approachable for both initial and follow-up consultations. However, follow-up was more frequent for those who requested or needed help with use of CycleBeads. Clients said home visits were educational to couples, conducted at a place which suited them, and motivated them to plan for appropriate spacing of their children. Respondents mentioned that CHWs’ appointment systems and hours of operation were accommodative. When respondents were asked about the quality of services provided by CHWs, the majority expressed satisfaction with community-based services and referrals. Respondents were particularly satisfied with the clarity and content of the information.

Critical factors to enhance scale-up

Engagement of key stakeholders in a participatory process: E2A engaged the MOH in development of SDM training materials and advocacy messages. Additionally, the project is engaging other donors, like the Bergstrom Foundation, to sustain program activities. The active and strategic engagement of these national actors has led to more rapid uptake of SDM, its integration into training curricula and standards of practice, and in building capacity for availability of master trainers for scale-up.

Advocacy for necessary changes in policies, regulations, and other health-systems

components: Pathfinder staff worked with the MOH to ensure that CycleBeads were part of the central procurement system. With the support of E2A, the MOH amended the CHW in-service training curriculum and supervisory checklist to integrate SDM/CycleBeads. These tools are in development and awaiting endorsement. In addition, Tanzania’s national DHIS2 has been updated to provide FP reports that include CycleBeads supply.

Recommendations

Drawing from the results of the project, Pathfinder and E2A arrived at several recommendations that should be considered by the MOH and partners when continuing the approach in Shinyanga and scaling it up to other regions of Tanzania, including:

- Ensure CHWs take clients closely through instructions on how to use SDM/CycleBeads and make frequent initial follow-up with clients, tailored to their needs.
- Include both partners in counseling sessions; counsel woman on condom negotiation and use of other methods, and assist women with negotiation skills and communication with husbands.
- Use community-based counseling and outreach events to dispel myths and give accurate information about contraception.
- Invest in interactive tools, such as mobile applications, to support the work of CHWs.
- Consider counseling and monitoring needs when designing mobile applications.
- Adequately address needs for capacity building in use of the mobile application.
- Establish scheme for loaning of mobile phones to reduce losses.
- Ensure effective transition planning for supporting CHWs after a donor-funded project has ended.

I. Introduction

Pathfinder International's integrated family planning (FP), reproductive health and HIV home-based care program in Shinyanga Region began in 2004. Since then, Pathfinder has worked closely with the national Ministry of Health (MOH) and local government authorities to recruit and support community health workers (CHWs) in five districts to: counsel clients on a full range of FP methods; offer short-term methods (e.g., combined oral pills, progesterone-only pills, and male and female condoms); and refer clients who opt for clinical methods (implants, IUDs, injectables, permanent methods) to a health facility.

From 2014-2016, Pathfinder Tanzania, through the Evidence to Action (E2A) Project, received \$1,200,000 USD from USAID/Washington and USAID/Tanzania to continue the community-based FP program in Shinyanga region and pilot-test the provision of the Standard Days Method® (SDM) as part of the FP method mix offered by CHWs, adding CycleBeads to the range of FP methods offered in the community. The project built the capacity for facility-based providers and CHWs offer FP methods in Shinyanga, and implemented approaches to reaching first-time mothers with contraceptive information and services.^c The project organized referral coordination meetings for mobile outreach services that provide long-acting reversible contraceptives (LARCs) to both optimize use of available resources

(especially the few service providers), and expand coverage. With intent to scale-up the interventions within and beyond the Shinyanga Region, the project included strong monitoring and evaluation, documentation, and dissemination components. The CHWs used a protocol-driven mobile phone application to help them adhere to counseling procedures and improve documentation.

This technical report describes a study E2A and Pathfinder undertook, which documented the programmatic approach applied for effective provision of SDM and corresponding results through collection and analysis of qualitative and quantitative data. The report highlights the added value of introducing SDM into the contraceptive method mix. Findings included in this report will inform national policies and strategies for inclusion of SDM in the FP method mix offered in communities and at health facilities, and programmatic requirements for scale-up of SDM to all regions of Tanzania.

National Indicators, Tanzania⁴

Population (2017 Projection): 56 million
mCPR, married women: 32 percent
Unmet need for FP, married women: 22%
TFR: 5.2
Lifetime risk of maternal death: 1 in 24
HIV prevalence: 4.7%, with regional prevalence ranging from 0.2 percent (Zanzibar) to 15.4% (Njombe)

Shinyanga Indicators⁴

Population (2012 Census): 1.5 million
mCPR, married women: 21%
Unmet need for FP, married women: 23%
TFR: 7.1
HIV prevalence: 7.4%

2. Background and Implementation Context

^c The interventions for first-time mothers are documented in this brief: [Increasing Access to Contraceptive Information and Services for First-Time Mothers in Shinyanga District, Tanzania](#).

National

Tanzania is faced with significant sexual and reproductive health (SRH) challenges, including high fertility rate, low contraceptive prevalence, and elevated rates of HIV and AIDS. Some of the factors contributing to low contraceptive use are inability to access modern contraceptives, prevalent myths and misconceptions about FP, and unresolved side effects, which have led to discontinuation of contraceptives and high rates of unmet need for FP.

Despite these challenges, Tanzania has made significant progress in improving access to contraceptive services over the last 30 years, and modern contraceptive use among currently married women has steadily increased: from 7 percent in 1991-92 to 20 percent in 2004-05 and 32 percent in 2015-16.⁴ Unmet need for FP among married women has also declined slightly over time, from 28 percent in 1991-92 to 22 percent in 2015-16; however, the total fertility rate has only slightly declined over the same time period: from 5.7 children to 5.2 children per woman.⁴ Women's need for FP is more often driven by their desire to space births (42 percent of married women 15-49 years), rather than limit them (26 percent of married women 15-49 years), leading to significant and continued population growth.⁵

Shinyanga Region

The Shinyanga Region of Tanzania is primarily rural with a large Catholic community. Sociocultural issues and weak health infrastructure impede women's access to FP services. The total fertility rate in the Lake Zone, of which the Shinyanga region is located, at 6.4 children per woman, exceeds the national average of 5.2.⁴ This region has a high HIV prevalence rate and is among regions with the lowest modern contraceptive use in Tanzania.⁴ Furthermore, Shinyanga is a drought-prone region, with considerable food insecurity.

Rationale for Inclusion of SDM in Method Mix

A series of 14 strategically designed pilot studies in diverse settings around the world determined significant demand for SDM among a broad range of women.¹ Most women (90-99 percent) found the method easy to learn, simple to use, effective, and without side effects.³ The studies also found that SDM can be effectively offered by community-based providers with little or no experience in FP given appropriate training, supervision, and linkages to other service delivery outlets to refer women interested in using other methods or who are ineligible for SDM.

Standard Days Method (SDM)

SDM, based on fertility awareness and developed by Georgetown University's Institute for Reproductive Health, focuses on assisting women to track their own menstrual cycles. Women with regular menstrual cycles lasting 26-32 days can prevent pregnancy by avoiding unprotected intercourse on days 8 through 19, a fertile window of 12 days. These 12 days account for the variability in timing of ovulation and the viability of sperm in the woman's reproductive tract. The method has been tested in rigorous efficacy trials, yielding a typical use effectiveness rate of 88 percent, comparable to those of male condoms and better than those of other barrier methods. It has been introduced in 30 countries and is included in the family planning norms in 16 countries; the World Health Organization recognizes it as an effective, modern method.

Programmatic Approach

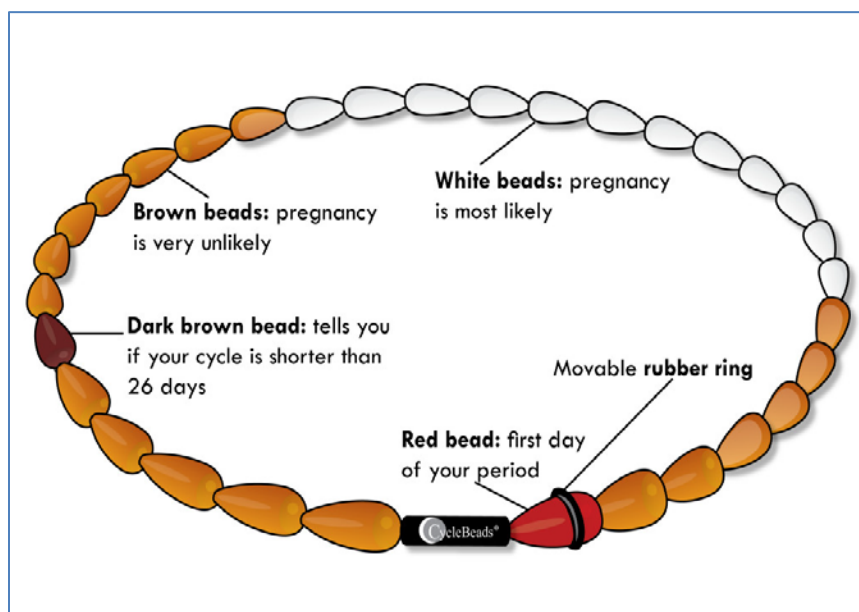
From 2004-2014, Pathfinder International implemented community-based programs in Shinyanga under the *Tutunzane* (*Let's take care of one another*) I and II projects with support from the Centers for Disease Control and Prevention and private funding from Mr. Rajen Kilachand. At the end of these projects, in 2014, there were over 1,647 community home-based care providers (volunteers selected in collaboration with street, ward, and village-level local government councils) and 288 supervisors in 18 districts of five regions of Tanzania, including Shinyanga, providing vital integrated FP/SRH information and services, in addition to home-based care.

