Quality Improvement Stories

Integrated Health Project in Burundi

Integration of Essential Health Services in Burundi through the Use of the Collaborative Quality Improvement Model

October 2018

Hilaire Ndihokubwayo
Roland Kone
Bruno Bouchet

USAID
FROM THE AMERICAN PEOPLE

IHPB

fhi360
THE SCIENCE OF IMPROVING LIVES

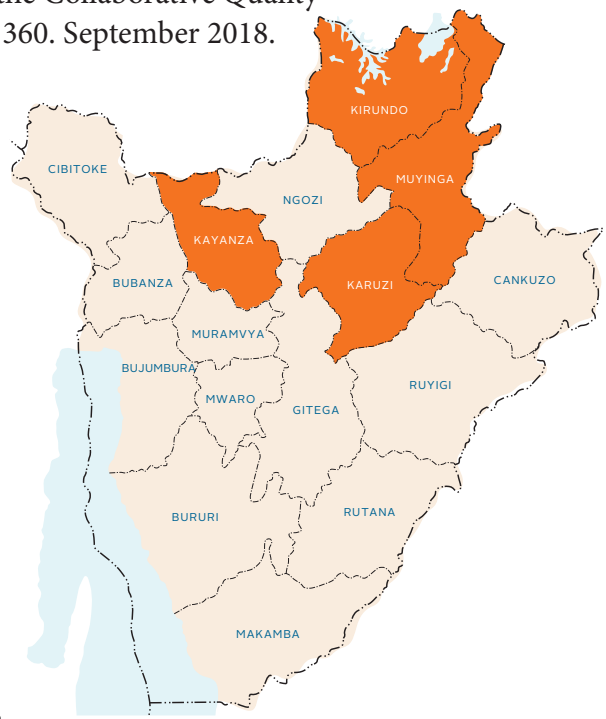
Acknowledgements

We would like to express our sincere thanks to the Burundi Ministry of Public Health and the Fight against AIDS for involving the central, intermediate and local levels in the implementation of the service integration process, as well as their spirit of partnership and collaboration with the IHPB project (Integrated Health Project in Burundi).

This document would not have been produced without the support of the American people through the United States Agency for International Development (USAID) Contract AID-623-C-14-00001 awarded to FHI 360. The content is the sole responsibility of the authors and does not necessarily reflect the views of USAID or the US Government. As such, we express our deep gratitude to USAID for the financial and technical support provided to FHI 360 through the IHPB project.

Recommended Citation: Ndihokubwayo H., Kone R., & Bouchet B. Integration of Essential Health Services in Burundi through the use of the Collaborative Quality Improvement Model. Quality stories. IHPB project. FHI 360. September 2018.

Intervention framework of the IHPB project



The Integrated Health Project in Burundi (IHPB) is a project funded by the United States Agency for International Development (USAID) and implemented by FHI 360 (Family Health International) in partnership with Pathfinder International.

IHPB aims to help the Government of Burundi, communities and civil society organizations (CSOs) improve population health status in 12 health districts located in the provinces of Karusi, Kayanza, Kirundo and Muyinga.

The purpose of the project is to expand and integrate essential services to support the fight against HIV/AIDS, improve maternal, newborn and child health (MNCH), combat malaria and strengthen family planning (FP) and reproductive health (RH) services.

The Ministry of Public Health and the Fight against AIDS (MSPLS) is the primary partner involved in every stage of project planning and implementation.

Table of contents

Acronyms and abbreviations

AIDS	Acquired Immune Deficiency Syndrome
AMC	Average Monthly Consumption
ANC	Antenatal Care Consultation
ARV	Antiretroviral (Antiretroviral drugs)
CC	Curative Consultation
CHW	Community Health Worker
CP	change package
CSO	Civil Society Organization
DH	District Hospital
DMO	District Medical Officer
DMPA	Depot - Medroxyprogesterone Acetate
FHI 360	Family Health International
FOM	IHPB Field Office Manager
FP	Family Planning
FPC	Family Planning Counseling
GATHER	Greet, Ask, Tell, Help, Explain, Return
GB	Government of Burundi
HC	Health Center
HD	Hospital Director
HDO	Health District Office
HE/IEC	Health Education (Health IEC)
HF	Health Facility
HR	Human Resources
HIS	Health Information System

HPO	Health Province Office
HISM	Health Information System Management
HIV	Human immunodeficiency virus
IHPB	Integrated Health Project in Burundi
IPT	Intermittent Preventive Treatment of malaria for pregnant women
IUD	Intra-uterine device
LLIN	Long-lasting Insecticidal Nets
LS	Learning Session
MCH	Maternal and Child Health
MH	Maternal Health
MPA	Minimum Package of Activities
MSPLS	Ministry of Public Health and the Fight against AIDS
MUAC	Mid-upper Circumference
OTS	Outpatient treatment service
PDSA	Plan, Do, Study, Act (Plan-Do-Study-Act cycle of innovation)
MCSPEC	Medical care and support
HMM	Home-based management of malaria
PBF	Performance-based financing
PEP	(HIV) Post-exposure Prophylaxis
PHO	Provincial Health Office
PIT	Provider-Initiated HIV Testing
PLHIV	People Living with HIV
PMO	Provincial Medical Officer
PMTCT	Prevention of mother-to-child transmission of HIV/AIDS
PNC	Postnatal Consultation

PNLS/IST	National Program to Combat AIDS and Sexually Transmitted Infections (STIs) Program
PNSR	National Reproductive Health Program
PV	Minutes, « Procès-Verbal »
QI	Quality Improvement
QIT	Quality Improvement Team
RBP+	Burundian Network of People Living with HIV
RUTF	Ready-to-use Therapeutic Food (RUTF)
SGBV	Sexual and Gender based Violence
SHC	Strategies for handling complaints
SP	Sulphadoxine Pyrimethamine
SWAA	Society of Women against AIDS in Africa
TOR	Terms of Reference
USAID	United States Agency for International Development
USG	United States Government
VCT	Voluntary Counseling and Testing
WA	Weeks of Amenorrhea

Executive summary

The IHPB project (Integrated Health Project in Burundi), funded by USAID and implemented by FHI 360 and Pathfinder International, aims to strengthen critical care and service systems in HIV/AIDS, maternal and child health, family planning and reproductive health and malaria. Service integration is a critical strategic component in achieving project objectives of improving population health status through increased care coverage and service quality.

The strategy for the integration of essential services in Burundi was designed during a workshop organized by the Ministry of Public Health and the Fight against AIDS (MSPLS) and IHPB in August 2014, with participation from actors (PMO, DMO, and hospital directors) in the target provinces. During this workshop, the participants identified the following opportunities for service integration in each province:

- **Karusi:** Improve and integrate FP into maternal and child health services;
- **Kirundo:** Improve and integrate a package of services (ANC, early ANC, SGBV, malnutrition, HIV testing) into curative consultations;
- **Kayanza:** Improve and integrate FP into maternal health services and PLHIV care;
- **Muyinga:** Integrate malaria prevention into ANC services.

During this workshop, participants also approved the use of the Collaborative Quality Improvement Model to facilitate the implementation of required changes for successful integration and service quality improvement.

In each province, quality improvement teams (QITs) were put in place, improvement indicators were measured monthly in a database that automatically generated performance charts, and changes in care delivery were tested. The QITs met regularly to identify a package of best practices that was tested in 52 HFs and then expanded to 165 HFs. From June 2015 to December 2017, the following results were obtained:

In Karusi, the proportion of women who brought their children in for immunization and accepted a contraceptive method increased from 0 to 6%, while the proportion of women who gave birth in a maternity clinic and received the contraceptive method increased from 4% to 36%. At the same time, the proportion of women referred by CHWs who arrived at health centers (HCs) for adherence to FP methods increased from 54% to 91%.

In Kirundo, out of 11,402 women of childbearing age who attended curative services and received a routine pregnancy screening, 9,185 or 81% had a pregnancy of less than 12 WA

and 79% benefited from early ANC the same day. Integration of HIV serologic screening in 104,602 at-risk patients contributed to the detection of 2,142 (2%) positive cases. Finally, out of a total of 284 cases of SGBV victims received in curative consultations, 266 or 94%, received post-exposure prophylaxis against HIV within 72 hours in the same health facility (HF) and on the same day.

In Kayanza, among 39,402 women seen in postnatal consultations (PNC), 8,729 (22%) were put on contraceptive methods. Among the active file of HIV-positive women of childbearing age, 55% received counseling services and began to use contraceptive methods.

In Muyinga, the proportion of pregnant women seen in ANC1 who received LLINs increased from 30% to 100% and the proportion of pregnant women seen in ANC3 who received the second dose of IPT increased from 0% to 68%.

The main lessons learned from this experience with the integration process, the use of the Collaborative Quality Improvement Model, as well as the effect of the implemented changes should enable other provinces to develop their own strategy for improving health services and ensuring sustainability of achievements through the MSPLS.

Introduction

The Integrated Health Project in Burundi) (IHPB), funded by USAID, works closely with the Government of Burundi (GB), civil society organizations (CSOs), communities and other development partners to strengthen the health system at the household, community, health facility and health district levels in four provinces: Karusi, Kayanza, Kirundo and Muyinga.

The project, implemented by FHI 360 and Pathfinder International, aims to strengthen essential care and service systems in HIV/AIDS, maternal and child health, family planning and reproductive health and malaria. Service integration is a key strategic component in achieving project objectives to improve population health status through increased care coverage and service quality.

Background and socio-economic indicators

Burundi is a landlocked country with a population of 10,395,951 inhabitants. The socio-economic development indicators are summarized in Table 1.

