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TECHNICAL REPORT

Towards Integrated People-centered Maternal, Newborn, and Child Health Care in Mali

SEPTEMBER 2019

This report was prepared by University Research Co., LLC (URC) under the United States Agency for International Development (USAID) Applying Science to Strengthen and Improve Systems (ASSIST) Project, which is funded by the American people through USAID's Bureau for Global Health, Office of Health Systems. The report was authored by Dr. Lourdes Ferrer of the World Health Organization and Dr. Sylvain B. Keita, Mr. Abdoulaye Sylla, Dr. Lazare Coulibaly, Dr. Houleymata Diarra, and Dr. Astou Coly of URC. URC's global partners for USAID ASSIST include: EnCompass LLC; FHI 360; Institute for Healthcare Improvement; WI-HER, LLC; and the World Health Organization Service Delivery and Safety Department. For more information on the work of the USAID ASSIST Project, please visit www.usaidassist.org or write assist-info@urc-chs.com.

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Acknowledgements

The USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project, which is funded by the American people through USAID's Bureau for Global Health, Office of Health Systems, has worked in collaboration with a number of key partners to apply the World Health Organization (WHO) integrated, people-centered health services approach in Mali. These include: The National Department of Health; the Kayes Region departments of Health, Social Development and Economic Solidarity, and Women's Welfare; the Local Social Development and Economy Solidarity Service; and Diéma Referral Health Center and community health center representatives.

The authors also appreciate the guidance and support provided for this activity by Dr. Hernan Montenegro and Ms. Nuria Toro of the World Health Organization Service Delivery and Safety Department and the support provided by Dr. Nick Goodwin of the International Foundation for Integrated Care. The authors would also like to thank Mr. Sabou Djibrina and Dr. Maina Boucar for their contribution to the analysis of the evaluation.

This report was prepared by University Research Co., LLC (URC) under the USAID ASSIST Project. Funding support for the application of the integrated person-centered health services approach in Mali was provided by the USAID Office of Health Systems with cross-bureau funding. The USAID ASSIST Project is managed by URC under the terms of Cooperative Agreement Number AID-OAA-A-12-00101. URC's global partners for USAID ASSIST include: EnCompass LLC; FHI 360; Institute for Healthcare Improvement; WI-HER, LLC; and the World Health Organization Service Delivery and Safety Department.

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Recommended citation

Ferrer L, Keita SB, Sylla A, Coulibaly L, Diarra H, Coly A. 2019. Towards Integrated People-centered Maternal, Newborn, and Child Health Care in Mali. *Technical Report*. Published by the USAID ASSIST Project. Chevy Chase, MD: University Research Co., LLC (URC).

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A. Acronyms

AMTSL	Active management of the third stage of labor
ANC	Antenatal care
ASACO	Community health associations (*Association de Santé Communautaire*)
ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
CSCOM	Community health center (*Centre de Santé Communautaire*)
CSRéf	Referral health center
ENC	Essential newborn care
FP	Family planning
FY	Fiscal year
IPCHS	Integrated people-centered health services
MNCH	Maternal, newborn, and child health
PE/E	Pre-eclampsia/eclampsia
PNC	Post-natal care
PPFP	Post-partum family planning
QI	Quality improvement
SCC	Safe Childbirth Checklist
SLDSES	Local Social Development and Economy Solidarity Service (*Service Local du Développement Social et de l'Economie Solidaire*)
URC	University Research Co., LLC
USAID	United State Agency of International Development
WHO	World Health Organization

Executive Summary

The World Health Organization (WHO), through its Framework on integrated people-centred health services adopted by Member States in 2016, has called for a fundamental shift in the way health services are funded, managed, and delivered. Integrated people-centered health services (IPCHS) imply that the needs of people and communities, not diseases, should be put at the center of health systems. The approach seeks to empower people to take charge of their own health as a route to supporting improved health and wellbeing.

In Mali, the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project has been working with the Ministry of Health since 2013 to contribute to reducing maternal, neonatal, and child mortality and morbidity. As part of ASSIST's larger partnership with WHO to contribute to the development of IPCHS in different contexts and settings to promote learning, the project proposed to conduct a pilot project in Mali to assess the promotion of people-centered approaches in clinical consultations by health providers during pregnancy and delivery at peripheral health centers.

The project was implemented in five community health centers in the District of Diéma in Kayes Region beginning in March 2016. The objectives of the pilot project were to build capacity in the community to participate in the management of their own health issues; empower communities with knowledge and confidence in managing their health status; enable participation in decision-making with health providers so patients can shape decisions; and promote positive changes in health outcomes in households and communities. The people-centered care work was expanded to neighboring Yélimané District in Kayes in March 2017. The pilot activities were concluded in August 2017.

The core activity of the pilot project was to promote people-centered approaches in clinical consultations by health providers during pregnancy and delivery at peripheral health centers using the quality improvement (QI) approach of setting measurable objectives, testing at small scale changes in care delivery processes, and ongoing measurement of the results using predefined indicators. The pilot also sought to examine whether health providers are responsive to the needs and preferences of patients and to what extent patients and communities gained the support they needed to participate in the management of their own care. To this end, the IPCHS intervention in Diéma consisted of the following:

- Training in people-centered approaches to care for regional trainers, health and social services providers, community providers, and community actors involved in health promotion and prevention (women's groups, community members, and traditional birth attendants);
- Facilitation of the integration of people-centered approaches into existing care services through the development of action plans, four monthly coaching visits within each of the five centers, and learning sessions to share knowledge and promote best practices to all stakeholders across the sites;
- Collection of data during coaching and learning sessions in the form of observations of provider-patient relationships, patient surveys, focus groups, and assessments of progress in relation to the action plans developed; and
- Identification of best practices by site-level QI teams.