In Shinyanga Region, there were approximately 230 Pathfinder-supported community home-based care providers and 32 supervisors providing services through these projects. The community-based agents were integrated in the district health system through district health facilities. They received supervision and commodities, provided referrals and reporting, and received technical support and mentorship from the Tanzanian Red Cross.

From 2014-2016, E2A and Pathfinder expanded demand for and access to SDM by engaging the 230 CHWs and their 32 supervisors. CHWs counseled on the full range of contraceptive methods, including SDM, and referred clients to facilities and mobile outreach services for injectables, implants, IUDs and permanent methods. E2A and Pathfinder also strengthened demand- and supply-side interventions for first-time mothers. This effort was part of ongoing national and local initiatives to increase access to and availability of modern FP in Tanzania, and reduce unmet need for FP.

By introducing CycleBeads into the contraceptive mix, Pathfinder Tanzania's objective was to increase utilization of modern FP methods, given that 6 percent of all FP users reportedly use traditional methods.⁴ Furthermore, evidence suggests that when a new contraceptive method is added to the mix of available methods, it attracts new clientele and increases contraceptive prevalence.⁸

Figure 1. CycleBeads®, [Institute for Reproductive Health, Georgetown University](#)⁶



Materials/Tools Development

CycleBeads® are a color-coded string of beads that help a woman use SDM, a clinically tested natural method of FP that enables women to manage their own fertility (www.irh.org). USAID/Tanzania ordered CycleBeads via John Snow, Inc.'s DELIVER Project and gave them to Pathfinder for distribution through the community-based project. In addition to CycleBeads, the project adapted the Population Council's Balanced Counseling Strategy Information, Education and Communication (IEC) materials, including counseling cards and method brochures.²

National SDM Training Curriculum and Tools Development Workshop

Together with the MOH, Pathfinder hosted a one-week workshop to develop the national training curriculum for SDM, and review content and cultural acceptability of all materials. Also during the workshop, features of a mobile phone application (described below) and IEC materials, including teaching slides, job aids, participants' manual, palm cards, client pamphlets, and provider cue cards, were finalized.^d The workshop included district and regional coordinators from Shinyanga Region, MOH master trainers, and representatives from the national MOH FP/RH office. This group reviewed and gave input into materials, and were especially involved in reviewing content and cultural acceptability of the materials. Once finalized, materials were printed and presented to relevant stakeholders in Shinyanga.

Mobile Application for Balanced Counseling

Pathfinder, in collaboration with D-Tree International, developed a protocol-driven mobile phone application to guide CHWs in offering quality services. The app helped the CHWs to adhere to counseling procedures, produce accurate documentation of contraceptives provided, and refer clients to health facilities for LARCs. CHWs used a decision tree to support users to choose the method appropriate for their needs. The project provided training, smartphones, and communication allowance bundles for the 230 CHWs. The project also provided training, tablets, and communication allowances for the 32 CHW health facility supervisors to view performance data and send messages to CHWs about contraceptive stocks and planned outreach services. The use of the mobile application allowed the program to:

- document CHW activities with GPS location coordinates and time-stamped entries;
- facilitate communication between CHWs, clients, and facilities;
- remind CHWs to make follow-up inquiries and visits to confirm refills and completed referrals;
- assist supervisors in reviewing activities of individual CHWs under their supervision;
- generate progress reports for managing the program and for routine reporting purposes;
- alert project staff and supervisors about issues the CHWs might encounter;

^d The MOH, Pathfinder/Tanzania, and D-tree International adapted the following tools and ideas from *The Balanced Counseling Strategy Plus: A Toolkit for Family Planning Service Providers*:

1. **CHW curriculum:** Includes instructions on how to use the phone algorithm, implement the integrated counseling strategy, and apply the "Citizen Report Card."
2. **Palm cards:** These 14 cards are method-specific and contain summary information about each FP method mentioned by CHWs during counseling. Each method card has an illustration of the contraceptive on the front, and the back contains information such as mechanism of action, side effects, benefits, and who can use the method. These cards are used to exclude methods that are inappropriate for the client's reproductive intentions and narrow her choice to reach a decision.
3. **Client brochures:** These brochures cover the 14 contraceptive methods counseled on by CHWs. They were designed to help the client better understand the method chosen. The CHW gives the client the brochure of the selected method and a brochure with information about condoms to share with their partner. These brochures include methods provided at facilities. CHWs encourage illiterate clients to share with their partner or other friends and review the brochure.

- generate data on client satisfaction with referrals through the Citizen Report Card, which recorded questions about the quality of service and outcome of the client’s visit (if referral was completed, including why not); and
- make electronic payments to CHWs based on their performance (as described above) using a phone-based mobile money application.

Data collected by CHWs through the mobile application were accessed through an online dashboard. The dashboard showed data collected during client visits, including information on visit outcomes, client demographic and method uptake, and CHW performance. The dashboard included user-friendly data visuals on performance and provided real-time access to key indicators. CHW supervisors viewed activity reports for each CHW they supervised. Additionally, the district health management teams (responsible for managing all public health care services at the district level) and regional health management teams (responsible for interpreting national health policies and monitoring their implementation at the regionally) could view the dashboard, including activities in their relevant districts.

To ensure the security of the devices (protection/insurance against loss, breakage, and theft), Pathfinder implemented an insurance scheme to replace lost or stolen phones. Each month, Pathfinder withheld from CHWs’ monthly stipend. This money was placed into an “account.” Each account contained the money from CHWs in each respective ward.^e If one CHW’s phone was reported lost, broken, or stolen, Pathfinder used these funds to pay for a replacement phone. At the end of the project, Pathfinder evenly distributed all remaining money to the CHWs in each ward. If no one in a ward lost a phone, each CHW received all of his/her money back.

Community-Based Distribution of FP

Pathfinder and E2A recruited the existing cadre of 230 CHWs and 32 facility-based CHW supervisors in five districts of Shinyanga Region established through Pathfinder's previous project. Criteria for selecting these CHWs were: literacy; residing in the same village; being respected, accepted, and trusted by community members; and experience in health was an added advantage. Procedures for selection involved advertising the post in each village, receiving applications, village leaders conducting interviews in collaboration with the program team, and selection of one CHW per village. To refine and sustain this effort, Pathfinder sourced funding from Bergstrom Foundation to continue supporting CHWs in Shinyanga District Council to provide FP services and scaled up the provision of maternal, newborn, and child health services to the whole district, covering 126 villages. Data in the dashboard are still updated in the intervention district and slowly in the non-intervention districts.

CHW and CHW supervisor training

During the first year of the project, MOH staff and master trainers were trained in a training-of-trainers workshop. In addition, 41 “champion CHWs” were trained. CHWs were designated as champion CHWs if they were highly active in the previous project, highly respected by their community members and peer CHWs, and indicated interest in serving in the role. These CHWs assisted in piloting the community-based approach and tools, and, in turn, served as both trainers and mentors to CHWs trained later. One champion CHW from each ward was trained and project staff/MOH followed up with each champion over a period of five weeks to ensure good quality of services were provided. The

^e Tanzania is divided into 31 regions. Each region is subdivided into districts. The districts are sub-divided into divisions and further into local wards. A village is the lowest government administrative structure at the community level. A ward or *Shehia* is an administrative structure for one single town or portion of a bigger town (urban wards) and represents up to 21,000 people. Rural wards are composed of several villages.

champion CHWs then served as co-trainers during scale-up trainings and mentored four to six newly trained CHWs who lived in the same ward or neighboring ward as the champion for up to six weeks after the training.^f The engagement of champion CHWs alleviated the need for Pathfinder program staff to make more intensive follow-up visits, and saved the program considerable time and money in terms of transport costs, staff time, and per diems.

At the end of the first and beginning of the second year of the project, the remaining 189 CHWs and their 32 supervisors received training as well. Five-day trainings with 25 trainees and trainers were organized. Using the national FP curriculum, CHWs and their supervisors were trained on the full range of FP methods available, including SDM/CycleBeads, and the Balanced Counseling Strategy developed by the Population Council. Topics covered in the training included: proper provision of SDM/CycleBeads; use of the adapted version of the Balanced Counseling Strategy Plus; use of the mobile phone app, counseling cards, and client brochures; and use of the Citizen Report Card for users to give feedback on satisfaction of services offered. By the end of the training, more than half of the participants were comfortable providing services using the mobile phone app and cards, although additional follow-up was needed to make sure all providers were well trained on use of the mobile phone application.

Service provision

Out of the initial 230 trained, 222 CHWs used the mobile application to provide counseling; CHWs were asked to administer balanced counseling on FP with 10 new clients per month^g. The mobile application guided the CHWs through a complex algorithm during the provision of intensive counseling to FP clients. This protocol draws on the client's fertility intentions and personal preferences to choose the method most appropriate for her needs. After the initial counselling visit, CHWs conducted regular follow-up visits to assess client satisfaction with the method used, support method continuation, and counsel on method switching based on observed complications and changes in a client's reproductive needs. CHWs were expected to complete 75 percent of their scheduled follow-up visits to these new clients.

Regarding SDM/CycleBeads, the program included features that ensured ongoing follow-up for effective use of the method:

- In-home or telephone follow-up by CHWs (minimum monthly follow-up for the first three months);
- Fliers for clients in Kiswahili for reference; and
- Calendars for clients to help them mark days and monitor their cycles.