Table 1: Burundi's socio-economic development indicators

Indicators	Results/Year (references)
Human Development Index	0.400; Burundi ranks 184/187 (UNDP, 2017)
GDP per capita	2,976 USD (UNDP, 2017)
Human poverty index (HPI) (% of people living on less than 1.25 USD per day).	81.3% (UNDP, 2015)

Health system organizational and institutional framework

Burundi's health pyramid is comprised of three levels: central, intermediate and local.

- The central level is responsible for health policy, strategic planning, activities coordination, resource mobilization and allocation and performance monitoring;
- The intermediate level consists of 18 Provincial Health Offices (PHOs) that coordinate activities within their respective provinces and provide support to the health districts;
- The local level is made up of 46 health districts, each managed by a district management team (DMT), 68 district hospitals (DHs) and 822 health centers (HCs). The district is the operational unit of the health care system. It covers the community level, the HCs and the DH.

Health and epidemiological context

The Government of Burundi (GB), with the support of the US Government and other partners, has achieved considerable progress in the health sector in terms of decentralization and service expansion. Despite this, the health situation remains a matter of concern and is marked by the prevalence of many communicable and non-communicable diseases: malaria, acute respiratory infections, diarrheal diseases, malnutrition, HIV/AIDS and tuberculosis are the main causes of morbidity and mortality. Table 2 presents the main epidemiological data available at the start of the project.

Table 2: Burundi National Epidemiological Health Data at Project Start-up

Indicators	Results/Year (2014)	Results/Year (references)
Reproductive Health and Family Planning		
Fertility rate/Total fertility rate (TFR)	6.4 : DHS 2010	5,5 : DHS 2017
Contraceptive prevalence rate	25% : PNSR 2012	29 % : DHS 2017
Use of contraceptive methods.	18% : DHS 2010	23% : DHS 2017
Unmet need in FP	31% : DHS 2010	30 % : DHS 2017
Maternal, Neonatal and Child Health		
Maternal mortality (deaths per 100,000 live births)	500 : DHS 2010	590 : DHS 2017
Neonatal Mortality	36‰ : IGME-2013	23‰ : DHS 2017
Infant mortality (under 5 years old)	59‰ : DHS 2010	47‰ : DHS 2017
Coverage rate for ANC4	33% : DHS 2010	79% : DHS 2017
Malaria		
Prevalence of malaria in children	17,3% : MIS-2012	26,8% GE and 37.9% (TDR)
Incidence of malaria	32,7% : DHS 2010	89.9% : DHS 2017
Malaria-specific mortality rate (deaths per 1,000)	34,07‰ PNILP 2010	64‰ PNILP 2012
HIV/AIDS		
Prevalence rate in women aged 15-49	1,7% : DHS 2010	1.2% DHS 2017
Prevalence rate in men aged 15-49	1% : DHS 2010	0.8% DHS 2017

Baseline situation and opportunities for improvement

The overarching objective of the IHPB project is to improve the delivery of quality integrated services at the health facility (HF) and community levels in four provinces. Table 3 shows the project's scale.

Identification of opportunities for integration

To identify appropriate ("smart") integration opportunities, the IHPB project organized a workshop in Bujumbura on August 2014 with all stakeholders: MSPLS representatives, ministry program officers, provincial and district doctors (health officers), USAID, CSOs and development partners. The workshop's main objective was to prioritize integration opportunities in the provinces supported by the IHPB project and to plan their implementation pilot phase in a sample of 52 HFs. Table 4 presents the identified opportunities by province.

> The intention behind the objective for integration is to provide patients with a package of services beyond the principal demand that motivates visits (to the HF) and thereby reduce missed opportunities to satisfy unmet needs, therefore making the system more efficient and preventing the need for repeated patient visits. In this project, service integration was defined on a scale ranging from the provision of several services provided on the same day by the same provider to referral to a different provider on the same day and in the same health facility.

Table 3: Number of HFs per province and district of the IHPB project target area

Provinces	Districts	Hospitals	Health centers (HCs)
Karusi	2	2	35
Kayanza	3	3	45
Kirundo	4	2	50
Muyinga	3	3	51
Total	**12**	**10**	**181**

Table 4: Integration opportunities per province

Provinces	Integration Opportunities
Karusi	Integration of FP into MCH services
Kirundo	Integration of early ANC, HIV, and SGBV into curative consultation services
Kayanza	Integration of FP into MCH and HIV care services
Muyinga	Integration of the malaria prevention package into ANC services

Following the workshop, meetings involving field actors (PMOs, DMOs, HDs, PHO and HDO supervisors, HIS managers), were held in each province to develop and sign a charter for health services improvement and integration. A charter is a reference document that provides a roadmap for the implementation of the improvement process. The charter is structured around the elements of the Collaborative Quality Improvement Model described below.

Collaborative Quality Improvement Model

Health services integration requires implementing changes in many functions and tasks within the HF team, such as the organization of care, provider skills, patient referral, communication between providers, working hours, task distribution and introduction of new tools and work/job aids.

At the start of such an effort, it is difficult to know which changes are necessary, feasible and effective. It was therefore rational for IHPB to select an improvement model that relies on testing changes by dispersed but networked teams. The improvement model based on the PDSA cycle (see Figure 1) was selected so each team could test changes specific to their context.

Given the large number of HFs, managing this effort required a phased, gradual model, with a small-scale demonstration phase, then scaled up to all HFs based on results of the tested changes. For example, the Collaborative Quality Improvement Model was chosen to manage this improvement effort. These two models and their interaction are described below.

The Collaborative Quality Improvement Model (also known as "the Collaborative") has been designed to manage a structured, large-scale improvement effort that involves many teams aiming to achieve the same result in a well-defined population or geographic area. A Collaborative accelerates the extension and sustainability of improvements in a system of care and services, over a period that varies according to the size and complexity of the project. This innovative model, developed by the "Institute for Healthcare Improvement,"[1] has 7 features/components:

1. Improvement goal and objectives shared by all units involved (HFs in this case);
2. A common improvement monitoring system based on indicators collected monthly and interpreted on run charts;

[1] The Breakthrough Series: Collaborative Model to Achieve Breakthroughs in Improvement Actions by IHI. Institute for Healthcare Improvement, 20 University Road, 7th Floor, Cambridge, MA 02138. www.ihi.org

3. An operational structure organized around teams with 5 specific roles and responsibilities: testing changes by Quality Improvement Teams (QITs); Collaborative management (management of the collaborative model) by district; strategic leadership by program decision-makers and experts; expertise in Quality Improvement (QI); and expertise (appropriate skills) in the content of care and services to be improved;
4. A package of changes, that is a combination of service standards and service organization best practices to benefit service delivery improvement;
5. A coaching system to support QITs in implementing the package of changes and assessing/measuring their effects;
6. An improvement model centered on the identification and testing of changes and their impact during action periods, i.e. the PDSA cycle;
7. Learning sessions during which QITs share their experiences in the implementation and the results of the tested changes, in order to define a final package of changes.

A *Collaborative* can be described in 3 phases:

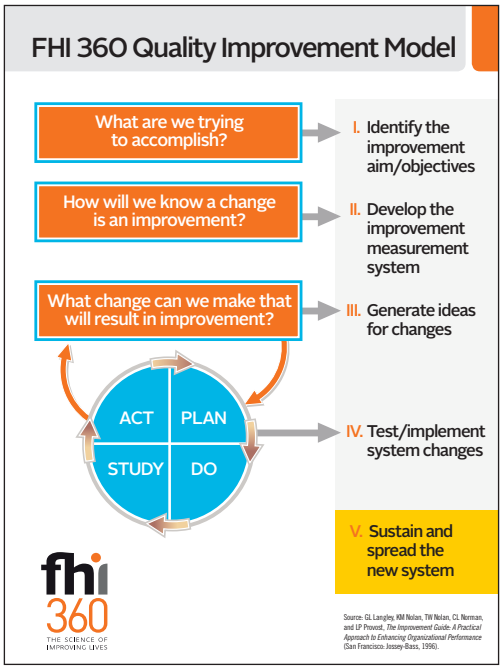
- *The preparation phase,* during which the first five elements are conducted;
- *The implementation (or demonstration) phase,* where the action periods (change tests) alternate with the learning sessions to assess the effects of the changes on the improvement objectives;
- *The extension (or scaling-up) phase*, where best practices (systemic changes that have produced the expected improvements) are replicated in other health care structures, and sometimes at the national level.

Each QIT uses a generic (quality) improvement model[2] adopted by FHI 360, shown in Figure 1. This model focuses on testing systemic changes according to the PDSA cycle. If a change produces an improvement, it is maintained. If the change does not produce the expected improvement, it is removed and another change is tested.

The principal steps are:

- *Identify a goal and explicit objectives for improvement* (what are we trying to

Figure 1: Quality Improvement Model



[2] Langley GL, Nolan KM, Nolan TW, Norman CL, Provost LP. The Improvement Guide: A Practical Approach to Enhancing Organizational Performance. 2009.

improve?) that express, in measurable terms, a benefit for the target population of the project.

- *Develop the improvement measurement system* (how shall we know if a change is an improvement?). The QIT frequently collects a few indicators, so that the change's effect is quickly identified through the run chart analysis.
- *Generate ideas for changes* (what changes can we put in place that will produce an improvement?). Using brainstorming, benchmarking and a list of change concepts, stakeholders suggest ideas for changes.
- *Test/Implement changes* (with the PDSA). The changes are introduced, and their effects are assessed against the improvement objectives.

This generic model is integrated into the Collaborative; the objectives and measures are the same for all the teams, but the nature of the changes tested (step 3) may vary according to the team's context.

Implementation timeline for the collaborative integration of essential services in Burundi

The three phases of the *Collaborative* took place between May 2014 and June 2018.

Preparation phase

This phase ran from May 2014 to March 2015. It was marked by a baseline assessment through a qualitative survey of services provided by HFs, coach training modules that were adapted and updated; integration charters that were finalized, validated, and signed in the provinces, orientation workshops for key actors on the implementation of the improvement process; establishment of QITs and the monitoring system, and training of coaches and project staff.