Following the training in IPCHS, providers in each of the five sites worked with local community actors to develop a site-specific action plan for making maternal and newborn care services more focused on the needs of individual patients and families. The areas of emphasis of the action plans varied significantly across the five sites and over time. The different sites focused on different aspects of IPCHS in relation to the five core strategies of the WHO Framework (1) empowering and engaging people and communities; 2) strengthening governance and accountability; 3) reorienting the model of care; 4) coordinating services within and across sectors; and 5) creating an enabling environment) and developed a variety of different approaches to improve the quality of services across these five domains. The action plans, in general, tended to focus on three key areas of activity:

1. Improving the physical infrastructure and quality of care provided in the health centers, including attending to such items as building alterations and sanitation;
2. Facilitating coordinated access to the health centers through a range of new approaches, including the use of financial incentives; and
3. Improving communication with patients, families, and communities to promote awareness, understanding, and trust in maternal, newborn, and child health (MNCH) services in the local community, including the mobilization of women and community representatives.

Overall, progress of the five sites in meeting the goals of their action plans was good but varied over the course of the project and across sites. By the second coaching visit, three sites had achieved 100% of their action plans while the remaining sites had reached 50% of their goal. By the fourth coaching visit, achievement was lower; one site had reached all their goals, two sites had reached two thirds of their goals, and one site had reached on third of its goal. ASSIST staff supported each site with four coaching visits during the March-December 2016 implementation period. Each of the coaching visits also provided an opportunity for community members and providers to discuss the level of implementation of the action plans, analyze reasons for lack of progress, and identify actions to remedy any delays. Through the work of coaches to facilitate discussions over the course of the project, communication and engagement between providers and community actors advanced, as evidenced by the development of co-produced action plans following the initial learning sessions and feedback from local stakeholders of improved communication and relationships.

However, it may be observed that this has required the leadership and support from the coaches and other managers locally to drive forward change. Feedback from the coaching sessions demonstrated that it was the coaches who most often initiated strategies and/or sought to take processes forward with providers and the local community. Without such agents for change working continuously with the sites over time, it is probably less likely that progress would have been made against the original action plans.

Another key objective of the IPCHS pilot was to empower communities with knowledge and confidence in managing their health status. There is less direct evidence for this, though feedback from the learning sessions suggests that awareness and understanding have been enhanced. There is also evidence in some sites of greater community involvement in supporting local providers in the delivery of care and in finding funding to support investments in buildings, medicines, and equipment.

Mapping the activities of the five sites against the key aspects of IPCHS suggests that the focus has been primarily on strengthening the provision of primary health care through investments in premises, equipment, and medicines. In one sense, this does represent IPCHS' ideals, since these decisions to improve quality came from a facilitated discussion between providers and community actors. However, this focus suggests that less emphasis has been placed on other core aspects of IPCHS such as strategies for engaging and empowering women in their own care. This suggests a clear need to emphasize people-centeredness in future IPCHS interventions.

The pilot program has demonstrated that much can be achieved through the use of improvement methodologies that engage providers with decision-makers and the local community in an effort to co-produce plans and work more collaboratively together to see them succeed. Indeed, since one of the core tenets of the IPCHS framework is to encourage community engagement and involvement, then the project has contributed to international learning in how improvements in MNCH might be implemented in other contexts and settings.

The pilot in Diéma District has also demonstrated that all stakeholders, including providers, recognize the legitimacy and importance of people-centered care for improving care quality and experiences when this is explained and presented to them.

Looking through the 'lens' of a people-centered approach to the benefit of pregnant mothers, their families, and local communities appears to engender understanding and support. Seemingly, this

suggests the potential for a more aware and engaged community and a new type of relationship between patients and their care providers that are more sensitive to their holistic needs.

The qualitive component of the comparative evaluation provided evidence for the added value of the IPCHS approach when combined with QI. While the quantitative component of the comparative evaluation did not provide clear evidence of the impact of the IPCHS approach combined with QI (compared to QI only), this is likely due to several limitations of the study design.

I. INTRODUCTION

There has been a growing consensus worldwide on the priority areas for health system transformation. In particular, there has been a growing emphasis on how to support the achievement of universal health coverage through health systems strengthening, a renewed emphasis on primary health care, and reforms that make health systems more people-centred and integrated. [1, 2]

This has most recently culminated in the ratification by World Health Organization (WHO) Member States of the Framework on integrated people-centred health services that has called for a fundamental shift in the way health services are funded, managed, and delivered through the implementation of five strategies: 1) empowering and engaging people and communities; 2) strengthening governance and accountability; 3) reorienting the model of care; 4) coordinating services within and across sectors; and 5) creating an enabling environment. [2] Integrated people-centered health services (IPCHS) imply that the needs of people and communities, not diseases, should be put at the center of health systems. The approach seeks to empower people to take charge of their own health as a route to supporting improved health and wellbeing.

The path to universal health coverage in many countries has been constrained by significant shortages in human and financial resources. Over-emphasis on disease-oriented rather than people-centred health services has limited access to needed services, led to poor quality of care, inefficient use of resources, duplication of infrastucture and services, loss of continuity of care, and low patient satisfaction. In many countries, including Mali, these issues are compounded by geography (an average of 15km to get to a primary care center) and understaffing levels that lead to long waiting times. The quality of care within primary health centers can be highly variable and often poor or even harmful. Health services also are often not sensitive to people's cultural, ethnic, or gender preferences (acceptability barrier), like delivery at home. Challenges for quality of care are also linked to people's behaviors and status within their communities. Beliefs and traditions often lead to negative perceptions of (and subsequent access to) health services which can result in poorer outcomes for women and newborns.

The USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project began working in Mali in May 2013 to contribute to reducing maternal, neonatal, and child mortality and morbidity. As part of its larger partnership with WHO to contribute to the development of integrated people-centered health services in different contexts and settings to promote learning, ASSIST proposed to the USAID Office of Health Systems and USAID Mali to conduct a pilot project in Mali to assess the promotion of patient-centered approaches in clinical consultations by health providers during pregnancy and delivery at peripheral health centers. Specifically, the pilot project sought to support maternal, newborn, and child health (MNCH) care activities in Kayes Region implemented within the framework of USAID's Preventing Child and Maternal Deaths strategy in Mali.