Counseling by CHWs placed great emphasis on dual protection, given the high HIV prevalence rates in Tanzania (particularly in Shinyanga), and the importance of providing a wide range of FP options for

^f Every champion was expected to complete the following tasks:

1. Visit every CHW in her ward twice per week for a period of 5-6 weeks. The champion was responsible for her own transport to each CHW's house, and he or she was expected to accompany the CHW to a client visit (if possible) during each follow-up visit.
2. Complete the supervisor's mobile phone application for each visit and send data on a weekly basis (at a minimum). Champions used the mobile phone application to follow up their CHWs. This application guides the user through a series of questions and activities to ensure the CHW is using the application appropriately and records any problems/recommendations to improve use of the application by the CHW.
3. Communicate with the project team daily to inform the team about which CHWs were visited and any major challenges

^g Eight out of the original 230 CHWs dropped out due to reasons beyond the program's management capacity: 3 passed away, 1 had a car accident, 3 moved from Shinyanga, and 1 underperformed due to witchcraft beliefs that people will harm her.

clients. When CHWs provided FP counseling, they also provided information on the benefits of using condoms alone or in addition to other FP methods to prevent both pregnancy and sexually transmitted diseases, including HIV. The district health system supported the CHWs in the areas of commodities (condoms and pills), supervision, and reporting. The district health system also supported capacity building for facility-based providers at dispensaries and health centers^h in counseling and skills for LARC insertion and removal, including infection prevention. They also supported the facility-based providers to counsel first-time mothers on healthy timing and spacing of pregnancy.

Commodities

CHWs received CycleBeads directly from Pathfinder staff, and condoms and pills directly from facilities through supervisors or the facility in-charges at no cost. To receive requested commodities, CHWs were expected to complete a written request and logistics management reporting form and submit these forms to the facility. Supervisors frequently provided feedback on available stock and stock-outs to their respective CHWs to facilitate their orders. Pathfinder distributed CycleBeads to CHWs during the training, and additional stocks during supportive supervision visits, typically conducted monthly. CycleBeads were not distributed nor available at facilities.

Pay-for-performance system

CHWs received a small stipend to cover transport and other costs associated with their volunteer work. The project introduced a mobile pay-for-performance scheme, which rewarded the CHWs for meeting targets in terms of new client recruitment and referral follow-up as shown in Table I on the next page. This payment strategy is within the larger government strategy of improving sustainability through a results-based financing scheme.

^h Twenty-eight of these facilities were dispensaries, and four were health centers.

Table 1. CHW performance-based monthly stipend scheme

New client registrations made/month	Additional amount paid in TZ Shillings
0-3	0
4-6	5,000
7-9	8,000
10 or more	11,000
Percentage of automatically scheduled follow-up visits made per month	
0-24%	0
25-49%	5,000
50-74%	8,000
75%+	11,000

Supervision

CHWs were “attached” to facilities serving their wards and were supervised by trained health facility workers; one in each of the 32 project-supported facilities. A CHW supervisor was typically either a FP nurse or the facility in-charge, typically a clinical officer. Many of the E2A CHW supervisors also served as supervisors in the previous Pathfinder home-based care project. Pathfinder recruited the same individuals as supervisors, and then added additional supervisors in districts where they were not previously working.

CHW supervisors were selected based on several criteria:

- Works in the same facility as CHW supervisee in the catchment area, and attached to an E2A-supported facility (dispensary or health center);
- If not the facility in-charge, must be providing FP/SRH services at the facility;
- Sufficient level of motivation and performance in clinical service delivery, as assessed by district Reproductive Health Coordinator.

All supervisors received tablets and a separate tablet application. The tablet application enabled them to track individual CHW performance and offer supportive supervision. They also participated in continuous mentoring and coaching on the use of tablets to: review CHW performance data, send messages to the CHWs regarding stock levels of FP methods, communicate planned outreach services to villages, and send invitations for monthly meetings. Through the supervision app, data were in “real time;” therefore, supervisors could review individual CHW performance at any time. Supervisors used various strategies to maximize engagement with CHWs and improve motivation and performance including the following:

- **Weekly phone calls:** Based on feedback from CHWs regarding their desire to receive regular feedback, Pathfinder/E2A recommended that supervisors call each CHW once a week to discuss his/her performance.
- **Monthly meetings:** In addition to regular phone calls, CHWs supervisors arranged and led monthly in-person meetings with CHWs in each ward, with occasional project team visits. These meetings provided an avenue to discuss the project and any challenges or successes. Monthly meeting minutes were kept in the community services file in each supported facility.

- **Review of data dashboard generated by mobile phone app:** By accessing this data (CHW “Month Report” and “Client Report”), a supervisor could view the number of new client registrations a CHW made that month, the number of visits made vs. visits scheduled, any overdue visits, and whether follow-up appointments had been made and completed. The project team provided feedback reports to the supervisors once per week, identifying issues requiring closer attention or problem-solving.

The data from the dashboard were also used for program review and decisions at district and/or regional level. The project team conducted review meetings quarterly with regional and district staff and implementing partners (including Pathfinder) to discuss this data, review performance, and give feedback, as well as to discuss implementation successes, gaps, and proposed solutions. Pathfinder/E2A then addressed these challenges in close collaboration with the Council Health Management Teams, health facility staff, and CHWs during the following quarter.

Reporting

As mentioned previously, the mobile phone application was used to generate CHW progress reports, which were used to manage the project and report on key indicators.ⁱ The E2A/Pathfinder project did not require CHWs to complete paper-based reports; however, these same CHWs were implementing other projects in the same wards in which they were required to complete paper-based reports.

Data from the dashboard were used in the study conducted by E2A/Pathfinder, particularly for collection and analysis related to uptake and discontinuation of contraceptive methods, client contacts made by CHWs, and clients’ perception of contraceptive methods, including reasons for discontinuation and ease of use. That study is described in the following section.

ⁱ One of the weaknesses of the mobile phone application as a reporting system is that CHW reports were not electronically linked to facility or HMIS systems. Therefore, much of the work performed in the context of this project was not reported at a higher level for planning purposes.

3. Methods

The study conducted by E2A and Pathfinder on effectiveness of the programmatic approach had three objectives:

1. Assess uptake rates and discontinuation rates of SDM and other FP methods, as well as clients' reasons for choosing SDM, and document their experience with the method.
2. Assess the perspectives of clients, service providers, supervisors, and managers on the programmatic approaches utilized (CHWs, digital health application, performance-based incentives) to introduce SDM.
3. Explore critical factors implemented to enhance scale-up of SDM from the perspectives of clients, service providers, supervisors, and managers.

Study Design

The study employed a mixed methods approach to understand E2A Project inputs and their effect on promoting use of FP methods, including SDM, in five districts of Shinyanga Region (Shinyanga DC, Shinyanga MC, Ushetu, Kahama and Msalala). The study used both qualitative and quantitative data collection methods. Qualitative interviews were conducted with program participants and clients to better understand program successes and challenges.ⁱ Quantitative data on uptake of all FP methods over the two-year program implementation period, including SDM using CycleBeads, were extracted from the routine project monitoring data system.

Participants were purposively selected based on attributes relevant to the study, and included CHWs; staff (government employed health leaders/managers at national, regional, district, or project staff); CHW supervisors; clients (both current users of SDM and those who reported discontinued use of SDM); and a small number of spouses/partners of clients. Table 2, below, shows the type of respondents included in the study, definitions and inclusion criteria of respondents, and the total number of planned interviews and FGDs.

ⁱ Ethical approval was secured by Pathfinder International in Tanzania through the Institutional Review Board and from National Medical Research Institute.

Table 1: Criteria for selection of respondents and sample size

Respondent types	Respondent definitions	Number of planned interviews, focus group discussions (FGDs)
Clients	All adult female clients aged 18-39 years who were current or former users of CycleBeads were eligible for interviews; Clients were grouped as users and discontinuers and then purposively selected based on their district of residence. Transport means and distance were considered.	5 FGDs and 10 in-depth interviews with current users 5 FGDs and 20 in-depth interviews with discontinuers (8 interviews with women who wanted to become pregnant and 12 who stopped for other reasons)
	Selected male partners/spouses of current users were also interviewed.	1 FGD and 3 in-depth interviews with spouses of current users
CHWs	Currently active CHWs were selected for interviews based on factors such as participation level of the CHW. While it was critical to ensure that CHWs had actively participated in the Pathfinder program to respond to interview questions in a confident and knowledgeable way, the research team ensured that those interviewed were not just the best “performers” in the program to gather reflections of limitations CHWs had in performing.	5 FGDs
CHW Supervisors	Selected for interviews based on performance, commitment to the program, knowledge, and insight on the program.	2 FGDs
National, district level, and program staff	Selected for interviews based on responsibilities/role, knowledge, and insight on the program.	5 key informant interviews

Data Collection

In total, the research team conducted 18 FGDs. Each FGD included approximately 8-12 participants. Five FGDs were conducted in each district: one each with CHWs, CHW supervisors, SDM continuing users, and clients who had discontinued SDM, although by the end of the study only two groups of CHW supervisors were interviewed due to time and logistical constraints. One group of male partners of continuing users was added through snowball sampling from the female clients currently using SDM. A total of 38 interviews with individual clients were conducted, and among them, 8 clients were pregnant women who purposely discontinued SDM to become pregnant, 12 clients who discontinued for other reasons, and 13 clients and spouses who are continuing to use SDM. The research team conducted 6 key informant interviews with the District Reproductive and Child Health Coordinator, District Family Planning Coordinator, Regional Reproductive and Child Health Coordinator, National FP Coordinator, and Pathfinder project staff.

Discussion guides were prepared for each category of respondent and type of interview. These guides were used by interviewers to facilitate discussions with respondents. At the beginning of each discussion or interview, participants were provided with the summary of the study and the implication of their participation, and a consent process was administered. They also heard an overview of the goals of the discussion. To build rapport, simple questions were asked first to encourage participants to begin talking and sharing. To avoid losing track of the discussion, moderators focused on the main questions in the discussion guide and encouraged conversation that revealed participants' feelings and thoughts. Refreshments and transport reimbursement were provided to the FGD and individual interview participants.