Stakeholder orientation in each province

In close collaboration with the national reproductive health and AIDS programs (PNSR and PNLS/IST) of the MSPLS, the IHPB project organized an orientation workshop in each province on the integration process and service quality improvement for HFs selected during the demonstration phase, HDO and PHO supervisors, as well as district and provincial health directors. During the workshop, IHPB informed participants on QI principles and models and defined the provincial management structure of the Collaborative.

Establishment of QITs

The managers (in-charge) of the pilot HCs were oriented on QIT establishment in their respective facilities and received work/job aids on QIT functionality: QIT composition scheme; Management of meetings (how to prepare and facilitate a meeting); Developing meeting minutes; Follow-up sheet of decisions made by the team; Tracking QIT functionality in sites; Table for planning and meeting follow-up; Improvement plan and monitoring tools.

Establishment of the coaching system

To build a QIT coaching system, the project trained 24 district supervisors (two per district) on coaching techniques: 1) QI Model; 2) QIT establishment and functionality; 3) Identifying and testing an idea for change; 4) Collaborative approach, and 5) Coach roles and activities.

Training of the IHPB project staff

IHPB shared knowledge on the improvement model and collaborative approach to harmonize understanding among project technical staff so they can monitor and coach the QATs during supervisory visits.

Establishment of an indicator tracking plan

An Excel database was designed to track the improvement indicators included in the charters and adapted to each province's specific integration objectives, with monthly measurement by the QITs.

Demonstration phase

This phase lasted 18 months, from June 2015 to December 2016. During this phase, QITs are supported through regular coaching visits and organized learning sessions.

Organization of joint coaching visits

The 1st joint coaching visits (districts/IHPB) were organized monthly for three months to evaluate the QITs' work and provide technical assistance on the model's application. During these visits, the coaches helped the QITs build their initial process chart, identify the problem stages (bottlenecks), their root causes and propose local solutions, which are formulated as ideas for changes that are tested during the visit.

Organization of learning sessions

During the demonstration phase, each province held three learning sessions, every three to five months. Each session brought together the QIT president and one member per site, the coaches, the HDO, PHO, and HIS managers, the PMOs and DMOs, and the provincial project staff. Each team presents the ideas for changes that are being tested, the results,

problems, and lessons learned. The session agenda advances according to the progress made/achieved by the teams: at the beginning, the focus is on the improvement processes and progresses towards the interpretation of results at the 2nd session.

Annex 1 provides a list of the HFs selected in the demonstration phase.

Extension/scaling-up phase

This phase took place in two stages: a) an intraprovincial extension to all the HFs, from January to December 2017; and (b) an interprovincial replication of results of four integration topics from January to September 2018.

The intraprovincial extension started in each province by reviewing changes that were proven effective and feasible in pilot sites, in order to develop the change package (CP). The teams, their coaches and provincial authorities have adopted the specific CP of their province and planned its extension into a charter. The intra-provincial extension was conducted in two successive waves considering the realities of each district and available resources. The first wave consisted of organizing experience-sharing site visits of the new extension sites around the pilot sites. The second wave consisted of pilot sites coaching the extension sites in order to introduce the CP, and provide and explain the implementation tools of the changes. For this second wave, the extension agents were staff from the best teams during the demonstration phase.

The interprovincial extension started with a dissemination workshop bringing together the Department of healthcare supply and demand, the 4 Provincial Health Officers/ Directors and 12 DMOs, coaches, district supervisors, and district HIS managers and extension agents. During this workshop, best practices from each province were combined into a collective package of best practices/changes that were amended and validated. The interprovincial extension of this collective package of changes took place during joint coaching visits by extension agents, district coaches, and IHPB staff. The monitoring plan and the Excel indicator database were also distributed to all teams.

Table 5: Number of HFs Covered by the Integrated Service QI Approach in Four Provinces

Province	Pilot Sites	Extension Sites	Total
Muyinga	9	37	46
Karusi	11	21	32
Kirundo	17	33	50
Kayanza	15	22	37
Total	**52**	**113**	**165**

Results of integration efforts from each province

Integration of FP into MCH in Karusi health province

1. Project rationale and expected benefits

The decision for the integration project was guided by a low contraceptive coverage rate of 24%, while the national average was 30.8%, and the fact that 89% of children received the BCG vaccine, which is an indication of a high rate of service use by mothers. Integrating FP into immunization and maternal and child health (MCH) services therefore offers an opportunity to increase access to and use of contraception.

2. Goal and objectives

Increase the contraceptive coverage rate through integrating FP services into immunization and post-natal consultation (PNC) services.

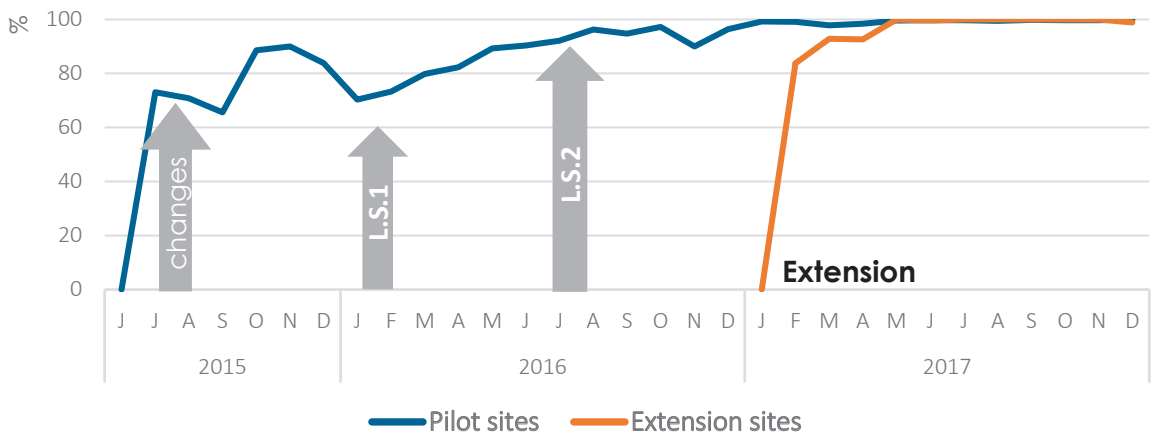
Table 6: Improvement objectives and monitoring indicators

Objectives	Indicators
Reduce missed opportunities to offer FP counseling to any woman who brings her child to the immunization service/unit and any woman seen in post-natal consultation (PNC).	% of women who bring children for immunization services and who received FP counseling. % of women seen in PNC and who received FP counseling.
Reduce missed opportunities to provide FP methods to women who bring their children in for immunization services and women seen in PNC.	% of women who bring children in for immunization services who received FP methods % of women seen in PNC who received FP methods.
Reduce missed opportunities to provide FP services to women admitted to (hospitalized in) maternity wards and those who have given birth, particularly through caesarean deliveries.	% of hospitalized women who received FP counseling. % of women who gave birth in maternity wards and who received FP methods.
Increase the demand for FP methods at the community level.	% of women referred by CHWs to HCs for FP counseling and who received a FP method.

3. Results

Objective: Reduce missed opportunities to offer family planning counseling (FPC) to any woman who brings her child to the immunization service/unit.

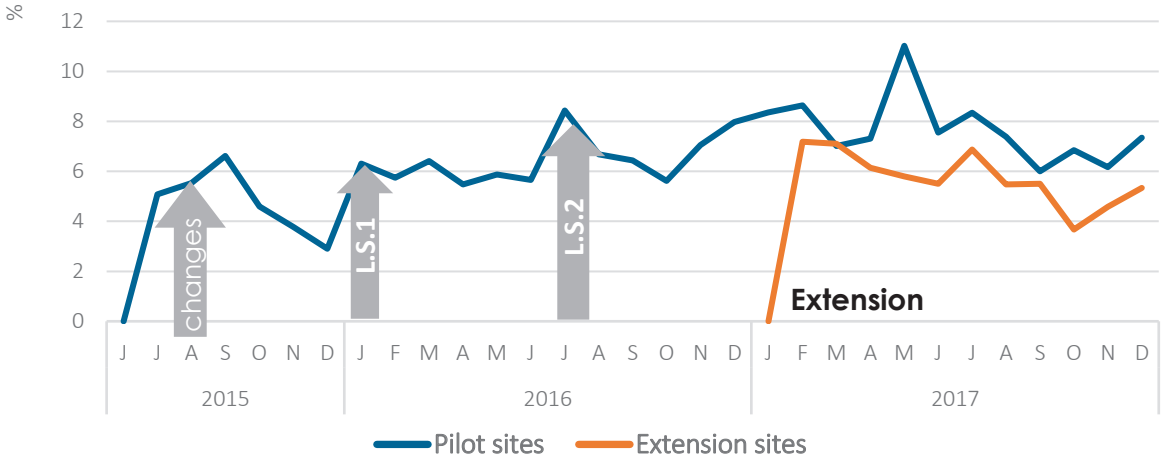
Figure 1: Percentage of women who bring children in for immunization services who were given FP counseling in pilot and extension sites from June 2015 to December 2017 in Karusi province



From June 2015 to Dec. 2017, 156,021 women brought their children in for vaccination, of whom 143,172 (92%) received FP counseling. This rate has rapidly increased since the initiation of the changes, from 73% to 89% and maintained at 100% throughout the extension phase.

Objective: Reduce missed opportunities to offer FP methods to any woman who brings her child to the immunization service/unit.

Figure 2: Percentage of women bringing children to the immunization unit who received FP counseling and who accepted a FP method in Karusi Health Province.