The learning generated through this work was aimed at supporting beneficiaries to access promotive, preventative, and curative health services of sufficient quality and effectiveness, without exposing people to financial hardship. The pilot project also supported the core aim in the WHO Framework on integrated people-centred health services in enabling a continuum of health promotion, disease prevention, diagnosis, and treatment across different levels of health care systems according to people's needs.

The project sought to co-design and implement integrated MNCH services centered on the needs of patients, families, and communities. The project was implemented initially in five health areas of the health district of Diéma in Kayes, beginning in March 2016. The objectives of the pilot project were to build capacity in the community to participate in the management of their own health issues; empower communities with knowledge and confidence in managing their health status; enable participation in decision-making with health providers so patients can shape decisions; and promote positive changes in health outcomes in households and communities. The patient-centered care work was expanded to neighboring Yélimané District in Kayes in March 2017. The pilot activities were concluded in August 2017.

The pilot project was implemented in collaboration with the National Department of Health, the Regional Departments of Health, Social Development and Economy Solidarity, and Promotion of Women, Children and the Family of Kayes, the Local Social Development and Economy Solidarity Service, and the referral health center (CSRéf) of Diéma.

This report describes the development of this pilot project and the improvement methodologies used with providers, community health association members, and community actors to support change and the implementation of action plans. It also describes the findings of the evaluation led by WHO's consultant to document the impact the pilot had on the care experiences of pregnant women and the ability of a region such as Kayes to adopt some of the principles of people-centered and integrated health services. The report discusses the challenges and approaches to change that were adopted.

B. USAID ASSIST in Mali

Maternal, neonatal and infant mortality remains high in Mali with 368 deaths per 100,000 live births; 34 deaths per 1000 live births; and 95 deaths per 1000 live births, respectively. ASSIST began working in Mali in May 2013 with a core mission to strengthen and expand on a previous initiative (USAID Health Care Improvement Project) that was applying improvement science to MNCH care. This work recognized the still unmet needs in Mali for adequate coverage and quality of MNCH services and the joint commitment from the Ministry of Health and USAID in prioritizing improvements.

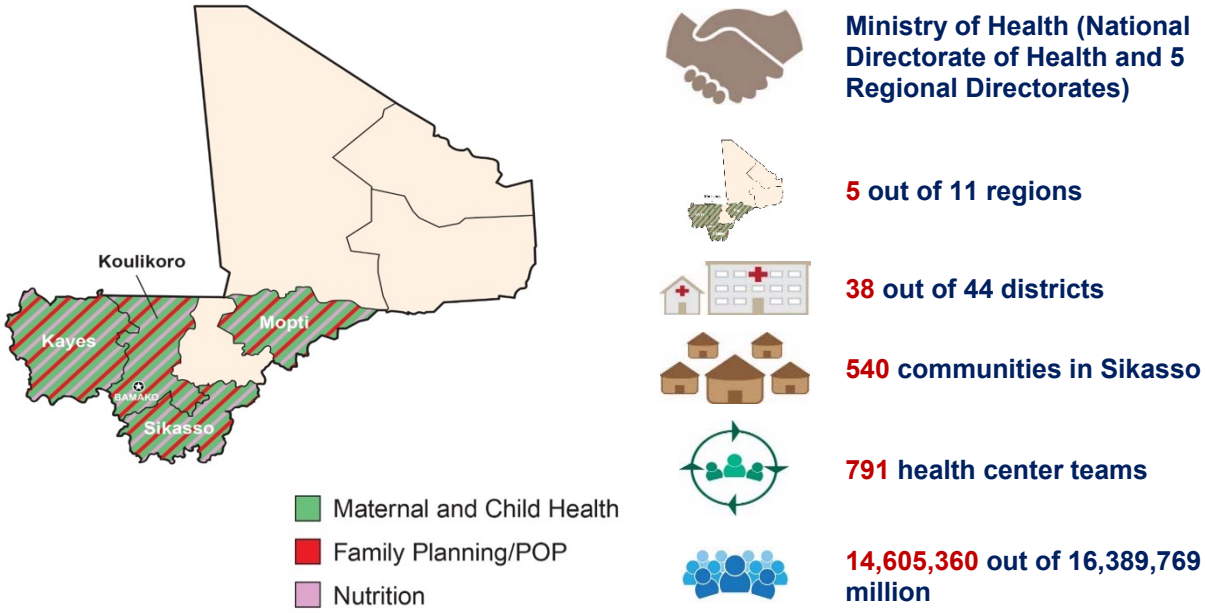
The overarching objective of the project has been to contribute to reducing maternal, neonatal, and child mortality and morbidity in the regions of Kayes and Sikasso by improving the quality of essential health services that are provided at the health care sites and in the community. To achieve these objectives, the project worked closely with the three ministries (Health, Women's Welfare, and Social Development) in charge of the implementation of the country's social and health development plan and their agencies at the regional level.

The focus of ASSIST was to serve vulnerable populations in Mali by phasing-in high impact clinical interventions along the maternal and newborn continuum of care. This has included strategies such as counselling/health education, home visits, anemia prevention, the promotion of birth preparedness, and the increased utilization of skilled delivery care in health centers. The strategy was to support capacity-building with intensive coaching of front-line improvement teams and to track progress against key indicators. From 2013-2017, the project strengthened the capacity of health care providers in almost 800 facilities and of some 1,500 community providers involved in the promotion and delivery of quality care in Kayes and Sikasso regions; more than 7,500 community members were involved in health promotion activities. [3] From the beginning of ASSIST's work in Mali, existing tools and quality improvement (QI) systems have been adapted to the needs of patients using the services. These platforms in turn facilitated the integration of the person-centered care approach to already existing quality improvement activities for the care of women and children during pregnancy and labor.