Data Management and Analysis

After completion of all interviews, standard forms were used to develop main themes, sub-themes, and codes for final analysis. The approach for analysis of qualitative data was selected for its suitability for studies that are short term, start deductively with pre-set aims and objectives, and have more structured data collection. The approach provides six stages in the analysis: familiarization, identifying a thematic framework, indexing, charting and mapping, and interpretation. The framework was used to analyze interviews and FGDs.

Three researchers used NVivo software to code and analyze interview transcripts. Unique user profiles and user IDs were created for and used by each team member when using NVivo. The researchers were assigned work on transcripts of the same sub-groups to bring unique perspectives to the analysis. For example, one researcher worked on CHW transcripts, a second researcher coded and analyzed the supervisor transcripts, and a third researcher coded and analyzed client transcripts. This approach allowed the team leader to easily merge and track, by the unique user profiles, the contributions made by all collaborators.

The researchers analyzed quantitative data using Excel and SPSS Version 10. For confidentiality, no identifiers, such as name or phone number, were extracted.

Data Quality Control and Quality Assurance

The following measures were taken for data quality control and assurance:

- Study design and data collection instruments were shared with project partners for review and inputs.

- Data collection tools were piloted in one district with all team members for suitability, reliability, coherence, and clarity. Corrections were made as needed.
- At the end of each interview and FGD, the interviewer quickly checked the guide and responses for completeness before the respondent left.
- FGDs and interviews were recorded to reduce loss of vital data.
- Only qualified and experienced research assistants were recruited.
- Interviewers were trained to understand objectives, process, and output requirements for consistency and completeness.
- All study tools were translated from English to Kiswahili, and back translation was performed to ensure accuracy and correctness.

Study Limitations

The qualitative research methods used in this study have several well-known limitations, such as the lack of generalizability of qualitative findings to all sub-populations of interest, biases inadvertently or deliberately introduced by careless respondent recruitment strategies, moderator biases which can interfere with respondent explanations, and non-response of respondents due to socio-cultural and power differences, or fear of negative consequences when the discussions are disclosed. This documentation process worked to reduce these limitations through means such as careful selection of participants, appropriate moderation, and ensuring full confidentiality of respondents and their responses at all steps of the study.

Participants selected using purposive sampling may not be representative of the perceptions and views of all community members or CHWs on SDM use or program effectiveness. To address this risk, the project team ensured that participants represented all districts from a variety of community settings, using a multi-stage recruitment strategy which included an element of randomness at the lowest level of selection.

Additionally, the project relied on the mobile application for quantitative data collection and reporting. As the application primarily served as a decision-making and counseling tool for the CHWs and not as a data collection system, it is important to note that there were limitations and gaps in the way data were collected, which negatively impacted analysis of the app data. For example, certain key indicators were not captured in the application, such as method initiation and method switching. Additionally, the number of clients, the number of visit-based variables, and the variability in the number of follow-up visits made by CHWs per woman yielded a very large dataset, further complicating data cleaning and pattern detection related to method uptake and use. These limitations with the quantitative data made triangulation with qualitative results difficult. Thus, the quantitative data serve to demonstrate topline activities of the project rather than to substantiate qualitative findings.

Finally, the project did not follow up with clients to determine method use at the project's conclusion. Instead, the application captures method used at the last visit with a CHW, regardless of the timing of the last visit. As a result, switching and discontinuation information was not collected systematically, but rather, opportunistically when a CHW happened to make a follow up. Thus, the app data may severely underreport FP discontinuation and/or method switching.

4. Results

Table 3 (below) shows the number of planned vs. achieved interviews by type of respondent. With the exception of one FGD with CHWs, all planned interviews were conducted, as specified in the original protocol.

Table 3: Number of planned vs. achieved Interviews and FGDs, by respondent type

Respondent types	Number of planned interviews, focus group discussions (FGDs)	Achieved number of interviews
Clients	5 FGDs and 10 in-depth interviews with current users	5 FGDs and 10 in-depth interviews with current users
	5 FGDs and 20 in-depth interviews with discontinuers (8 interviews with women who wanted to become pregnant and 12 who stopped for other reasons)	5 FGDs and 20 in-depth interviews with discontinuers (8 interviews with women who wanted to become pregnant and 12 who stopped for other reasons)
	1 FGD and 3 in-depth interviews with spouses of current users	1 FGD and 3 in-depth interviews with spouses of current users
CHWs	5 FGDs	4 FGDs
CHW Supervisors	2 FGDs	2 FGDs
National, district level, and program staff	5 key informant interviews	5 key informant interviews

Study Objective 1: Assess uptake and discontinuation rates of SDM and other FP methods, and clients' reasons for choosing SDM, documenting their experience with the method.

The study, as a first objective, sought to measure uptake and discontinuation rates of SDM and other FP methods, and to understand clients' reasons for choosing SDM/CycleBeads, experiences using the method, and reasons for discontinuing use of CycleBeads. This first section describes these findings.

In total, 33,940 clients were counseled by a CHW from October 2014-September 2016 (Table 4). Nearly 20 percent (6,504) of these clients were men. Most clients (21,982 or 64 percent) were aged 25-49 years and had three children or less, and 48 percent (15,867) were either cohabitating or currently married.

Table 4. Demographics of FP clients counseled, by sex

		Sex		
		Female	Male	Total
Parity	0	3400	1727	5127
	1	4122	859	4981
	2	4781	932	5713
	3	4528	843	5371
	4+	10604	2143	12747
	Missing	1	0	1
	Total	27436	6504	33940
Age	14-Oct	99	13	112
	15-19	3352	590	3942
	20-24	5893	1121	7014
	25-49	17602	4380	21982
	50+	360	367	727
	Missing	130	33	163
	Total	27436	6504	33940
Marital Status	Cohabiting	6541	2525	9066
	Currently married	6214	587	6801
	Never Married	1766	550	2316
	Separated	1780	296	2076
	Widowed	326	17	343
	Missing*	10809	2529	13338
	Total	27436	6504	33940

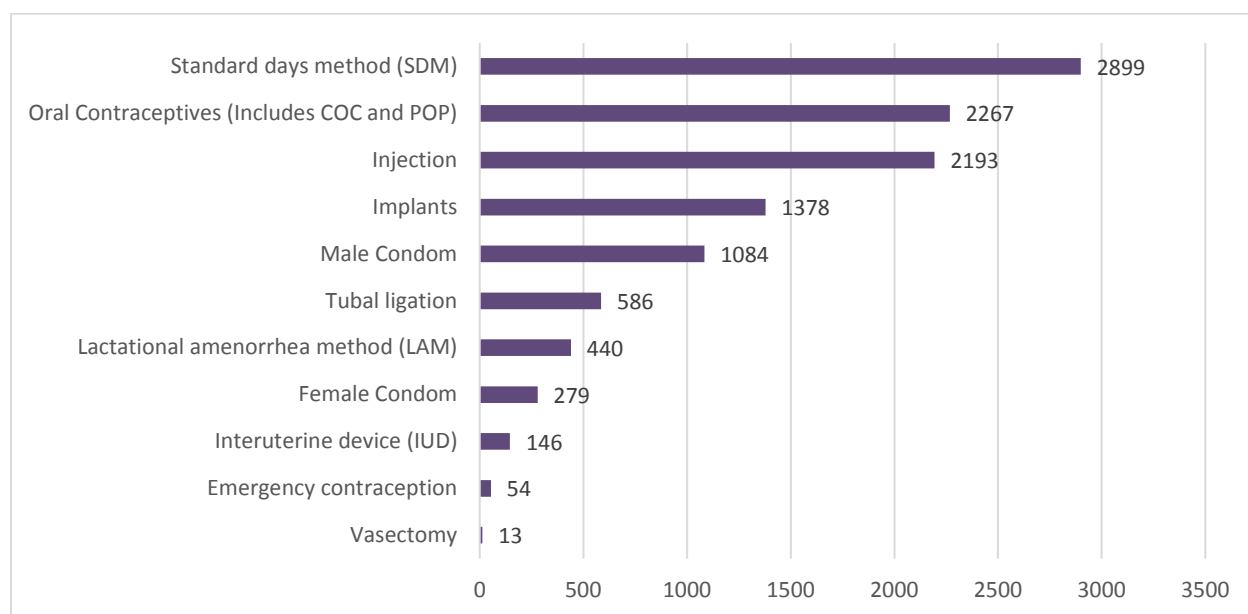
*Due to the high number of missing data for marital status, distribution of the remaining categories (e.g., cohabitating, currently married, etc.) is not reliable.

Most of the 27,436 female clients (57 percent), reported already using a FP method at their first visit by a CHW, as recorded using the mobile phone application (data not shown). Among women who reported using a method at registration, 20 percent were using injectables, 10 percent an implant, 9 percent oral contraceptives, and 2 percent (428) SDM with a calendar, known locally as the “calendar method” (data not shown).

Figure 2 shows the first method accepted by lapsed and new female FP clients during a visit with a CHW, including both community-based (short-term) methods as well as referrals for clinical methods. As the chart indicates, SDM was the most commonly accepted method by new and lapsed FP users, with 2,899 accepting SDM between October 2014-September 2016. Results indicate that SDM was the most popular method accepted by clients during this period, who were eligible to use the method;^k SDM represents one-quarter (25 percent) of all methods accepted by new and lapsed users.

^k Client’s menstrual cycle length must be between 26 to 32 days, and any circumstance that may affect the woman’s cycle length (recent pregnancy or use of other methods) results in ineligibility.