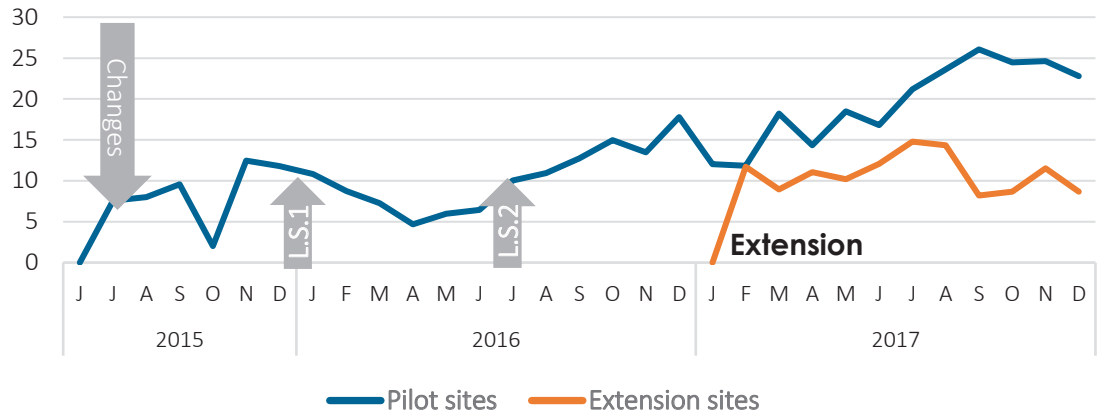


The average monthly rate of new women accepting contraceptive methods is 6%. A progressive increase is observed after each learning session, which reached 11% in May 2017 and stabilized around 7% during the extension phase.
Objective: Reduce missed opportunities to provide FP counseling (FPC) to any woman seen in PNC.

Typically, women use postnatal consultation (PNC) services only when they have postpartum issues. To increase the use of PNC services, providers organize BCG vaccination and PNC services on the same day and refer women to PNC where they receive postnatal care and individual FPC. As a result, from June 2015 to December 2017, 33,760 women were seen in PNC services, of whom 31,602 or 94%, received FP counseling.

Objective: Reduce missed opportunities to provide FP methods to every woman seen in PNC.

Figure 3: Percentage of women receiving PNC who receive FP counseling and who accept FP methods in pilot and extension sites.



The average monthly rate of accepting new FP methods seen in PNC is 12% over 30 months. Note a clear improvement in two stages: after the second LS and the start of the extension where this rate rose from 9% to 17% (June and Dec. 2016), respectively, to reach a peak of 23% in September 2017. Pilot sites show better performance than extension sites, although the latter show a faster progression.

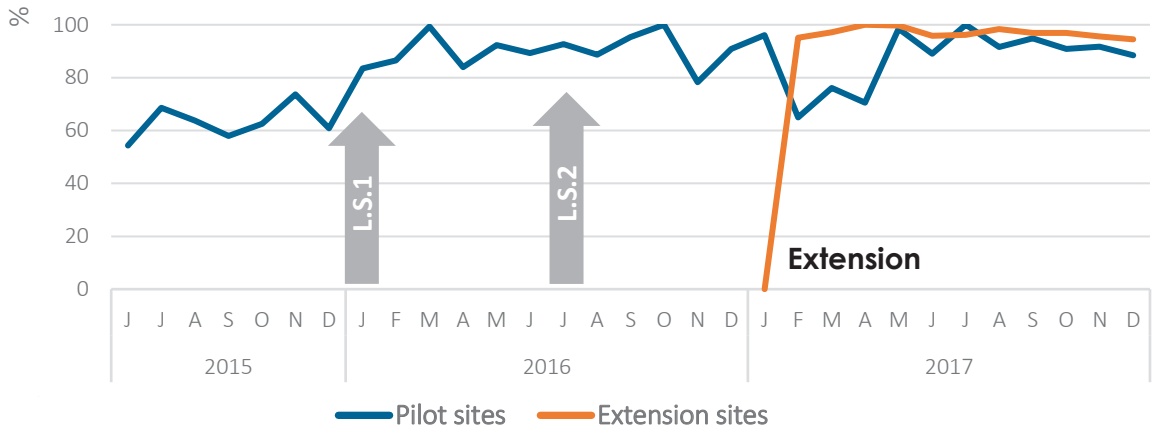
Objective: Reduce missed opportunities to provide FP services to women admitted to maternity wards and those who have given birth, especially through caesarean deliveries.

During the 18 months of the demonstration phase, 2,528 women were admitted to the maternity ward at Buhiga Hospital. The providers take this opportunity to offer couples FP counseling. Thus, 47 women or 19% accepted a FP method, often DMPA use.

Conversely, the integration of FP services into women bringing children less than five years old for curative services or hospitalized in pediatrics wards during the same period, showed that women with sick children are primarily concerned about their children's state of health and are not receptive to spontaneous adherence to FP methods: the rate of new women who accept FP is low, around 1%.

Objective: Increase the accessibility of FP services in the community.

Figure 4: Percentage of women referred by CHWs who come to HCs to receive/initiate a FP method in the pilot and extension sites.

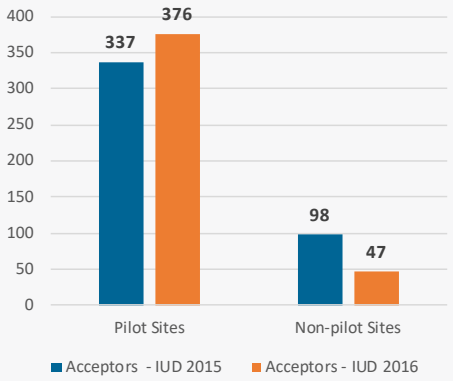


The QI effort to increase FP integration at the community level has been successful with an average percentage of 83% of actual referrals using FP methods in pilot sites, versus 97% in extension sites. Integrating FP into HMM is a practice that has contributed to the success of this approach. Each woman who brings her child in for fever treatment receives FPC and a referral (document) to take to the HC where she is promptly received for provision of a FP method.

Contribution of FP services integration in increasing contraceptive coverage in Karusi province

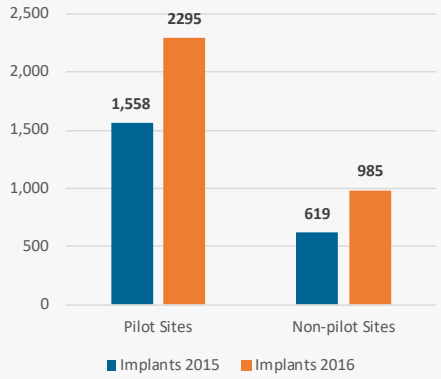
After 18 months of the demonstration phase (from July 2015 to December 2016), we compared QI pilot sites with non-pilot sites to assess the effects of integrating FP services.

Figure 5: Contribution of integration to IUD coverage (Source: HIS HPO Karusi).



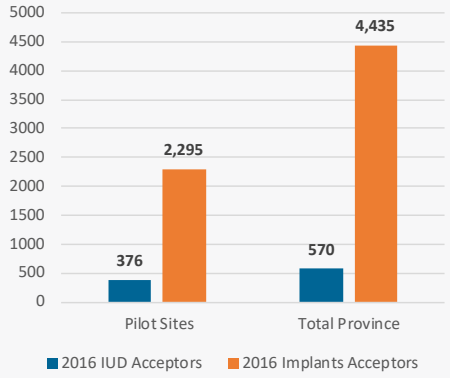
- Figure 5 shows that the number of IUD users was 3 times higher in the demonstration sites (337 against 98) in 2015
- In 2016, the number of new IUD users was 8 times higher in demonstration sites (376) than in other sites (47)

Figure 6: Contribution of integration to Implant coverage (Source: HIS HPO Karusi.)



- In 2015, there were 2.5 times more implant users in demonstration sites (1,558) than in other sites (619)
- In 2016, new implant users were 2.3 times more numerous in demonstration sites (2,295) than in other sites (985)

Figure 7: Contribution of QI/ Integration to coverage of long-acting methods in Karusi Health Province. (Source: HIS HPO Karusi).



- Out of the 570 IUDs implanted across the province, the 11 pilot sites contributed 66 %, representing 376 IUD users.
- On the other hand, out of 4,435 new implant users across the province, pilot sites contributed 2,295 implants (51.7 %). These improvements have resulted in Karusi Health Province ranking from 16th to 4th among Burundi's 18 provinces in contraceptive coverage.

Improved integration of early ANC, SGBV care and HIV testing in curative services in Kirundo health province

1. Project rationale and expected benefits

A significant number of pregnant women, children under 5 and other patients use health services for curative consultations, especially at the health center level and more than 65% of consultations are malaria cases. In 2014, statistics showed that the rate of HIV prevalence and the existence of gender-based violence cases were high, and the rate of early prenatal consultation (ANC) was low (13.8%). Integrating these services into curative consultations should reduce missed opportunities to provide these services.

2. Project goal

Increase the rate of early ANCs as well as HIV testing and sexual and gender-based violence care, through integrating these services into curative consultation.