From 2013 to 2016, the project worked in 338 community and referral health centers in 14 districts in the Kayes and Sikasso regions to improve the quality of emergency obstetric and neonatal services as well as maternal and infant anemia. In fiscal year (FY)17, the USAID Mission asked ASSIST, based on the project's achievements, to scale up MNCH, family planning (FP), and nutrition improvement interventions to an additional 24 districts in three new regions and one old region (Bamako, Koulikoro, Mopti, Sikasso), with a total coverage of 38 districts in the five regions. The integrated MNCH/FP improvement package focused on antenatal care (ANC) linked to maternal anemia prevention and management and implementation of the WHO Safe Childbirth Checklist (SCC). The use of the checklist focused on improving the active management of the third stage of labor (AMTSL), essential newborn care (ENC), pre-eclampsia and eclampsia (PE/E) care, newborn resuscitation, post-partum FP (PPFP), and people-centered integrated health services. The nutrition package focused on improving maternal and infant anemia prevention and management. In addition, the project introduced in FY17 new technical content

linked to the quality of immunization in two districts of the Mopti Region. In all, until its closure in Mali in December 2017, ASSIST supported a total of 752 community health centers (CSCOMs), 38 referral health centers, and one regional hospital to implement changes to improve MNCH/FP and nutrition services. The overall scale of ASSIST's work in Mali is shown in **Figure 1**.

Figure 1. Scale of ASSIST's work in Mali



II. DESCRIPTION OF THE INTEGRATED PEOPLE-CENTERED CARE INTERVENTION AND EVALUATION

With FY15 Cross-Bureau funding from the USAID Office of Health Systems, ASSIST proposed implementing the WHO Framework on integrated people-centred health services to MNCH in 10 health centers across two districts of the Kayes Region, Diéma and Yélimané, using a QI approach. Altogether, the districts of Diéma and Yélimané have respectively 23 and 27 health centers which ASSIST supported with technical assistance in MNCH. The two districts were chosen because of their maturity for certain technical contents relating to pregnancy and childbirth, their accessibility throughout the year, the existence of functional and committed community health associations, and the availability of staff for activities at the center.

The first phase of the pilot project, focusing in Diéma District only in the areas of Farabougou, Iambidou, Torodo, Fassoudébé, and Diéoura, began implementation at the site level in March 2016. The roll-out of the second phase of the project into neighboring Yélimané District began in March 2017 and concluded with the follow-up survey of patients in August 2017.

The core activity of the pilot project was to promote patient-centered approaches in clinical consultations by health providers during pregnancy and delivery at peripheral health centers using the QI approach of setting measurable objectives, testing at small scale changes in care delivery processes, and ongoing measurement of the results using predefined improvement indicators. The pilot also sought to examine whether health providers are responsive to the needs and preferences of patients and to what extent patients and communities gained the support they needed to participate in the management of their own care. The key improvement objectives and indicators pursued in the IPCHS pilot in Mali are shown in **Table 1. Table 2** lists the main interventions proposed to deliver person-centered maternal and newborn

care services, anticipated barriers, proposed change concepts to overcome those barriers; and indicators proposed to measure results.

Table 1. Improvement objectives for the pilot project and key indicators

Improvement Objectives	Indicators
Increase to 30% the satisfaction rate of patients during antenatal care (ANC) services within the sites by May 2016	Percentage of patients who say they are satisfied with ANC services within the sites
Increase to 30% the satisfaction rate of patients during delivery services within the sites by May 2016	Percentage of patients who say they are satisfied with delivery services within the sites
Increase to 40% the satisfaction rate of patients during post-natal care (PNC) services within the sites by May 2016	Percentage of patients who say they are satisfied with PNC services within the sites
Increase to 80% care givers' compliance with the IPCHS approach within the sites	Compliance of care givers with the IPCHS approach within the sites

Table 2. Proposed interventions at community health centers to achieve the improvement objectives and key indicators to measure improvement

Interventions	Possible Gaps/Challenges	Change concepts	Indicators
Improved ANC package	Low use of antenatal care by patients Difficulties in changing beliefs and attitudes related to pregnancy and delivery Social division of health management within the communities Low motivation of providers Lack of organization of the duties within the health center Perception and beliefs of providers Knowledge gaps of IPCHS concept	Improvement of beliefs and attitudes regarding services during antenatal care, delivery and postnatal care for providers and communities Increase awareness of providers on the need to integrate systematically the IPCHS concept within their daily work Increase in use of services use due to compliance with IPCHS activities within the sites	Percentage of patients satisfied with ANC services within the sites
Delivery services			Percentage of patients satisfied with delivery services within the sites
PNC package			Percentage of patients satisfied with PNC services within the sites
IPCHS concept			Compliance rate of care givers to the IPCHS approach within the sites

ASSIST applied a QI approach to introduce IPCHS. This approach is based on the establishment of QI teams in health facilities to help improve health care. These teams look for and test ways to put into practice concepts of change to overcome obstacles to their functioning. Each team collects data on well-defined indicators to determine if the changes it has implemented led to improvement. In addition, "learning sessions" periodically bring together these QI teams to share experiences (results, list of changes implemented) and "coaching" visits are carried out to give additional support to the QI teams. In

this pilot project, ASSIST staff worked with health managers and social workers in the Kayes Region together with community health associations, communities, beneficiaries (patients), and their families.

Another focus of the pilot project was on assuring longer-term sustainability of the IPCHS intervention. By involving key departments working on health programs at regional and district levels, ASSIST sought to build the capacity of staff to continue the implementation through the existing services managed by local actors. The project aimed to grow community ownership and leadership to promote ownership of the results achieved at each level. Peer sharing within communities was designed to facilitate the uptake of the approach in other settings within the targeted districts. The pilot was also designed to contribute to global learning about how integrated people-centered care in MNCH might be implemented and what impact it may have.