Figure 2. Acceptance of FP methods among new and lapsed FP users by method type (n=11,339)



Note: The above table captures only those women who reported not using an FP method at the time of first contact.

As noted previously, the E2A Project was limited in its capacity to capture method discontinuation or method switching. Only instances where a CHW followed up with a client after discontinuation or method switch were recorded in the application. A total of 933 women recorded either a discontinuation and/or a method switch over the two-year project for all contraceptives provided, including 94 instances where a woman discontinued SDM or chose to switch to a different method. It is important to note, however, that CHWs were expected to meet with SDM users once every 30 days for the first three months. If a woman discontinued using SDM following those 90 days, it may not have been recorded. Of the 933 discontinuations and method switches, the largest percentage—20 percent—were injectable users. The most common reasons reported through the mobile application for discontinuation were: desire for pregnancy (20 percent), side effects (15 percent), and partner disapproval (12 percent).

Clients' reasons for initially choosing SDM

FGDs or in-depth interviews revealed additional information about the initial findings from monitoring data. During these interviews, clients most often reported that they chose to use SDM because it is a natural method. The findings indicate that SDM/CycleBeads is highly acceptable.

I have used this method for about one and a half years but I haven't noticed any effects on my body, it has also helped me to know my menstrual cycle unlike other methods. - Female client (current user), In-depth interview

Menstrual cycles differ from woman to woman. Other methods sometimes affect the cycle; either a woman stops bleeding or goes beyond the normal days with unpredictable cycles. - Female client (current user), FGD

Many SDM clients reported that they had previously used hormonal methods, but that they had experienced side effects, including bleeding, headache, nausea, dizziness, low libido, and weakness, which caused them to discontinue.

It is effective because it doesn't have side effects on me unlike when I was using injection method like miscarriage... - Female client (current user), In-depth interview

It is good as it does not have any side effects. For instance when I was using pills I experienced side effects such as nausea and headache. - Female client (current user), FGD

Low cost was another frequently mentioned reason for selecting SDM/CycleBeads, in terms of initiation, ongoing use, transport, and time spent at a facility accessing other FP methods. One remaining cost associated with SDM was the need to collect condoms from facilities when CHWs had minimal supply, but most clients liked the fact that CHWs could provide condoms when needed at home.

This method has reduced a lot of costs especially going to collect medicines in the health facility therefore it helps to improve economic condition. - Female client (current user), In-depth interview

...I have been using this method for a long time now, I have three children, the method has helped me a lot since I don't incur any cost in getting the service, it does not consume my time and doesn't have side effects to my body. - (Female client (current user), FGD

Finally, clients mentioned that the method is deemed acceptable by both dominant religions (Islam, Christianity/Catholicism).

Cyclebeads has been accepted by religious leaders because it is natural and has no side effect. - CHW, FGD

Clients' experience using SDM/CycleBeads

In interviews about clients' experiences, successes, and challenges using SDM/CycleBeads, they said the method is not new to the community, and some women reported to have used this method for two to as many as fourteen years previously, referring to it as the "calendar method." In fact, many clients using CycleBeads used them in conjunction with a calendar.

To my knowledge and my experience, I started using this method since I was in secondary school up to college education and up to this moment and I have not conceived. - Female client (current user), FGD

Clients mentioned that using CycleBeads has increased their confidence in using SDM, particularly because they must advance the ring on the CycleBeads daily, monitoring "safe" vs. "unsafe" days.

This method is good. It helps a lot to know when one has entered fertile days and even after, also helps one to know what to do in those days and how a person can take care of her self. - Female client (current user), FGD

From my experience, I have been using this method for five years, hasn't caused me any bodily effects, and I am able to know the fertile days and my husband has also loved it because we are all involved. - Female client (current user), FGD

Another advantage mentioned was immediate return to fertility, unlike injectables. It was clear that the extra time needed after injectable use to become pregnant is frustrating for women.

The method doesn't have side effects. I previously used injection method but I had to be cleaned before I would conceive. - Female client (current user), IDI

Clients were asked about their initial experiences using SDM/CycleBeads, including ease of use. There were variations among respondents regarding how long it took for them to use CycleBeads confidently, ranging between three and seven months.

I made follow up for four months to get used to it and to truly feel comfortable. - Female client (current user), FGD

It took me seven months to get used to the method. - Female client (current user), FGD

Both CHWs and clients noted that SDM was not initially easy for some clients to use. Several clients mentioned that the red beads confused them, they forgot where to start on the beads, and two mentioned that they initially moved the band in the wrong direction before being corrected by the CHW. Though most clients reported eventually learning how to use the method, they also stated that it was difficult to remember to move the band daily. Follow-up mechanisms, such as phone calls and follow-up visits during the first three months and reference guides in Kiswahili, helped to alleviate this confusion.

Because the method requires the use of a secondary method (e.g., condoms) or abstinence during the 12 unsafe days, use of SDM with CycleBeads requires a high level of partner cooperation. Respondents were asked how they avoided pregnancy during unsafe days. Most clients either use abstinence or condoms. Other strategies included withdrawal and negotiation.

We use condoms or withdrawal method. Female client (current user), In-depth interview

At most times, we use condoms and when he refuses to use a condom, he withdraws. At times, I refuse to have intercourse and remind him on the reason for using family planning. - Female client (current user), In-depth interview

I make him happy during safe days in order to avoid disturbances during fertile days. - Female client (current user), In-depth interview

For example, he might need sex without condom, I will tell and explain to him that I am in unsafe days and we agreed that we use family planning methods. - Female client (current user), In-depth interview

By involving male partners, clients and CHWs described how using this method has actually increased the family bond.

This method has brought a lot of success, it has joined families together since it involves both partners, has also been accepted by religious groups, doesn't have side effects. - CHW, FGD

We really enjoy using this method and it has saved many marriages because other methods cause a lot of conflicts...other men were having extramarital relationships after their wives had non-stop bleeding for two weeks. But nowadays it is easy to abstain for a few days or use condoms. - Female client (discontinuer), In-depth interview

Clients also noted instances where men failed to comply with unsafe days and their wives became pregnant. Some women discontinued SDM due to this lack of cooperation (see next section).

It was reported that this method is mostly used for avoiding unwanted pregnancies, but many liked the fact that they could also use it to become pregnant.

I use it for both reasons, to avoid pregnancy and to conceive when I want to bear children. - Female client (current user), FGD

Discontinuation rates of SDM and other methods of FP

The research team also interviewed women who discontinued SDM. Clients reported discontinuing SDM primarily for three reasons: because they became pregnant (mostly intentionally), because their cycles were too erratic to use SDM, or because clients' husbands would not abstain or use condoms during unsafe days.

I failed to use it. I did understand but when I entered my menstruation cycle it tends to fluctuate – sometimes I menstruate between months. - Female client (discontinuer), FGD

My partner refused to use a condom after seeing that the child has grown up. - Female client (discontinuer), FGD

I was using it so that I can get pregnant and I was successful. - Female client (discontinuer), FGD

When asked why men dislike condoms, respondents mentioned itching, misconceptions about condoms affecting their own fertility, and religious and cultural norms.

Men do not want to use condoms because of irritation caused by wearing condoms. - CHW, FGD

Most of the family believes that a woman is married in order to produce children because they have have given a lot of cows as dowry - CHW, FGD

They believe that family planning methods destroy genital organs. - CHW, FGD

In other cases, CHWs mentioned that alcohol consumption (by both men and women) can play a factor in not abstaining or using other methods during unsafe days.

There was a little difficulty with drunk fathers and mothers, because after drinking they have intercourse even during fertile days, so this was the challenge. - CHW, FGD

Finally, some women could simply not remember to move the band each day. Some traveled without it, forgot to use it, and a few of these women accidentally became pregnant and discontinued, or switched to a different method. One women said,

“Challenge happens when you forget to move the black band thinking that you are still in safe days while not. - Female client (discontinuer), FGD

I think it is troublesome to move the ring and calendar and then I went back to use tablets that I used to use. - Female client (discontinuer), FGD

Conclusive remarks, Objective 1: Results under Objective 1 suggest that SDM was a popular method among new and lapsed FP clients and that clients appreciated that it was a natural method and had few side effects, as compared to their experience using other FP methods. The use of SDM did, however, require a lot of education and follow-up to ensure women were using the method correctly, as well as partner cooperation.

Study Objective 2: Assess the perspectives of clients, service providers, supervisors, and managers on the programmatic approaches utilized (CHWs, digital health application, and performance-based incentives) to introduce SDM.

The study, by its second objective, sought to examine how three strategic components of the project functioned: community-based outreach, the Balanced Counseling Strategy using a mobile phone application, and performance-based incentives for CHWs. This next section looks at the results of applying these three programmatic components in contributing to outcomes.

Community-based services using Balanced Counseling Strategy

E2A's primary programmatic approach was community-based outreach. Clients, CHWs, and CHW supervisors were all asked about this aspect of the program. Clients reported that CHWs were accessible and approachable for both initial and follow-up consultations. CHWs provided services whenever and wherever the clients asked for them. One client noted:

CHW are very supportive, especially when help is needed. – Male client (current user), FGD

CHWs were committed to follow up with their clients as trained to do so: once per month during the first three months of method initiation and bimonthly thereafter. However, frequency of client follow-up depended on the extent to which clients understood how to use CycleBeads, and was more frequent for those who requested or needed it. CHWs and clients both reported that CHWs made more frequent visits at the request of clients.

They are close to their clients to know their progress and they help when a problem arises.” - Female client (current user), FGD

Clients noted that especially during the first three months, CHWs made great efforts to follow up with them to clarify issues and continue counseling both clients and their husbands.