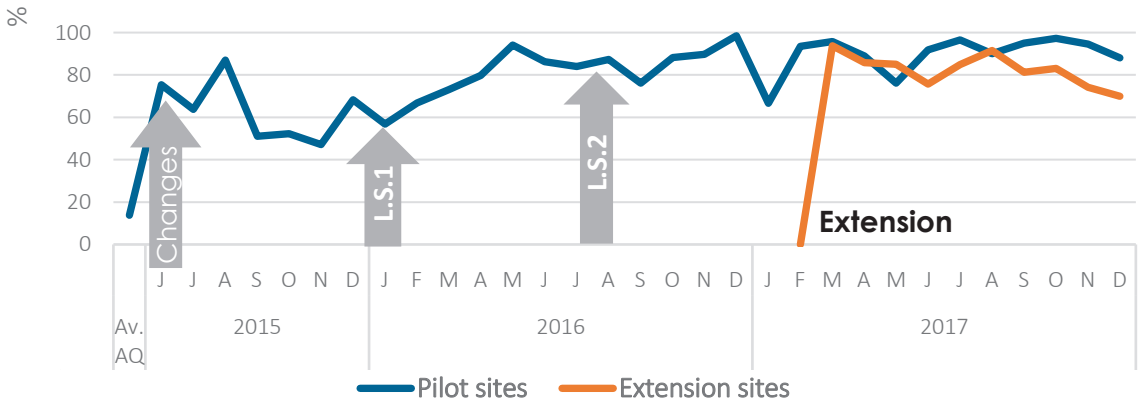
Table 7: Improvement objectives and monitoring Indicators

Objectives	Indicateurs
Improve the provision of early ANC services to pregnant women seen in curative consultation.	Proportion of pregnant women seen in curative consultation who received early ANC.
Improve the provision of prevention and care services for sexual and gender-based violence.	Proportion of SGBV victims who received PEP.
Improve provider-initiated HIV testing and counseling for all cases seen in curative consultation.	Proportion of patients counseled and tested for HIV in curative consultation.

3. Results

Objective: Improve the provision of early ANC services to pregnant women seen in curative consultation.

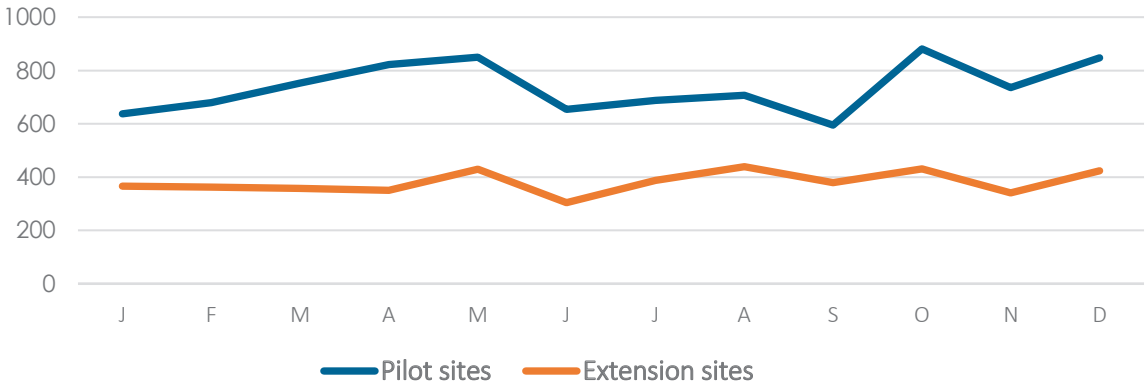
Figure 8: Percentage of pregnant women seen in curative consultation in pilot and extension sites who received early ANC in Kirundo health province.



Over a period of 30 months, a pregnancy test was carried out in curative services of pilot and extension sites for every woman girl of childbearing age with more than 10 days of menstruation delay. Among 11,402 women whose test were positive, 9,185 or 81% had a pregnancy of less than 12 WAs. These women benefited from an early, same day ANC (first trimester ANC1) with a package of services (LLIN, IPT, and HIV counseling and testing).

The QI/Integration efforts contributed to the increase in the early ANC rate from 14% before the approach to a peak of 98% for a monthly average of 79%. The same progressive dynamic is observed in the extension sites.

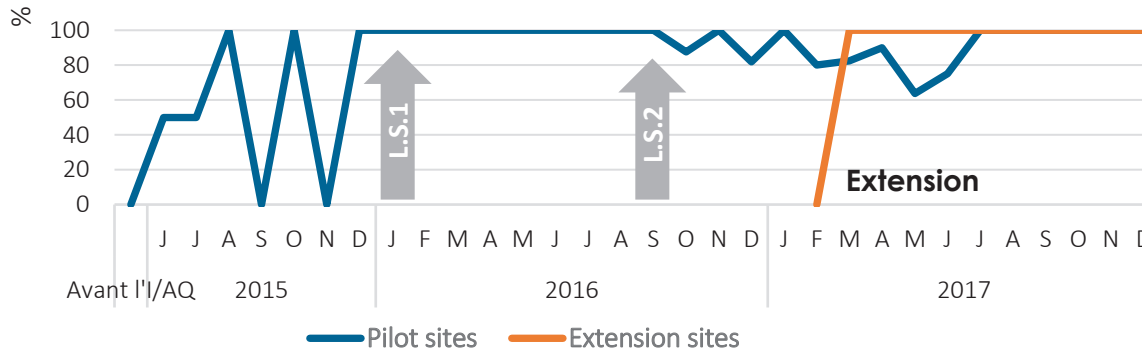
Figure 9: Comparison of early ANC cases recorded in Integration sites and other sites from January to December 2016 in Kirundo Province.



Data analysis of the above chart shows that the number of pregnant women who receive early ANC is twice as high in the integration sites as in the other sites.

Objective: Improve the provision of prevention and care services for sexual and gender-based violence

Figure 10: Percentage of SGBV victims who received PEP in the pilot and extension sites.



Before the introduction of the QI/Integration approach, little to no SGBV cases were reported in the health facilities. The QITs have initiated changes including sensitizing local administration, local elected officials, religious denominations, CHWs and other actors on the importance of immediate referral of SGBV victims. Over a period of two and a half years, 284 cases of SGBV victims were recorded in curative consultation of pilot and extension sites. Of these, 266 (94%) received post-exposure prophylaxis within 72 hours in the same health facility and the same day, with a monthly average of 87%.

This rate has performed well and has progressively evolved in pilot sites, from 0% before integration to 50% in July 2017, and eventually stabilized at 100%.

Objective: Improve provider-initiated HIV testing and counseling (PITC) for any case seen in curative consultation.

Since the start of the integration in 2014, HIV testing in curative consultation was oriented to PITC: any patient not knowing his/her serological status was counseled and tested if he/she accepted. In this context, during a period of 18 months (June 2015 to December 2016), out of a total of 34,170 patients received in curative consultation, 13,319, (39%) were counseled and tested for HIV, compared with 17% before the approach. However, as the positivity rate was low (1.1%), this strategy was oriented to targeted testing (patients with risk factor) since the start of the extension phase; this contributed to the detection of 104,602 patients, of which 2,142 (2%) were positive, with a variation of 0 to 6% according to HFs.

Improved integration of FP into MCH and HIV care services in Kayanza health province

1. Project rationale and expected benefits

Since the presidential standard for free maternal health care in 2006, a large number of pregnant women have been using health services for pre- and post-natal consultations, both at health centers and district hospitals. According to the 2013 PNSR activity report, 88% of pregnant women are seen at least once in ANC, 49% of women give birth in health care settings and 80% of them receive PNC services. However, FP contraceptive coverage in Kayanza province remains low at 25.7%, compared to a national average of 30.8%. Additionally, according to data available in 2013, FP coverage among HIV-positive women is very low, with a rate of 9% at Kayanza Hospital. Integrating FP into maternal health services (ANC, deliveries, PNC) and PLHIV care services is, in principle, an opportunity to increase access to contraceptive methods.

2. Project goal/objectives

Increase the contraceptive coverage rate in maternal health and PLHIV care services.

Table 8: Improvement objectives and monitoring indicators

Improvement objectives	Indicators (targets)
Reduce missed opportunities to offer FPC to pregnant women and/or couples seen in ANC.	Percentage of pregnant women who received FP counseling in ANC.
Reduce missed opportunities to offer FP methods to women seen in PNC.	Percentage of women seen in PNC while pregnant who received FP methods.
Reduce missed opportunities to offer FP methods to women monitored in HIV care services/units.	Percentage of HIV-positive women coming in for HIV services who received FP methods.

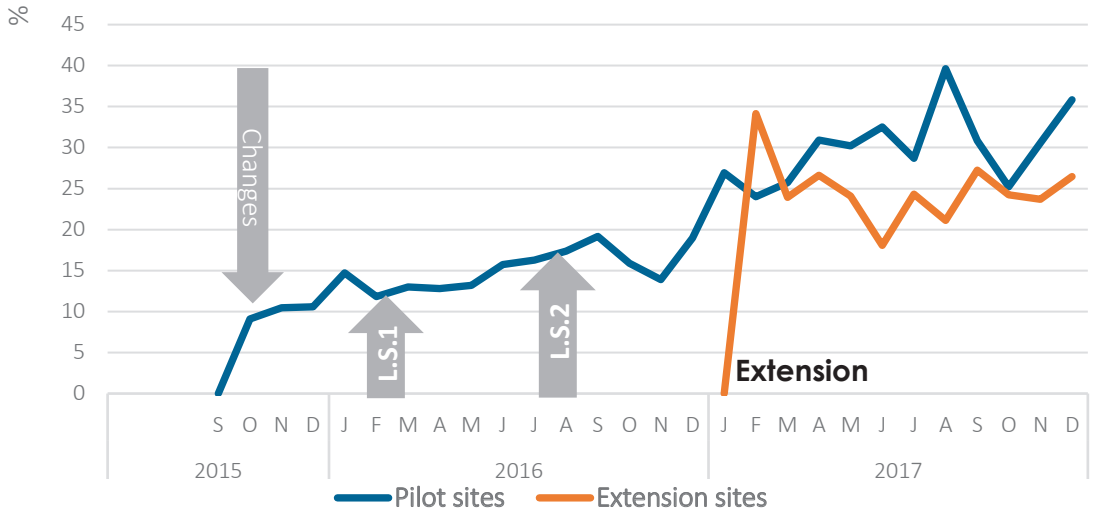
3. Results

Objective: Reduce missed opportunities to offer FPC to pregnant women and/or couples seen in ANC.