A. Timeline

ASSIST began working in Kayes Region in 2011 to support the application of QI methods to prevent post-partum hemorrhage through AMTSL, promote ENC, and improve management of PE/E. These activities were not affected by the IPCHS. However, the five 'intervention' sites in Diéma would receive additional QI initiatives to promote integrated and person-centered care. To this end, the IPCHS intervention in Diéma consisted of the following:

- Training in people-centered approaches to care for regional trainers, health and social services providers, community providers, and community actors involved in health promotion and prevention (women's groups, community members, and traditional birth attendants);
- Facilitation of the integration of people-centered approaches into existing care services through the development of action plans, coaching visits to each of the five centers, and learning sessions to share knowledge and promote best practices to all stakeholders across the sites;
- Collection of data during coaching and learning sessions in the form of observations of health provider-patient interactions, patient surveys, focus groups, and assessments of progress in relation to the action plans developed; and
- Identification of best practices by site-level QI teams.

The second stage of the project was to then roll out these improvement initiatives to five sites in Yélimané so that both districts would benefit from the approach. The overall timeline for the IPCHS intervention is shown in **Table 3**.

Through these approaches the project has been able to document a variety of issues related to the implementation process and share lessons learned with regional and district actors during dissemination meetings of these results and experiences.

Table 3. Mali IPCHS intervention timeline

MONTH/YEAR	ACTIVITY
Jun-Aug-15	Consultation, engagement with key stakeholders, project planning
Sep-15	Training of the trainers
Oct-Dec-15	Training in cascade and coaching sessions
Jan-16	First data collection for evaluation
Feb-16	Training of the providers and community members in Diéma Development of action plans
Mar-Apr-16	Preparation and implementation of action plans across the five sites in Diéma
May-16	First coaching visits to Diéma
Jun-Jul-16	Implementation continues across the five sites in Diéma
Aug-16	Second coaching visits to Diéma
Sep-16	First learning session in Diéma
Oct-16	Third coaching visits to Diéma

MONTH/YEAR	ACTIVITY
Nov-16	Implementation continues across the five sites in Diéma
Dec-16	Fourth coaching visits to Diéma
Jan-17	Implementation continues across the five sites in Diéma
Feb-17	Second learning session in Diéma
Mar-17	Training of providers and community members in Yélimané Development of action plans
Apr-17	Second data collection for evaluation
May-17	Development of implementation report and case study
May-17	Second phase of project begins in Yélimané and Diéma
Aug-17	Third data collection for evaluation

B. QI intervention to apply IPCHS in MNCH in five sites of Diéma District

In this section, we describe the different activities that ASSIST implemented to apply the IPCHS approach to MNCH care in Diéma.

1. Training of trainers in IPCHS

The training of trainers was organized in Kayes in November 2015 with the technical support of a WHO consultant, the regional health management team of Kayes, and the ASSIST team. It brought together participants from three different regional divisions of Kayes (Health, Social Development, and Promotion of Women, Children and the Family) and officials from Diéma and Yélimané districts. A total of 21 trainers (4 women and 17 men) were trained on the approach and on how to develop action plans.

The overall objective was to strengthen the skills of providers to use the person-centered integrated care approach to improve the quality of the health services offered in their facilities. The key expectations from the trainer's point of view was to:

- Be well trained on the key elements of the IPCHS approach;
- Be supported in the competencies necessary to promote the engagement and empowerment of patients through the patient-provider relationship;
- Have competence to understand and play their role as trainers in IPCHS

Training of trainers in Kayes, November 2015

Photo credit: L Coulibaly, URC

The training module was presented in three sessions in which the expectations of the participants were gathered, followed by an introductory session on the integrated people-centered approach to care. Participants were then divided into three working groups for a first exercise focused on examining a case scenario of a patient with specific needs (see **Box 1**) and then working through how an integrated people-centered approach might achieve a better care experience and outcomes.

Box 1. Training the trainers: The case of Zeinab

Zeinab is a pregnant 28-year-old woman with 4 children. She is anemic. She lives a long distance away from the health center. She does not want to go back to the health center for her third ANC visit. In this exercise, participants were asked to discuss:

- What are the possible reasons why Zeinab no longer wants to continue with ANC?
- What is the group's views on Zeinab's conduct in relation to her ANC and what she could do to ensure her health and that of her child?
- What contribution (roles and responsibilities) of providers and decision-makers might be developed so that Zeinab can continue to receive care and support?

Through this approach to training, participants recognized that there may be multiple reasons for Zeinab's behavior including: geographic distance from the centers; lack of financial means; poor memory or understanding of ANC1 and ANC2; lack of trust in providers; and possible ignorance of the impact of anemia on her health. Several IPCHS-related strategies were discussed including:

- Educating the community about the importance of ANC and the effects of anemia;
- Encouraging the community to set up a village health fund;
- Improving the care experience at the centers, including improved communication with care providers

Through this approach the participants were then guided to understand the importance of the five key strategies in the WHO Framework on IPCHS (WHO, 2016) and of key tools and strategies to support community empowerment and engagement in health care. After this presentation, the participants divided into three groups, and each visited a health center to enable them to follow the path of the patient and to propose a list of interventions at the local and district level to improve patient experience, empowerment, and commitment.

Through group work, consolidated action plans were created. These emphasized the need to: strengthen provider capacity to deliver IPCHS; re-organize services around patient's needs and bring services closer to patients; strengthen partnerships between different stakeholders; support provider training and supervision; and advocate for change to key decision-makers and civil society.

From the start, it was agreed that an 'acceptable level of knowledge' from the training program was an attainment rate of 70%. At the beginning of the training (pre-test) 39% of participants reached or exceeded a score of 70%; scores varied from 45% to 85%. At the end of the training (post-test), 87% reached or exceeded the threshold of 70% correct, with scores varying from 50% to 90%.

2. Training of providers and community actors

In addition to the training of trainers described above, another key methodology of the project was to support providers with similar training in IPCHS. This was achieved through two training sessions for community stakeholders organized in Diéma in March 2016. These two sessions were attended by 28 decision makers (mayors, community health association [ASACO] representatives, religious leaders, and representatives from women's groups) – 11 women and 17 men--and 26 health care providers--17 women and 9 men. The sessions were facilitated by three ASSIST technical advisors and trainers from the Referral Hospital's social development team. At the end of each session, the participants developed an action plan for each site (five plans in all) to ensure better delivery of care in their sites.