They often do follow ups especially in the early period, they follow up closely in order to observe progress and also make sure that you do not make a mistake and give a report. - Female client (current user), FGD

When respondents were asked about the quality of services provided by CHWs, the majority expressed satisfaction with community-based counseling, FP methods, and referrals. Respondents were particularly satisfied with the clarity and content of the information, critical in a low-literacy setting such as Shinyanga Region. It was not only CHWs who reached out to clients, but clients who sought the services from CHWs. They often did so when they needed clarification or more information.

I am satisfied, because they make sure we understand the instructions without caring how much time they use. - Female client (current user), FGD

They give information, and repeat if someone hasn't understood until you understand. - Female client (current user), FGD

Clients appreciated the convenience and mentioned numerous benefits to receiving services in their homes. During these visits, CHWs provided clarifications and counseling to couples. In addition, they provided contraceptive pills and condoms, additional information as requested, and referrals for clients who preferred other methods or medical advice. CHWs also used the home visits to continue to counsel and motivate clients to use the methods and provided additional information as requested by clients, for example, on the correct use of the CycleBeads. They tested clients' understanding by asking clients to demonstrate use of CycleBeads. CHWs reported some of the advantages of offering CycleBeads at community level:

It saves time because the service is now delivered at home. - Male client (current user), FGD

I also ask her to bring the CycleBeads and demonstrate to me her understanding and ask her to pass knowledge to others. - CHW, FGD

Respondents mentioned that the services provided by the CHWs were accommodative in terms of appointment systems and hours of operation. They mentioned that the visits by CHW were not ad-hoc. CHWs sought appointments and asked for male partners to participate. Since CHWs stayed in the same village as clients, they had flexible working hours which made it convenient for couples to attend and prepare for sessions together. CHWs could be reached anytime through their mobile phones, and the services from them were deemed accessible—in terms of transportation, resources, distance, and cost. Respondents mentioned several advantages of home visits: mitigating conflicts between couples when the husband does not want his wife away from home for long; flexibility in making appointments at convenient times for CHWs and clients; and reduced congestion, workload, and use of supplies at health facilities.

For those men who do not like their wives to go out for a long time, it is possible to provide them service without causing conflict among the married couples, and it reduces cost to clients. - Male client (current user), FGD

There is friendly time arrangement between service provider and client and there is settled mind. There is no rush and it is offered in a longer period contrary to the way it is offered in health facilities. - Female client (current user), FGD

It has helped us to reduce congestion at the dispensary because the service is now delivered at home. - CHW Supervisor, FGD

At home, CHWs said clients tended to be more open than when they meet a health provider in a facility. Home visits were educational to couples, conducted at a pace which suited them, and motivated them to plan for appropriate spacing of their children.

They are open and free to communicate at home compared to when they are with a health provider in health facilities settings. - CHW, FGD

It has helped women a lot in family planning and they have learned more than what is being offered at the health facilities. - CHW, FGD

The benefits of them visiting people at their household is it guarantees them to find both wife and husband at home, which helps the household to understand the method easier than the wife herself. - Female client (discontinuer), FGD

Both clients and CHWs confirmed that male partner involvement is an especially important ingredient for FP uptake and use of SDM/CycleBeads.

Before the service provider gave me any explanations I asked him to wait until my partner was present. He came later and gave us instructions together, so my partner agreed [to accept the method]. - Female client (current user), FGD

Our service delivery timing is flexible so we meet couples in times where they have finished their work and can listen to what we offer them. We do not rush; we give enough time with them. It is not possible to get such an environment in health facilities. - CHW, FGD

CHWs provided condoms, alternative strategies to intercourse such as abstinence or engaging in oral sex, and counseling, especially with male partners, to avoid unwanted pregnancies during unsafe days. Clients reported feeling satisfied with the options of condoms and abstinence during this time.

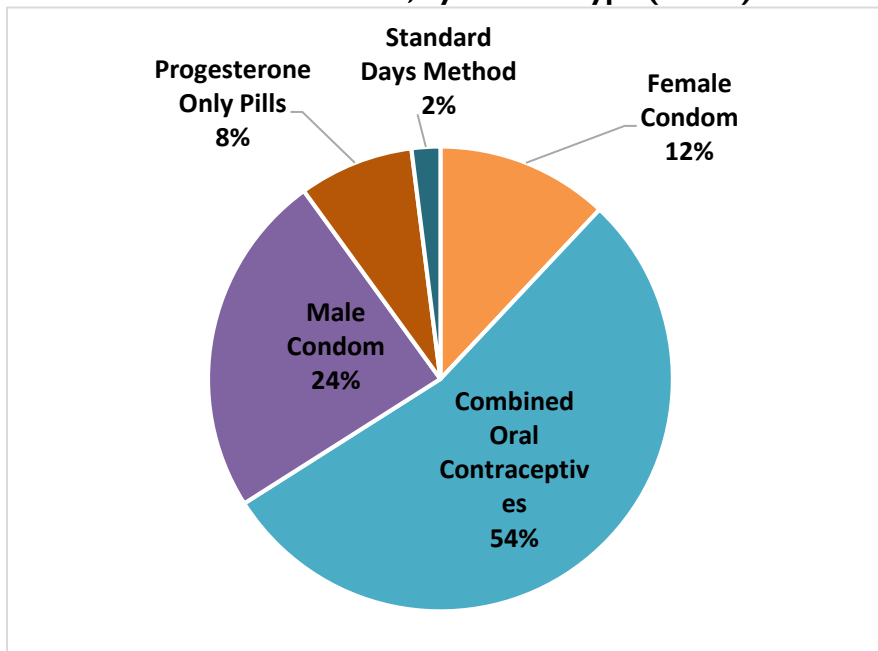
I am satisfied because they give alternative methods during fertile days like giving out condoms regularly. - Female client (current user), FGD

Most clients mentioned that CHWs provided confidential counseling, an extremely important element of quality mentioned.

He does keep a secret because I have never heard what I talk with him in another place. - Female client (discontinuer), In-depth interview

The mobile application recorded instances where the CHW was unable to fulfill a request for a method because she did not have the preferred method at the time of the visit. Figure 3 below illustrates the distribution of these “stock-outs,” by method. Most unfulfilled requests involved combined oral contraceptives (54 percent).

Figure 3. Percentage of client requests for community-based methods that could not be fulfilled at the time of service, by method type (n=489)



Digital health application



CHW counseling young mother using mobile app

The project introduced a mobile application developed by D-Tree International, designed to increase the quality of FP services provided by CHWs. The use of an interactive, step-by-step counseling protocol based on the Balanced Counseling Strategy enabled CHWs to provide counseling systematically and to assist in following up referrals and documenting referral decisions/outcomes of clients. In interviews, CHWs expressed satisfaction with the mobile platform in counseling clients. Through the application, CHWs' reporting burden was theoretically eliminated as reports were automatically generated and accessed online by the program team. CHWs used a decision tree that draws on the client's fertility intentions to support them to choose the method appropriate for their needs. The mobile application includes reminders to CHWs to follow up on their clients for refills or to confirm if the referral was successful for the clients. In addition, the mobile phone was used to generate progress reports.

Previously we have been working with clients but we did not have a step by step guide. This tool is really helping us in our work- it acts as a reminder of what we are supposed to do. - CHW, FGD

Using the mobile phones given to us, we are able to register someone and monitor the progress of the training given to this person until when he/she starts to use the method. - CHW, FGD

One of the challenges of introducing smart phones and the mobile phone application was training CHWs to use it successfully. The project gave intensive support to the introduction of the mobile phone application through rigorous training, engagement of "champion CHWs" (who provided training and mentorship to the main and subsequent waves of recruited CHWs), and follow-up supportive supervision:

Okay, we had actually pre- and post-tests during the training, and we were so many facilitators in the class, and after [the training], also, we had five consecutive weeks of following them because we know, like, most Community Health Workers had never used smart phones before when we were training them back in 2014...actually, it was not an easy training because, you know, like, training an old person how to use smart phone it really takes time and lots of follow ups. - Program key informant, In-depth interview

The reporting burden for CHWs was theoretically eliminated as reports were automatically generated and accessed online by the project team. This was confirmed further in interviews where CHWs expressed satisfaction with the mobile platform in counselling clients. According to staff, mobile phones reduced paperwork, improving counseling, and helping to increase CHW contacts with new clients.

And the use of mobile phones - community health workers were using paper-based [reporting] methods... that time they were only registering two new clients in a month which were very few...it was very hard to use all those paper-based [reports], but then when we introduced the need for introduction of [mobile phones] - this really simplified the whole work flow and helped them to make sure they really provide quality counselling according to client's choice of that method. - Program key informant, In-depth interview

While the mobile application was developed as a systematic and guided process for counseling, it also served to promote a sense of accountability and provided avenues for interactions between clients, providers, CHWs and the project staff. Data from the application allowed for closer monitoring of field activities by CHWs by reviewing the GPS location and the time stamp associated with a client visit app entry. CHW supervisors used their mobile phones to supervise the activities of CHWs and provide follow-up support. In addition, the platform provided an opportunity for CHWs to share concerns and seek support from each other and program staff.

Clients commended counseling by CHWs as high quality, and said men were often motivated to be part of the process. CHWs were extremely positive about the digital tool as it provided a step-by-step guidance in counseling. CHWs attributed their ability to offer high-quality counseling to the tool itself, and the ability to follow up a client in person or by phone. In addition, the platform provided an opportunity for CHWs to share concerns and seek support from each other and project staff.

However, several CHWs mentioned that once they learned to use the mobile phone application, counseling was difficult to perform *without* the application. Because the tool is so interactive, it is possible that CHWs did not actually increase their *unassisted* counseling skills, and may face difficulties in counseling without the tool. Reliance on the tool may affect sustainability of high-quality counseling.