From October 2015 to December 2017, out of a total of 77,284 pregnant women who received ANC, 75,796 (98%) were counseled in FP. It should be noted that the proportion of pregnant women who received ANC FP counseling was not documented prior to integration.

Objective: Reduce missed opportunities to offer FP methods to women seen in/attending PNC.

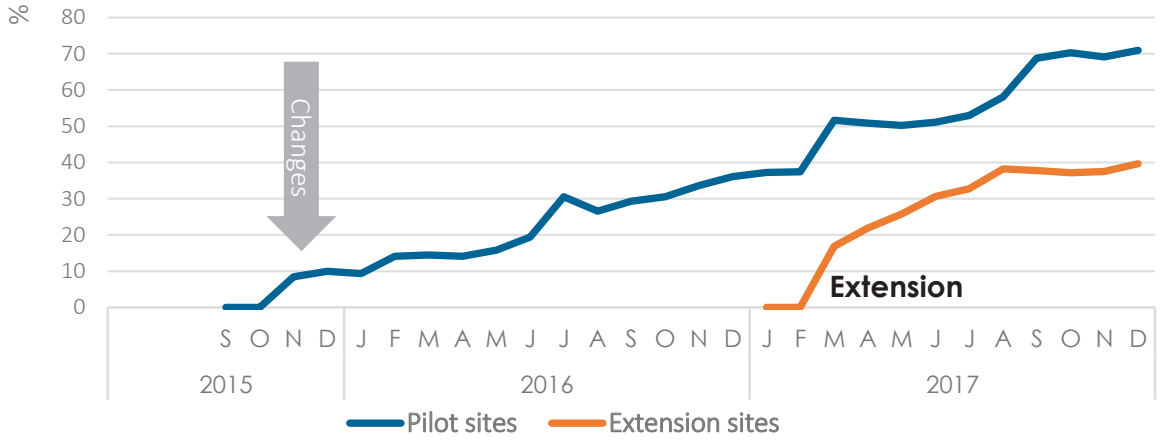
Figure 11: Percentage of women seen in PNC who received FP methods in pilot and extension sites from October 2015 to December 2017 in Kayanza province.



The rate of new acceptors of FP methods seen in PNC rose from 0% to 36% in pilot sites, with an average rate of 21%, and from 0% to 26% in extension sites, with a monthly average of 23%. Aggregate data from all sites revealed that, out of 39,402 women seen in PNC, 8,729 (22%) began using a contraceptive method.

Objective: Reduce missed opportunities to provide FP methods to HIV-positive women monitored in HIV care services/units.

Figure 12: Proportion of HIV-positive women using FP methods in pilot and extension sites from October 2015 to December 2017 in Kayanza province.



Within 2 years and 4 months, 210 (71%) HIV-positive women of childbearing age began using FP-methods among a cohort of 296 followed up in HIV care. Within a 10 month-period, this rate is 40% (117 out of 295) in extension sites.

Contribution of integration to increased contraceptive coverage in Kayanza Province at the end of the demonstration phase.

Before extending achieved improvements to the rest of the health facilities, the effects of integration were measured by comparing results obtained in 15 QI sites with 15 other sites that did not pilot the approach.

Figure 13: Comparison of acceptors of three methods (IUDs, implants and DMPA) in 15 QI sites and 15 control sites (Source: HIS HPO Kayanza).

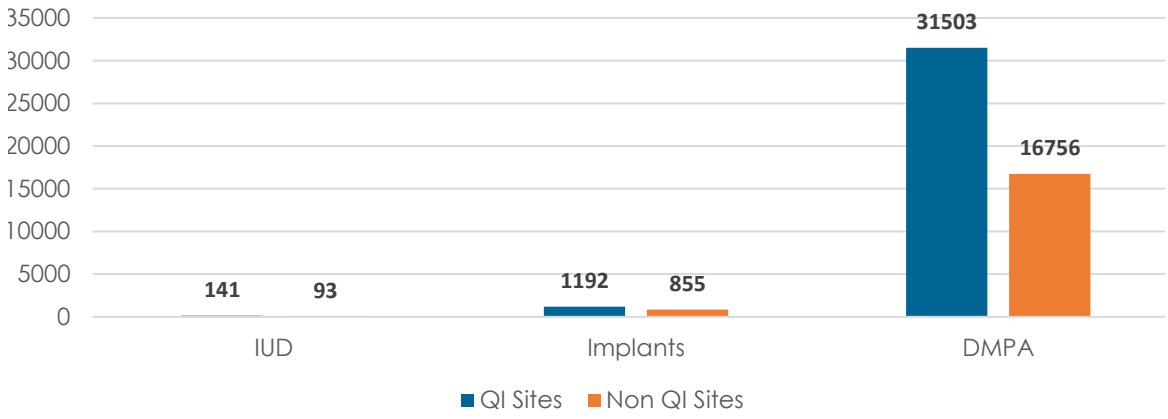


Figure 13 shows that QI sites have respectively 1.5 and 1.4 times newer IUD and implant users than sites that did not pilot the approach. Furthermore, QI sites have almost twice as many new DMPA users than sites that have not piloted the approach.

Improving the integration of Malaria prevention services in Muyinga health province

1. Project rationale and expected benefits

Malaria is the leading cause for curative consultations among pregnant women and children under age 5, and the major cause of infant morbidity and mortality. Additionally, ANC coverage shows satisfactory results with a rate nearly 100%, while the rate of assisted delivery in a health care setting is 84.7%. The integration of malaria prevention services into ANC services is therefore an opportunity to help reduce the rate of morbidity and mortality among pregnant women.

2. Project goal

Increase the level of integration of malaria prevention into CPN services.

Table 9: Improvement objectives

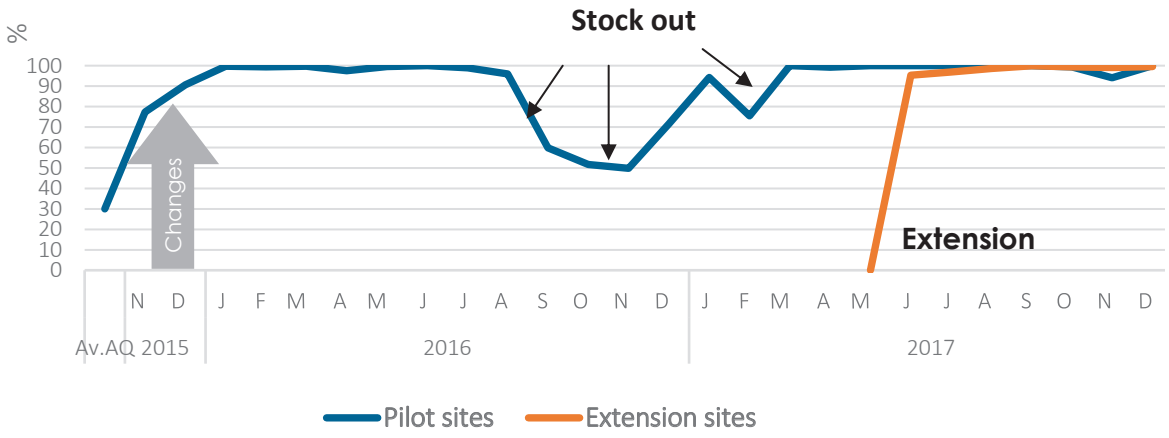
Improvement objectives	Indicators
Improve the package of malaria prevention services for pregnant women seen in ANC	% of pregnant women seen in ANC1 who received long-lasting insecticide-treated nets (LLINs) % of pregnant women seen in second trimester of ANC who received IPT2

3. Results

Objective: Improve the package of malaria prevention services in ANC

a. Improve the provision of LLINs for women attending ANC1

Figure 15: Percentage of pregnant women attending ANC1 who received LLINs in the pilot and extension sites from November 2015 to December 2017 in Muyinga province.



Before the QI approach, LLINs were inconsistently provided to pregnant women attending ANC1. Since introducing changes within the QI process, the percentage of pregnant women attending ANC1 who received LLINs has increased from 30% to 77% in November 2015 and stabilized at 100% thereafter. Stock outs of LLINs at the central level from September 2016 to February 2017 explain the temporary decline in this rate. In the extension sites however, there is consistent performance at 100%.

b. Improve the offer of IPT2 in pregnant women attending CPN3.

The MSPLS recommends that a pregnant woman should receive at least two doses of SP during pregnancy.

Figure 16: Percentage of pregnant women attending ANC3 who received IPT2 in pilot and extension sites from November 2015 to December 2017 in Muyinga province.

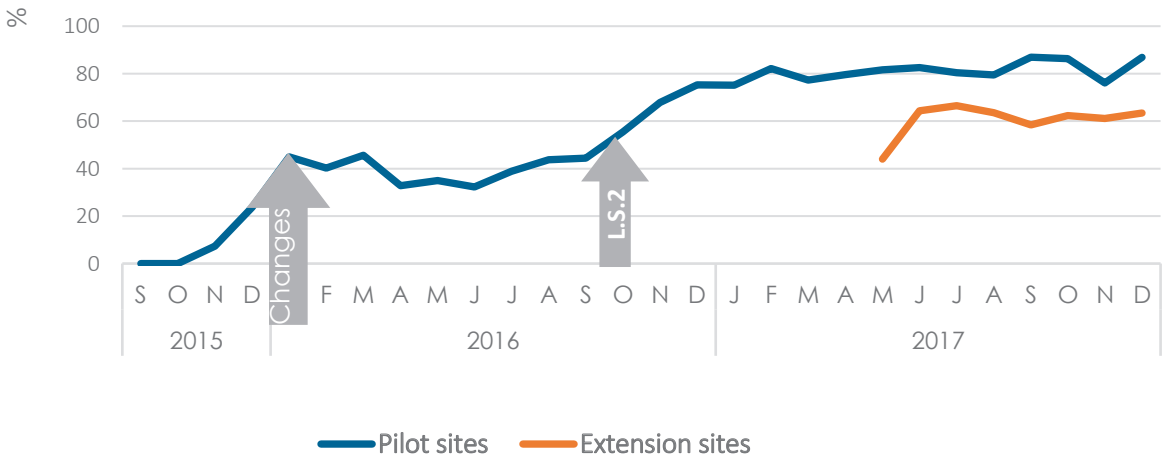


Figure 16 shows a steady increase in the rate of pregnant women receiving two doses of IPT in ANC3 from 0 to 7%, and then 24% before QI. A clear trend towards improvement is observed after introducing changes in pilot sites, from 45% in January 2016 to 68% in November 2017 after the second WA, during which the changes were adapted. This rate continued to increase, reaching 87% in December 2017. In the extension sites, this rate remained stable around 63%.