The overall objective of the training workshops was to strengthen the competencies of providers and community actors to use the integrated people-centered care approach to improve the quality of health services offered in health facilities. The workshops sought to engage providers in a series of debates including understanding the concept of universal health coverage and its core objectives and defining and

understanding the values of a people-centered care approach and its core elements. Focus was placed on understanding how best to communicate with patients.

As a result of the workshops, a number of consensus points were reached including:

- Everyone should have access to care without the risk of being financially depleted by the cost;
- The quality of reception at the health center affects patient attendance rates and depends more on the humanism of the provider in engaging with patients rather than the provider's medical qualifications;
- The involvement of patients, family members, and the community in health care should be encouraged, enabled, and managed;
- Patients, families, and the community should be treated with respect; communication and support of patients reflect societal values;
- Shared-decision-making should be encouraged;
- A climate of trust between the provider and the patient/family needs to exist;
- Care should be accessible and coordinated; and
- The care environment should be cordial, clean, and hygienic, with the availability of fresh water.

The provider group was tasked with looking at key barriers and potential facilitators in developing a more people-centered approach to care in their own context. The case exercise described in **Box 1** was used with the providers as well. At the end of the workshop, decision-makers in each of the five pilot sites in Diéma District verbally committed themselves to the implementation of their action plans within the timeframes set forth. The acceptable level of knowledge in IPCHS rose from 58% (pre-test) to 74% (post-test) among the 26 participants attending.

Training of providers and community actors in Diema, March 2016

Photo Credit: I Niambele

A key outcome of the March training for providers and community actors was the development across each of the five sites of their first action plans. The action plans established a problem to be addressed, a mechanism for addressing the problem, and a proposed timeline to resolve the problem. The action plans play a key part in the improvement methodology of the project since they become the focal point for reviewing progress and, at each subsequent coaching session, were reviewed in light of conversations and reflections amongst providers and community actors.

3. Coaching sessions

From March 2016 to December 2016, coaching visits were organized by the project staff in collaboration with the district team involved in IPCHS implementation in Diéma. During these coaching visits, site-level staff were interviewed on the progress of implementation of their plans. Challenges and difficulties were also discussed to find solutions locally.

The key objectives of the coaching visits were to:

1. Describe and assess the components of the action plans and their implementation, including an examination of progress over time between the site visits;
2. Observe the quality of the work of the providers in providing care to patients (the health provider-patient relationship) using a standard template;
3. Undertake short satisfaction surveys with patients;
4. Provide training support in the form of feedback and guidance to service providers and other stakeholders across the five sites on the integrated people-centered care approach;
5. Identify the challenges and issues in implementing the IPCHS approach and make recommendations for change to address priority problems.

Four rounds of coaching visits were undertaken across five localities in 2016: Diéoura, Fassoudebe, Farabougou, Lambidou, and Torodo (see **Table 4** for the breakdown of participants in the coaching visits, by type of health agent). In total, 37 providers and 81 ASACO members received coaching over the period. The vast majority (33/37) of providers coached were women and mainly obsteric nurses (15/37) and matrons (18/37).

Table 4. Number of care providers coached by type

	1st Coaching Visit (18 Mar-23 May)	2nd Coaching Visit (10-12 August)	3rd Coaching Visit (26-28 October)	4th Coaching Visit (6-8 December)
Physicians	1	0	0	0
Midwives	0	0	0	0
Senior Health Technicians	1	1	0	0
Obstetric Nurses	4	4	4	3
Health Technicans	0	0	0	0
Matrons	6	3	4	5
Caregivers	1	0	0	0
ASACO members	32	23	14	12
Elected officials	0	0	2	1

In addition to the key objectives described above, a core aspect of the learning methodology behind the project was the ability through the coaching session to reflect upon progress in enacting the action plans. Moreover, the coaching sessions enabled providers and community actors to revise and add, where agreed, new challenges and issues to be addressed in subsequent iterations of the improvement cycle. The results and observations of the coaching sessions, and how they influenced the development of the action plans, is discussed in more detail in the Results section.

4. Learning sessions

To complement the coaching sessions, the project also undertook two learning sessions designed to bring together providers and decision-makers as well as mothers from across the five sites in the district of Diéma. The purpose of these meetings was to assess progress, share difficulties, discuss challenges, develop strategies for improvement, and agree on next steps in advancing people-centered care.

The learning sessions were facilitated by persons from ASSIST, the Referral Hospital, and the Local Social Development and Economy Solidarity Service. They were undertaken on 6-7 September 2016 and 6-7 February 2017 and included 24 and 25 participants, respectively (see **Table 5** below). All five sites had representation in each meeting. Unlike the coaching sessions, the majority of participants were men (20/24 in September and 17/25 in February).

The first learning session was designed to share the results of the first and second coaching visits (i.e., client surveys, observational analysis, and progress on action plans), with the second learning session addressing the results from both the third and fourth coaching visits. In each case, the learning sessions sought to:

1. Share and describe the evident changes based on site experience;
2. Share and discuss cases of success stories/testimonials;
3. Share the difficulties and constraints related to the implementation of the IPCHS approach;
4. Discuss challenges and strategies for improving quality of care through the implementation of the IPCHS; and
5. Discuss recommendations and next steps.

Table 5. Number of participants by type in the two learning sessions

	1st Learning Session (6-7 September 2016)	2nd Learning Session (6-7 February 2017)
Physicians	2	2
Senior Health Technicians	2	2
Obstetric Nurses	1	2
Health Technicans	1	1
Matrons	1	3
Laboratory	1	0
Caregiver	0	1
All ASACO members	7	5
Locally elected representatives	5	5
Representive of women users	1	1
Other	4	3

A learning session in Diéma

Photo Credit: L Coulibaly, URC

III. RESULTS

A. Developing and implementing the action plans

First prepared in March 2016, the action plans of the five sites evolved over time following regular review through the coaching visits and learning sessions. This section first looks at the content of the action plans and how these were adapted over time.