Cell phone network and electricity infrastructure needed for charging the phones also posed challenges. For example, the project had to purchase solar chargers for CHWs. Network was needed to send and upload data from the mobile application and for calling clients to make follow-up appointments, which was not available in all locations of the Shinyanga Region.

And then network for phones, some of the villages are very rural that you can't get network after five or seven kilometers around [some villages]. The great thing about the app you can work with it off-line, and then you have to synchronize data...and you have to get network for that, so they had to walk far away to be able to synchronize data and then you know like how ... in Shinyanga [network coverage] is scattered...[it] is different from other regions. - Program key informant, In-depth interview

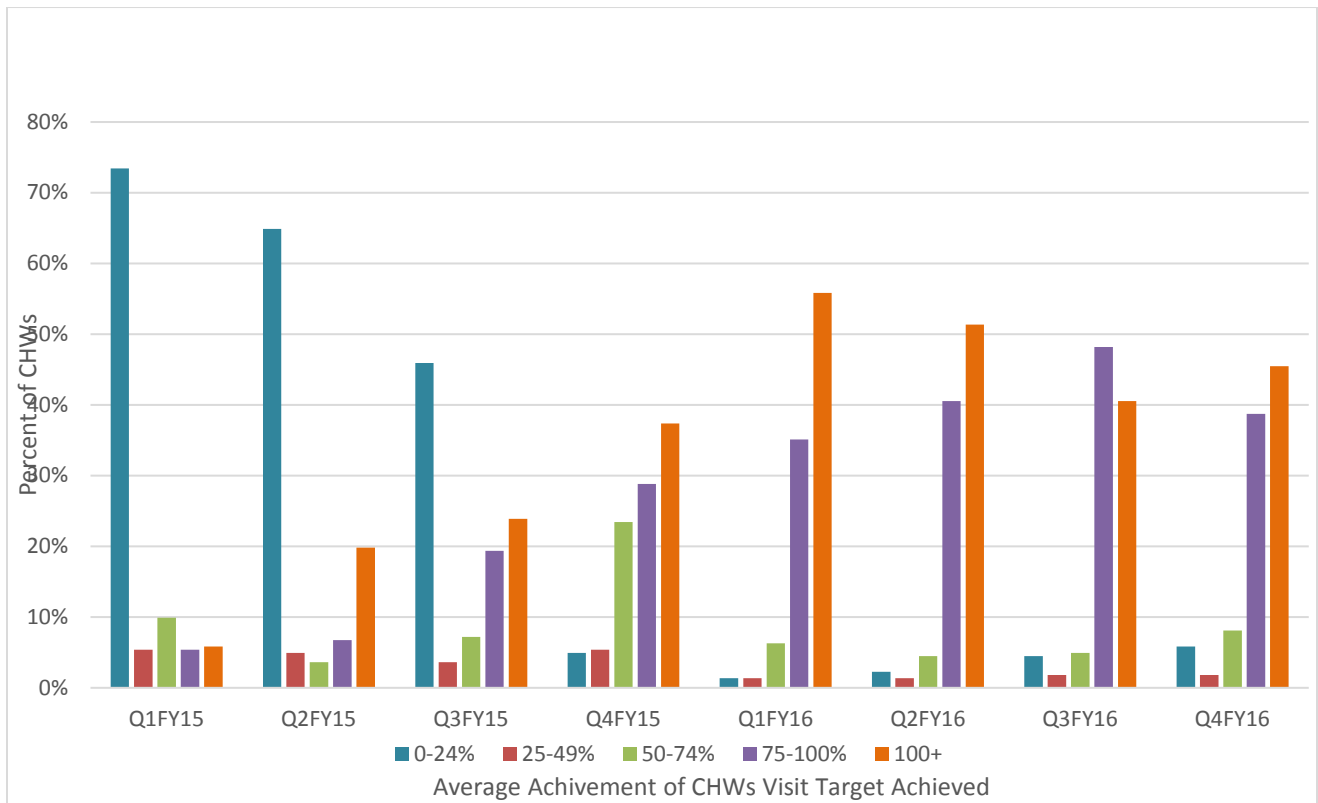
The mobile phones provided to CHWs and CHW supervisors, and accompanying communication allowances to both groups, created some inevitable tension among other non-compensated actors in the network of FP service provision. CHWs and their facility-based supervisors are part of an integrated

health system which relies on providers at facility level to provide a wide range of FP methods. In fact, as part of the project design, clients were regularly referred to these facility-based providers for FP methods not provided at community level. The allocation of resources to some providers and not others created some tension between non-program providers and those in the Pathfinder/E2A program, which directly and negatively impacted client service and relationships between program and non-program staff in some instances. Some non-program providers took out their frustrations on the CHWs themselves by summoning CHWs to the facility and ordering them to clean the facility; others refused to provide services to referred clients, saying that only CHW supervisors were providing services for these clients, privately complaining that they were being “delegated” work by CHWs.

Performance-based incentives

CHWs received monthly stipends based on the number of new clients counseled and follow-up visits made. This approach was used to see if CHWs would be more active in making visits and following up referrals than if they were paid a flat monthly stipend, regardless of activity. Each month, CHWs were requested to offer balanced counseling for at least ten 10 new clients and to complete 75 percent of their scheduled follow-up visits. A portion of their stipend was then determined based on the percentage of the target achieved. Figure 4, below, documents the percentage of CHWs who met or exceeded their monthly achievements every quarter by averaging their monthly achievements across the quarter. Up until the third quarter of the project, most CHWs were either inactive or did not achieve 25 percent of their visit target. By the fourth quarter, over 50 percent of CHWs achieved at least 75 percent of their follow-up visit targets.

Figure 4. Quarterly average achievement of CHWs' visit targets, by quarter (n=222)



Based on information from interviews with clients and all levels of service provision and supervisory staff, this approach was effective in increasing CHW activity.

The things that we did not plan and we are already surprised it is exceeding requirements or exceeding performance. Now in every indicator that we had we have more than two hundred percent increase of performance so that one real we did not expect it was just beyond our expectation. - Program key informant, In-depth interview

It should be noted that the mobile phone application greatly facilitated this approach, and it is possible that performance-based stipends could not have been implemented as successfully without the app. The mobile phone app allowed for greater remote monitoring and supervision, for example, which was critical in preventing falsified reports and overpaying allowances. In the beginning of the project, a small number of CHWs tried to cheat (“game”) and enter false data to increase their allowances. This situation was rectified through random follow-up visits with clients by supervisors and close monitoring of GPS coordinates and a time stamp associated with entries into the mobile phone app. Visits which were too closely spaced or at inconceivable times were investigated and CHWs were confronted.

...in the beginning we trusted so much these community health workers without they will never game the system... and then the good thing is the system itself is GPS sensitive and also it is time stamped... we realized that there are some clients who [were] being followed up between 3am and 5am... You know like 3am and 5am you can't imagine you passing to any [homes]... unless you are a witch! So what we did we went back to them ... and then they realized that they did a mistake and proposed punishment... the great [thing] about it they were gaming the system with follow up visits but never gaming the system with new clients, because every month when we go to visit them we [select a] client randomly. [I ask them to] take

me to this client so they are not sure which client are you going to pick but then for follow up visits they try to game...but when they knew that we followed them up they were scared and we did not find it anymore. They are now very careful with the system. - Program key informant, In-depth interview

Therefore, while performance-based stipends were extremely successful in increasing CHW counseling activities and contacts with clients, it required a strong and active monitoring and supervision component.

Conclusive remarks, Objective 2: Results under Objective 2 show that clients were satisfied with the services provided by CHWs and viewed the community-based outreach favorably. Clients stated that CHWs were supportive and approachable. CHWs also found the application-based counseling tool to be helpful and allowed them to monitor the progress of their clients. Program staff noted that it did require quite a bit of training before CHWs felt comfortable, although many relied heavily on the application to conduct counseling sessions once they did feel comfortable with the app. CHWs responded well to the pay-for-performance system, although program staff found that it required extensive monitoring and supervision.

Study Objective 3: Explore critical factors to consider for scale-up of SDM from the perspectives of clients, service providers, supervisors, and managers.

By its third objective, the study sought to examine critical steps taken at national level to facilitate scaling up the program to other regions of Tanzania and beyond. Two key steps were taken to ensure scalability of the pilot program: engagement of key stakeholders and advocacy for necessary changes in policies and systems.⁸

Engage in a participatory process involving key stakeholders.

E2A engaged the national FP unit in development of SDM training materials and advocacy messages. The active and strategic engagement of these national actors led to a more rapid uptake of SDM and its integration into training forms. This type of engagement led national stakeholders to view SDM/CycleBeads as an important FP and educational tool for Tanzanians.

The way I see it is that Pathfinder has been like a provoker who has enabled introduction of CycleBeads method into the curriculum, since they were the first to bring this method and we saw the importance of adding it to the additional curriculum. - Program key informant, In-depth interview

Advocate for necessary changes in policies, regulations and other health-systems components.

To scale up provision of any FP commodity, it is critical that national training, procurement, reporting, and supervision tools are amended to include the method and related service delivery factors. As part of the E2A Project, Pathfinder staff worked with the MOH to ensure that CycleBeads were part of the central procurement system. At the time this report was written, CycleBeads were within the national method mix, ordered centrally, and supplied at facility level. At MSD zonal stores, CycleBeads were reported to be available. The scale-up of CycleBeads was facilitated by the support of USAID to zonal health resource centers which provided training to health facility providers.