Lessons learned from piloting activities of improving service integration

On using the Collaborative Quality Improvement Model

- **The functionality of improvement teams**
  - **Positive points:** i) The teams, set up by coaches with technical support from the IHPB project, included a community representative; ii) The accessibility of work/job aids for meeting management and binders, made available to archive meeting minutes, facilitated the work of QITs and is documentation of their functionality by the coaches; iii) Meetings were held regularly in most sites (on average two meetings per month) as reflected in their minutes.
  - **Problems encountered:** i) The QIT chair chosen can positively or negatively affect the functionality and performance of a QIT; ii) At the beginning of the approach, poor performance at a Karusi site was due to the QIT Chair not being involved and not convening meetings; ii) There was distinct performance in this site when the chair was changed and replaced by a more dynamic chair; iii) Hospital teams are less motivated and dynamic, with an irregular meeting schedule, than health centers because of their staff's multivariate profiles and skills.

- **The coaching system**
  - **Positive points:** i) Joint coaching (districts/IHPB) visits are essential activities in the QI process as it is through these visits that QITs begin to understand the approach, develop their initial process diagram, test ideas for changes and measure the effect of changes on monitoring indicators; ii) The hiring/establishment of QI Officers in the field has steadily revitalized the coaching system.
  - **Problems encountered:** i) District supervisors trained on coaching techniques were often called on for other district management activities, which limited regular coaching visits; ii) District supervisors find it difficult to coach physicians because of their hierarchical relationships, which accentuated low motivation in hospital teams.

- **The monitoring system**
  - **Positive points:** The Excel database with embedded charts facilitated results analysis during learning sessions and preparation for presentations.
  - **Problems encountered:** i) Data transmission and analysis before the production and submission of reports is another QI area where challenges,

such as misunderstanding denominators of some indicators and errors in the transcription of data from the register to the report form, still exist despite improvement efforts; ii) Given the large number of facilities involved, especially after extension, prompt reporting was not assured.

- **Testing changes**
  - **Positive points:** i) Developing a patient-specific integration process diagram has allowed teams to identify bottlenecks and propose solutions; ii) The QITs have identified existing problems, looked for their root causes and proposed local solutions. A work/job aid allowed the QITs to understand how to plan for change, introduce it and study/assess effects of change in terms of results.
  - **Problems encountered:** i) Some QITs confused changes with activities (implementation of change); ii) In the "Act" step of the PDSA cycle, some teams did not always think to modify a less effective change. Usually after learning exchanges, teams altered their changes that were to be tested.

- **Learning sessions:**
  - **Positive points:** We observed improvement in performance after each learning session during which QITs exchanged their experiences and modified the ideas for changes being tested based on results from other QITs.
  - **Problems encountered:** Scheduling conflicts limited the availability of local health authorities, delaying certain learning sessions.

- **Intra and inter-provincial extension:**
  - **Positive points:** i) Extension sites quickly adopted best practices, resulting in faster achievement of results than in pilot sites; ii) QITs of new extension sites expressed their satisfaction in being mentored by their colleagues/peers from pilot sites because, according to them, they could freely ask questions on aspects that were not understood during the learning sessions.
  - **Problems encountered:** The inter-provincial extension included the integration of the extended collective package of services. At the midterm results exchange workshop, some sites indicated that there was a lack of qualified staff to improve all the indicators in this package.
- **Other factors that influenced improvement efforts:**
  - Frequent staff turnover, either in healthcare providers or DMOs, have influenced the dynamics of QITs and support from districts. New staff were not trained in the approach and took time to understand and get involved, which required additional awareness-raising by supervisors and coache**s.**

On service integration

Successful integrations
The results of Karusi and Kayanza show that the integration of FP services into MCH services (child immunization, PNC, maternity) and HIV patient care services is feasible by providers, accepted by clients and produced results.

According to QITs, early ANC integration into curative consultation services is feasible without difficulty and has become an established routine. Early ANC also increases the chances of completing third trimester ANC, an indicator supported by the Performance Based Financing (PBF) system, which is a source of motivation for providers. The premium granted by the PBF is used in part to cover the costs of free pregnancy tests.

The QITs noted that service integration has created a sense of satisfaction among clients who receive a service package on the same day, which saves time:

- BCG vaccine for children, postnatal care for mothers, and family planning services;
- Clients receive refocused ANC (HIV testing and counseling, IPT, LLINs and PMTCT) the same day instead of returning another day for the same services.

According to the Kigozi sister in-charge, discovering accidental pregnancies also has another advantage, which is to avoid prescribing a drug that is contraindicated during the first trimester.

Integration of HIV counseling and testing into curative consultation is feasible and, combined with targeted testing of at-risk patients, has raised the positivity rate.

The establishment of a LLIN requisition register and proper management of mosquito nets, has allowed adequate use of LLINs and the integration of malaria prevention services (LLINs and SP) into ANC.

The involvement of district medical officers (DMOs) is a key factor in the success of the collaborative approach. Their participation in the supervisions and their contributions to the learning sessions motivated/prompted the QITs to improve their work.

Limitations and constraints that may hinder the integration of services:
The integration of services has its limits because it requires a different organization of care and a longer contact time between providers and patients.

The following change ideas were difficult to implement and/or did not achieve any results:

- We observed that mothers received for curative consultation of their sick children are not receptive to FP counseling. Rather, they are concerned about the health status of their children;
- Anthropometric measurements of pregnant women, breastfeeding women <6 months and children <6 months of age seen in curative consultation was abandoned, as malnourished cases went directly to the outpatient treatment service without going through the curative consultation services.

Sustainability of Results

This improvement experience has demonstrated the feasibility and impact of integration on coverage and quality indicators of health services with substantial technical, logistical and financial support by the project. To sustain the results, the project, jointly with the districts, integrated the interprovincial change package into the district's annual action plans. In addition, HIS managers will integrate the monitoring system into their databases at the HDO level. Finally, the expanded collective package of changes will be integrated into the District Executive Teams' supervision topics.

Conclusion

The smart integration opportunities identified by the health provinces and the districts have led to many changes that have contributed to the improvement of patient coverage in essential health services and the improvement of many performance indicators.

Skills acquired by QITs and their coaches allow them to integrate a continuous improvement dynamic into their daily practices to solve problems in organizing services and quality of care.

This unique experience demonstrates the versatility of the quality improvement model in its application to service integration goals. Lessons learned will allow the MOPHFA, provinces, districts and their partners to reproduce this experience in the rest of the country.

Annexes

Annex 1: List of HFs involved in the demonstration phase

Health Facilities (HFs) involved in the pilot phase of the Karusi Health Province.

BUHIGA District	NYABIKERE District
Masabo Health Center (HC)	Rusamaza HC
Nyaruhinda HC	Nyabibuye HC
Karusi HC	Rusi HC
Buhiga HC	Gihogazi HC
BUHIGA Hospital	Nyabikere HC
	Gisimbawaga HC

Health Facilities (HFs) involved in the pilot phase of the Kirundo Health Province.

KIRUNDO District	VUMBI District	BUSONI District	MUKENKE District
Kirundo Hospital	Rushubije HC	Burara	Mukenke Hospital
Ruhehe HC	Muramba HC	Marembo HC	Buhoro HC
Kigozi HC	Gikomero HC	Kabanga HC	Gitobe HC
Kiyonza HC	Ntega HC		Bugorora HC
Gakana HC			Bucana HC

Health Facilities (HFs) involved in the pilot phase of the Kayanza Health Province.

KAYANZA District	MUSEMA District	GAHOMBO District
Kayanza Hospital	Musema Hospital	Rukago HC
Kayanza HC	Matongo HC	Ngoro HC
Rubura HC	Karehe HC	Mubogora HC
Kabuye HC	Rango HC	Gakenke HC
Kavoga HC	Nyarurama HC	Gahombo Hospital

Health Facilities (HFs) involved in the pilot phase of the Muyinga Health Province.