1. Content of the action plans

Since each of the action plans was developed through dialogue between facilitators, providers, and local community actors, the areas of emphasis varied significantly across the five sites and over time. The different sites focused on different aspects of IPCHS in relation to the five core strategies of the WHO Framework and developed a variety of different approaches to improve the quality of services across these five domains. There was also been a difference between the focus of IPCHS activities promoted specifically by the trainers and facilitators at a district-wide level (e.g., during training) and the actions developed by the five sites themselves. **Table 6** provides a visual representation of these differences by the five dimensions of the WHO Framework on IPCHS.

Table 6. Intervention site action plan activities mapped against the five key strategies for IPCHS outlined in the WHO IPCHS Framework

Key: Diéoura (D), Farabougou (FA), Fassoudebe (FS), Lambidou (L), and Torodo (T)

Key WHO Strategies mapped against activities in the Action Plans	Implementation Site					
	D	FA	FS	L	T	District
Empowering and Engaging People and Communities						
Target language barriers						Yes
Develop onsite feedback mechanism of patient experience and quality improvement						Yes
Support choice and decision making						Yes
Increase stakeholder awareness of the importance of users in decision making and in engagement with self-care						Yes
Increase providers' awareness of the importance of engaging family members						Yes
Support providers to personalize care interactions						Yes
Provide written instruction to user on what to do and what to avoid						Yes
Include information on malaria prevention within the services; Distribute prepared mosquito nets to all members of the family visiting the center					Yes	
Increase women's awareness using education sessions, community visits, community health workers, women groups, radio programs of the	Yes			Yes		

Key WHO Strategies mapped against activities in the Action Plans	Implementation Site					
	D	FA	FS	L	T	District
importance of antenatal care in the first trimester, in general, of vaccinations, and of family planning						
Involve providers to sensitize on vaccinations	Yes			Yes		
Active follow-up of women's missing appointments	Yes					
Collect data on use of family planning methods				Yes		
Mobilize users and community to support infrastructure: engage women's group to support cleaning activities in the health centers	Yes				Yes	
Use community workers and ASACO members to pass information, drugs, and prepared mosquito nets to community members						Yes
Sensitize the community about preventing diseases due to lack of hygiene at the village					Yes	
Make a play/theatre for the community representatives			Yes		Yes	
Monthly visit about birth control, sensitize ASACO and the council			Yes			
Organization 3 visits for sensitization vaccinations, sensitize mothers in law, reaction to immunizations explained			Yes			
Strengthening governance and accountability						
Support development of supervision schedule and supervision tools						Yes
Invite users or provide feedback of their experience in supervision meetings						Yes
Reorienting the Model of Care						
Increase knowledge of the IPCHS approach						Yes
Include users and community in assessing needs and planning change						Yes
Coordinating Services						
Improve welcome and orientation of users at the centers: Create a person responsible to orient women arriving the center						Yes
Link with the hygiene and cleaning department of the village					Yes	

Key WHO Strategies mapped against activities in the Action Plans	Implementation Site					
	D	FA	FS	L	T	District
Facilitating and coordinating access to care, including flexible opening times, coordinated access, reduced waiting times, local accommodation options		Yes	Yes	Yes	Yes	
Creating an Enabling Environment						
Improving infrastructure at the Centers		Yes			Yes	
Improving water and sanitation		Yes	Yes	Yes	Yes	
Promoting awareness and improving communication flows		Yes		Yes		
Community support to providers such as village-based care visits	Yes				Yes	Yes

The action plans, in general, tended to focus on three key areas of activity:

1. Improving communication with patients, families, and communities to promote awareness, understanding, and trust in MNCH services in the local community, including the mobilization of women and community representatives
2. Improving the physical infrastructure and quality of care provided in the health centers, including attending items such as building alterations and sanitation; and
3. Facilitating coordinated access to the health centers through a range of new approaches, including the use of financial incentives.

Of less prominence in the sites' action plans were issues related to supporting self-care and promoting shared decision-making between health providers, patients, and families. Whilst in the coaching visits and learning sessions the understanding and need to promote person-centered care was identified (e.g., in terms of the nature of the health provider-patient relationship), action plans tended to focus on other issues of importance to communities.

2. Progress over time

Table 7 shows the achievement of the five sites in meeting the goals of their action plans over the course of the project. There was a good level of implementation attainment achieved across the course of the project in each of the five sites. Each of the coaching visits also provided an opportunity for ASACO members, providers, and communities to inquire about the level of implementation of the action plans, any underlying reasons for lack of progress, and the ability to identify actions to remedy any delays.

Table 7. Percentage attainment of goals in actions plans over time across the five sites

% Attainment of Action Plans by Coaching Session				
Site	1st Coaching Visit **Mar-May '16**	2nd Coaching Visit **Aug '16**	3rd Coaching Visit **Oct '16**	4th Coaching Visit **Dec '16**
Farabougou	60%	50%	50%	67%
Dieoura	80%	50%	50%	67%

% Attainment of Action Plans by Coaching Session				
Site	1st Coaching Visit Mar-May '16	2nd Coaching Visit Aug '16	3rd Coaching Visit Oct '16	4th Coaching Visit Dec '16
Torodo	67%	100%	100%	33%
Fassou	100%	100%	100%	67%
Lambidou	83%	100%	100%	100%

There are many good examples from the project about how this improvement methodology led to strategies that could mobilize actions that had become 'stuck'.