Until now we supply the beads across the whole country in all regions because we have zonal resource centers which have been supported for training purposes on family planning methods. - Program key informant, In-depth interview

Also critical to strengthening the foundation for CycleBeads is inclusion of new acceptors in the health information system (DHIS2). Tanzania's national DHIS2 has been updated to provide FP reports that include CycleBeads supply. This, in turn, facilitates quantification and procurement exercises at national level to ensure future distribution.

They [CycleBeads] are available in DHIS 2...we get information from clients every month. - Program key informant, In-depth interview

Finally, with the support of the E2A Project, the MOH amended the CHW in-service training curriculum and supervision checklist to integrate SDM/CycleBeads. Supervision checklist tools were amended to document counseling and client satisfaction at facility level for users of SDM/CycleBeads. These tools are still in development and are awaiting endorsement.

We could incorporate the CycleBeads method in our materials and curriculum. It became among the methods being taught as modern methods (SDM), and we moved it from natural method to modern method at the NTF4 level. - Program Key Informant, In-depth Interview

Conclusive remarks, Objective 3: The project highlighted the importance of a participatory process to assist in the scale-up of SDM. By engaging key stakeholders, it allowed for a rapid integration of SDM into the national system and into training, reporting, and supervision forms.

5. Lessons Learned and Recommendations

This study provides an understanding of reasons underlying trends and uptake of SDM when compared with other methods at community level. A clearer picture emerged on community perceptions and norms affecting use of SDM and CycleBeads, supported by qualitative information and secondary data analyzed from the project routine monitoring system. Clients found SDM and CycleBeads to be useful in teaching users about their fertile and safe days, as well as a method which offered both pregnancy prevention and pregnancy planning. Recommendations and lessons learned are found below.

Provision of SDM

Ensure CHWs work with clients closely, give clear instructions on how to use SDM/CycleBeads, and make frequent initial follow-up visits with clients. Several clients expressed challenges in initially learning how to adhere to SDM using CycleBeads, forgetting to move the band daily, or not remembering to carry the beads with them when they travel. Follow-up visits by CHWs were critical, particularly during the first three months, to ensure correct use of the method by women and their partners. Because many said they were on the method prior to the project through use of a calendar, initially it may be valuable in other contexts to teach clients how to use CycleBeads in conjunction with the calendar.

Consider gender dynamics at household level, and when possible, involve male partners to encourage use of contraception on “unsafe days.” Use of SDM/CycleBeads requires a strong relationship and communication between members of a couple. They must agree to use other FP methods during a woman's “unsafe days.” It is therefore critical to involve male partners in introduction of this method, both for their compliance and support. This method will likely not be appropriate for couples whose reproductive goals are very different, in marriages where women are significantly disempowered in reproductive or sexual decision-making, or for those couples who find it impossible to

discuss sexual and family matters together. It is equally important to ensure male involvement is included in the training content for CHWs.

Community-Based FP Services

Use community-based counseling and outreach events to dispel myths and give accurate information about contraception. Some of the biggest obstacles in encouraging uptake of FP are the myriad myths regarding side effects of hormonal FP. It is important to ensure adequate training of CHWs to prepare them to dispel these myths and offer accurate and comprehensible information using low-literacy communication tools and engagement during home visits and community outreach events.

Digital Health Application

Consider both counseling and monitoring/data needs and priorities when designing mobile apps. While the mobile phone application was developed as a decision support tool to ensure CHWs provide quality care, it was also used to collect and document routine monitoring data. However, the data collection system was a secondary priority in the development of the app, and, as a result, key variables were missing from the dataset. Those variables would better help an analyst determine patterns of method initiation, switching, and discontinuation among clients. Pathfinder is addressing these challenges and improving the tool to address gaps to better serve programming.

Continue investing in interactive tools to support the work of CHWs. Several CHWs mentioned that once they learned to use the mobile phone application, counseling was difficult to perform *without* the application. Because the tool is so interactive, it is possible that CHWs did not actually increase their unassisted counseling skills. This may affect the sustainability of the program and the ability of CHWs to perform counseling without the support of interactive tools.

Adequately address needs for capacity building in use of the mobile app. One of the challenges of introducing the mobile phone application was training CHWs to use it successfully. The project gave intensive support to introduction of the application through rigorous training, engagement of “champion CHWs” (who provided training and mentorship to the main and subsequent waves of recruited CHWs), and follow-up supportive supervision.

Establish scheme for loaning of mobile phones to reduce losses. E2A/Pathfinder invested in smartphones for all CHWs and CHW supervisors, and lent them to those providers. It was therefore necessary to have a scheme so that phones were used carefully and remained with the CHW or supervisor in good working order. The program team devised an insurance scheme whereby they withheld 3,000 Tanzanian shillings from monthly allowances as a security deposit, with the agreement that they would refund the entire deposit to each CHW who returned a phone.

Pay-for-Performance System

When using a pay-for-performance approach, include strong monitoring and supervision systems. While performance-based stipends were extremely successful in increasing CHWs’ counseling activities and contacts with clients, it requires a strong monitoring and supervision component to ensure no under- or over-payments are made.

Consider effect of rewarding selected providers that work within a larger system. CHWs and their facility-based supervisors are part of an integrated health system. Clients were regularly referred to these facility-based providers for FP methods not provided at community level. The

allocation of resources to some providers and not others (especially in the case where the supervisor was *not* the facility in-charge) created some tension between non-program providers and those in the program, which, in some instances, directly and negatively impacted client-provider relationships and relationships between program and non-program staff. Some non-program providers took out their frustrations on the CHWs themselves by summoning CHWs to the facility and ordering them to clean the facility; others refused to provide services to referred clients, saying that only CHW supervisors were providing services for these clients, privately complaining that they were being “delegated” work by CHWs. Adopting a results-based financing scheme, where the health facility as a system is the beneficiary and not only selected staff, is a much more sustainable approach that has already been embraced by the government of Tanzania.

Collaboration for Sustainable Interventions

Engagement with district, regional, and national stakeholders (especially MOH) through materials development, program planning, and access to data can lead to closer cooperation and improved program coverage and access. The project engaged the national FP unit in development of SDM training materials and advocacy messages. The active and strategic engagement of these national actors led to rapid buy-in for SDM and its integration into training guide and monitoring forms. This type of engagement led national stakeholders to view SDM/CycleBeads as an important FP and educational tool for Tanzanians.

Ensure effective transition planning for supporting CHWs after a donor-funded project has ended. CHWs were not sure of their continued participation in the program beyond the organizational support. Discussions can be held with relevant government officials and solutions found which can ensure the sustainability of a project, such as provision of monthly incentives for CHWs using results-based financing funds, and seeking financial support for minimal project costs via national mechanisms such as district comprehensive council health plans (CCHPs).

6. Conclusion and Next Steps

This project demonstrated that CycleBeads can effectively be added to the method mix in a community-based FP program. Mobile tools and IEC materials can be used to facilitate community-based contraceptive services and CHWs’ performance. Coupled with CHW champions and a pay-for-performance scheme, this model has the potential to be implemented at scale. The next phase of the project will focus on advocating for and supporting scale-up of SDM and mHealth innovations to sustain communities and facilities nationwide. The main activities going forward will include:

- Actively advocating and engaging the MOH to expand method mix to include SDM, and use mHealth in community service delivery. Staff will continue to advocate with the district councils and facilities in the project sites to sustain the provision of contraceptives in the communities and facilities after project close-out.
- Engaging other funders and FP stakeholders to support inclusion of SDM in FP master trainers training. Staff will continue to reach out to other USAID stakeholders working in Shinyanga Region to continue to support this and other project activities in the region.
- Collaborating with the MOH for the development of supervisory tools to further transfer monitoring and management of the project to the local government and mainstream incentives. Staff will work closely with the facilities to ensure that data are captured and CHWs continue to offer services and receive incentives through a results-based financing scheme.

References

1. Jain, Anrudh K., "Fertility Reduction and the Quality of Family Planning Services," *Studies in Family Planning* 20.1 (1989): 1.
2. Population Council, "The Balanced Counseling Strategy Plus: A Toolkit for Family Planning Service Providers Working in High HIV/STI Prevalence Settings (Third Edition)." (Population Council, 2016). Accessed: <http://www.popcouncil.org/research/the-balanced-counseling-strategy-plus-a-toolkit-for-family-planning-service>.
3. Arévalo, Marcos, Victoria Jennings, and Irit Sinai., "Efficacy of a new method of family planning: the Standard Days Method," *Contraception* 65.5 (2002): 333-38.
4. Tanzania Demographic and Health Survey and Malaria Indicator Survey 2015-2016 Final Report. Rep. United Republic of Tanzania, ICF, (Dec. 2016); HIV/AIDS and Malaria Indicator Survey 2011-2012. Rep. United Republic of Tanzania, ICF, (Mar. 2013).
5. World Population Review, Tanzania Population (2016, August 06), Accessed: <http://worldpopulationreview.com/countries/tanzania-population/>
6. Georgetown University, Institute for Reproductive Health, "Standard Days Method," Accessed: <http://irh.org>.
7. World Health Organization, and ExpandNet, "Beginning with the end in mind: planning pilot projects and other programmatic research for successful scaling up" (2011). Accessed: http://www.who.int/reproductivehealth/publications/strategic_approach/9789241502320/en/.
8. Freedman R, Berelson B: The record of family planning programs. *Studies in Family Planning* (1976): 7:3–40.



USAID
FROM THE AMERICAN PEOPLE

E2A EVIDENCE TO ACTION
for Strengthened Reproductive Health

1250 23rd St, STE 475
Washington, DC 20037 USA

T 202.775.1988

F 202.775.1977

info@e2aproject.org

WWW.E2APROJECT.ORG