MUYINGA District	GITERANYI District	GASHOHO District
Muramba HC	Kamaramagambo HC	Gasorwe HC
Rugabano HC	Mugano HC	Nyungu HC
Murama HC	Ruzo HC	Nyagatovu HC

Annex 2: Expanded collective package of changes and their implementation activities

Integration Opportunities	Improvement Objective	Tested changes	Activities/Best practices
Health Center and Hospital levels **Curative and gynecological – obstetric service**	Improve the provision of early ANC services to pregnant women seen in curative and gynecological-obstetric consultation.	Provide free pregnancy testing to any woman or girl of childbearing age who has come for curative or gynecological obstetric consultation with delayed menstruation and who is not using a contraceptive method.	a) Make stock sheets available for pregnancy test equipment (strips, urine vials, gloves) in curative consultation. b) Retrieve the pregnancy test equipment (urine test strips, urine containers, pedal bins, gloves) from the laboratory, and put it in the curative consultation room. c) Collect the sample for the pregnancy test in the HC toilet. d) Perform the pregnancy test in the consultation room and deliver results through the same provider.
	Improve the provision of SGBV prevention and medical care.	a) Conduct a thorough medical history to look for possible sexual violence, make a clinical examination, record with a code (I/SGBV) in red for any case of SGBV, (change of mood/behavior). b) Provide the complete care package for victims.	a) Establish a SGBV listening and medical care service (for SGBV victims). b) Organize/facilitate a session on HE/week on SGBV at the HC. c) Make ARVs for post-exposure prophylaxis, contraceptives and STI treatment antibiotics available in the curative consultation service unit.
	Improve counseling and targeted HIV testing for any case seen in curative and gynecological-obstetric consultation.	Providing counseling and targeted testing (patients with STI-, TB-malnutrition- risk factors; female sex workers, opportunistic infections stigma) and index testing (family member of PLHIV, multiple sexual partners) for anyone seen in curative and gynecological/ obstetrical consultations.	a) Indicate in red pen the I/PITC code for anyone who has accepted the test and accompany him/her to the laboratory for sample collection. b) Provide the result on the same day. c) Provide care for anyone testing positive for HIV.

Annex 2: Expanded collective package of changes and their implementation activities *(continued)*

Integration Opportunities	Improvement Objective	Tested changes	Activities/Best practices
Immunization	Reduce missed opportunities through counseling any woman who brings her child to immunization service.	Organize collective Health education sessions for women who bring children to immunization service, facilitated by staff trained in FP.	a) Set up a Health Education notebook containing the topics to be developed integrating messages on side effects and rumors. b) Organize the waiting room to provide family planning counseling (FPC). c) Involve contraceptive method users to provide testimonies during collective/group Health Education sessions. d) Use audiovisual aids. e) Train unskilled personnel on FPC according to the availability of human resources. f) Refer mothers attending PNC and provide individual FPC.
PNC	Reduce missed opportunities to provide FP services to any woman attending PNC.	a) Provide individual FP counseling to any woman who comes in for PNC. b) Provide FP methods daily to all women who request them either in the same service department or refer them for FP service in the appropriate department on the same day. c) Receive, on a priority basis, women referred by CHWs for FP methods. d) Invite men to accompany their wives in PNC to receive FPC together.	a) Ensure appropriate leave planning and limit staff authorization in order to maintain continuity of FP service. b) Ensure the availability of short-acting FP methods in the PNC service department. c) Offer the method, if possible, in the same room and by the same provider to those who accept FP. d) Accompany the clients to the FP service unit for long-acting methods. e) Hold a staff meeting to inform them that they must always give priority to clients referred by the community and accompany or refer them to FP services. f) Write invitation letter (ubutumire). g) Send the invitation letter to the partner, through the mother leaving the maternity ward. h) Organize PNC and BCG vaccination on the same day.

Annex 2: Expanded collective package of changes and their implementation activities *(continued)*

Integration Opportunities	Improvement Objective	Tested changes	Activities/Best practices
Maternity	Reduce missed opportunities to provide FP services to women who have given birth in the maternity ward, particularly those who had caesarean deliveries.	a) Provide FP counseling in the maternity ward by staff qualified and trained in FP. b) Offer FP methods in the maternity ward to those who accept.	a) Assign staff qualified and trained in contraceptive technology to the maternity ward. b) Make FP methods (DMPA, COP) available by requisition at the hospital pharmacy. c) Record the methods on the stock sheets. d) Provide the FP method in the same maternity ward by the same provider.
HIV care services	Reduce missed opportunities to provide FP services to all HIV-positive women of childbearing age, who are monitored in HIV care services.	a) Provide FP counseling to any HIV-positive woman of childbearing age who are monitored in HIV care wards. b) Provide all FP methods in HIV care services.	a) Develop a Health Education planning/calendar focused on FP. b) Develop key messages on benefits, side effects and rumors about FP methods. c) Make a register available for the preparation of HE sessions. d) Stock FP inputs at the HC pharmacy. e) Provide the FP method in HIV care services. f) Send out client cards to the FP service and file them in the service schedule after registration in the standard reception and FP registers. g) Train all HIV care providers locally in FPC. h) Assign to HIV care provision units qualified and trained staff in contraceptive technology. i) Match the date of appointment for ART supply with the date of checking or renewal of the FP method.

Annex 2: Expanded collective package of changes and their implementation activities *(continued)*

Integration Opportunities	Improvement Objective	Tested changes	Activities/Best practices
ANC	Improve the package of malaria prevention services in ANC. • Improve the LLIN provision for women attending ANC1/AR	a) Provide the LLINs in the ANC service ward as part of refocused ANC.	a) Establish a requisition and daily consumption register of LLINs in the ANC ward/unit. b) Establish a daily recording/ checking log to verify the LLINs distributed in the ANC unit. c) Record each time LLINs were provided in the ANC register. d) Arrange appointments according to the refocused ANC schedule: • 8 to 12 WA: 1st ANC • 18 to 24 WA: 2nd ANC • 8 to 32 WA: 3rd ANC • 36 to 38 WA: 4th ANC e) Inform the client of the appointment date and record it in her health booklet/card.
	Improve the provision of IPT in pregnant women attending ANC.	b) Provide SP in the ANC unit through trained personnel under direct observation.	a) Set up a clean water point (water filter) and cup in the ANC unit. b) Update the internal requisition register for ANC inputs. c) Record the requisitioned inputs on the SP daily inventory sheet. d) Give the pregnant woman the dose of SP on the spot.
		c) Supply the SP according to the Average Monthly Consumption (AMC).	a) Correctly calculate the number of pregnant women expected and order the SP based on the AMC. b) Check the consumption of previous months on the stock sheets
	Improve recording of malaria prevention services provided to pregnant women in the ANC register.	a) Mark in the ANC register the number of times the SP dose is provided (1st SP, 2nd SP....)	a) Inform all ANC service providers that the ITP dose must be recorded in the appropriate column of the ANC Register. b) Appoint a nurse to check at the end of the day if all the data has been entered in the ANC register.

Annex 2: Expanded collective package of changes and their implementation activities *(continued)*

Integration Opportunities	Improvement Objective	Tested changes	Activities/Best practices
ANC *(continued)*	Improve recording of malaria prevention services provided to pregnant women in the ANC register. *(continued)*	b) Analyze the data before transmitting them	a) Check, record and compile data. b) Develop a schedule of review/ analysis meetings. c) Invite QIT members to analyze the data. d) Transmit the corrected report before the 25th day of the month following the month in question. e) Make a daily synthesis of the data from the ANC register.
		c) Record each time the LLIN was provided in the ANC register	a) Compare the number of coupons distributed and the number of pregnant women seen in ANC1. b) Take a daily inventory of distributed LLINs.
	Reduce the number of LLIN and SP stock outs.	a) Order LLINs on time, taking into account the AMC	a) Develop a daily report of LLIN distribution. b) Make a monthly inventory of the LLINS. c) Keep the LLIN stock sheets up-to-date. d) Update the AMC every six months. e) Telephone or go to the HDO pharmacy to request information on the delivery date of LLINs to avoid a stock out.
		b) Order the SP in a timely manner, taking into account the AMC.	a) Follow the calculation formula of the AMC. b) Follow the order form.

Annex 2: Expanded collective package of changes and their implementation activities *(continued)*

Integration Opportunities	Improvement Objective	Tested changes	Activities/Best practices
Community	Improve the referral quality of SGBV victims from the community to health centers.	Organize an information/ awareness meeting for local government/ local administration, local elected officials, religious denominations, CHWs and other community stakeholders to explain the importance of immediate referral of SGBV cases to the HC.	a) Prepare topics on SGBVs to develop.. b) Send out an invitation letter. c) Provide referral cards for SGBV. d) Explain how to fill out the referral sheets e) Accompany the victim to HCs for care/support. f) File the community referral sheets at the HC. g) Hold a monthly meeting to analyze CHWs' referral sheets and activities.
	Increase the demand for FP methods at the community level.	a) The CHWs provide FPC to women who bring children in for consultation within the framework of HMM. b) The CHWs provide referral sheets/ vouchers to women who accept, so that they can be received at the HC.	a) Use work/job aids. b) Make reference sheets/vouchers available. c) During meetings with CHWs held at the HC, compare the referral vouchers provided with the number of women who actually arrived at the HC. d) Providers sponsor hills within their area of responsibility and participate in the FP awareness meetings organized by CHWs.
	Increase the rate of early ANC by informing the population on the benefits of early ANC.	a) Make/issue announcements in various churches and mosques to raise awareness on the benefits of early ANC.	a) Develop key messages. b) Contact the administration and religious leaders. c) Disseminate key messages.
		b) Conduct a joint visit (nurse, health promotion technician, CHW) to the hills to sensitize the community on the importance of early ANC.	a) Sponsor the hills of the HC's area of responsibility. b) Identify key awareness messages (to be used) by CHWs. c) Develop an awareness schedule.

Annex 2: Expanded collective package of changes and their implementation activities *(continued)*

Integration Opportunities	Improvement Objective	Tested changes	Activities/Best practices
Community *(continued)*	Increase the rate of early ANC by informing the population on the benefits of early ANC. *(continued)*	c) Send a reminder to pregnant women with a delay in ANC attendance.	a) Identify women who have missed/ delayed ANC appointments. b) Write invitation letters.
	Increase the use of LLINs and IPT through community awareness-raising.	Hold a monthly GASC awareness meeting on the importance/ benefits of using LLIN and IPT in pregnant women.	a) Develop themes on the importance/benefits of using LLINs and IPT in pregnant women. b) Convene a GASC meeting by sending an invitation letter for the meeting. c) Identify key messages for community awareness (to be used) by CHWs d) Develop an awareness schedule (to be used) by the CHWs.


fhi360
THE SCIENCE OF IMPROVING LIVES