During the coaching visits, many implementation issues and subsequent resolutions were documented. Some examples included:

- **Lambidou:** It was identified that there remained an insufficient source of drinking water in Lambidou despite this being a key action plan priority from the start. After coaching session 1, the coaches supported a meeting to be held with the ASACO Water Management Committee and the City Council on the water problem in the health center of Lambidou, and arrangements were subsequently made to make water available in the center.
- **Farabougou:** During the meeting with the ASACOs and the leaders during coaching session 1, it was seen that the problem of shortage of rooms in supporting women's privacy during and after childbirth had not been addressed. It was decided to revitalize the commitment for this. However, by coaching session 2 it was reported that there were difficulties in mobilizing community funds to complete the construction of two blocks at the center. The coaches suggested that ASACO members should focus instead on completing at least one of the blocks with the financing available to compensate for the shortage of rooms. By coaching session 3, the building works were continuing, and it was decided to purchase a hemocue and handwashing facilities. By coaching session 4, the handwashing kit had been installed, but an ASACO meeting to discuss the hemocue purchase had been postponed. The coaches supported the providers to then focus on completing the building works.
- **Torodo:** A key issue in the original action plan and coaching visit 1 was to functionally separate the delivery room from the main health center, as well as to purchase a cart to enable fresh water to be transported to the center from the town. ASACO had been able to purchase the cart by coaching visit 2 to ensure a water supply, but a new problem was identified in the poor coordination of patients attending the center and waiting times. By coaching session 3, improvements in communication with patients was observed by improving patient management by a local language-speaking person at the center. The completion of the action plan was otherwise low so coaches worked with ASACO to help them procure a hemocue and assess delays in building works.

3. Summary of implementation problems and ideas for change

During each of the coaching visits, one of the key tasks was for providers, ASACO members, and other community actors to work with the coaches in identifying difficulties in implementing the IPCHS approach. **Table 8** summarizes these problems insofar as these were articulated by participants. Amongst the wide-ranging issues revealed, the most common were related to:

- Effective communication and information giving, especially influenced by language;

- Perception of waiting times and staff problems in managing patient flows, especially at busy periods; and
- Inadequacies in health center infrastructure and lack of essential facilities such as water, electricity, and medical equipment.

Table 8. Difficulties encountered during the implementation stages of the action plans

Number of Sites Affected by Difficulties				
Difficulties encountered	1st Coaching Visit Mar-May '16	2nd Coaching Visit Aug '16	3rd Coaching Visit Oct '16	4th Coaching Visit Dec '16
Language barriers preventing good communication between provider and patient	All 5	All 5	-	-
Inadequate staffing / longer waiting times / complaints	2	4	2	2
Inadequate / problematic triage of patients	2	2	-	2
Absence of lighting	1	-	1	-
Lack of drinking water / poor infection prevention measures	2	-	2	-
Lack of beds	1	-	-	-
Unsuitable built facilities	1	1	2	1
High prescription costs / refusal of husbands to pay for drugs	-	2	-	2
Insufficient information giving / problematic communication	-	1	2	1
Failure to respect privacy	-	1	-	-
Non-compliance/registration attendance at center	-	1	-	1
Absence of hemocue and other medical equipment	-	4	5	3

The use of an improvement cycle methodology enabled coaches to support change through dialogue with providers, ASACO, and community actors. This created space for discussions with coaches how to enable change. Some of the lessons from that experience include:

- Include both providers and elected community leaders in setting joint priorities;

- Raise public awareness, for example through sensitization and learning sessions with the local community and gaining support from key leaders (e.g., mayors);
- Engage with patients at reception to promote information sharing, promote knowledge-transfer and mitigate impatience with long waiting times;
- Improve distribution of tasks amongst providers, especially at reception;
- Encourage patients to attend with interpreters.

Progress in meeting action plans was most often delayed due to issues related to the raising of finances to purchase necessary equipment or enable renovations to the centers themselves. The ability to inform and support patients and families effectively over the period was also a task that needed continual attention, especially in relation to the management of patient flows and the core issue of waiting times.

B. Assessing progress through the learning sessions

Learning Session 1 (September 2016)

During the first learning session, the results of the first and second coaching visits (patient surveys, observation of providers, and action plans) were shared with participants. At the time of the learning session, it appears that only the action plan from Fassoudébé was 100% executed. Progression in the other four sites observed implementation rates of 83% in Lambidou; 80% in Diéoura; 67% in Torodo; and 60% in Farabougou. The key difficulties in enabling implementation of the action plans were the planning of activities related to capital expenditure (e.g., building construction, wall construction).

Participants were divided by site to examine what had changed following the early implementation of IPCHS across the five sites. Discussions focused on the impact of two key tests of change. First, it was suggested that the grant of 500f to each woman at the first ANC in Lambidou might be changed, or supplemented by, the provision of drugs (iron tablets) to tackle issues related to anemia. Another issue was the importance of calling patients for appointment by their name, rather than by number, in Torodo.

Providers, community members, and elected officials discussed the challenges and constraints associated with the implementation of the IPCHS at the health centers, including:

- Poor organization of the services;
- Inadequate patient care;
- Poor reception capacity;
- Insufficient care equipment;
- Inadequate space to triage patients appropriately;
- Unsuitable premises and insufficient staff;
- Lack of safe drinking water that reduces the quality of care and infection prevention.

In consideration of these issues and challenges, the learning session concluded that:

- The human aspect in the provision of health services (by providers) needs greater consideration;
- The distribution of the tasks in centers needs to be improved, especially in terms of reception;
- Ensure collaboration and exchange between the City Hall, ASACOs, and health agents;
- Better involve female relays, women's groups, town halls, and ASACOs in awareness-raising in relation to the IPCHS approach;
- Rely on our own resources when drawing up action plans instead of relying on external aid;
- Conduct (from ASACO), from time to time, surveys of women leaving the center to inquire about inadequacies in the care of patients;
- Ensure collaboration and exchange between providers for continuity of care;
- Transfer skills to other providers after each training session and always ask about what you do not know;

- Do not leave the center solely in the hands of the providers; they must be helped to fight the false rumors in the village (ASACO, Town Hall, community);
- Involve women in decision-making about their health problems, especially in the absence of their husbands;
- Strengthen awareness among decision-makers to avoid delays in decision-making; and
- Strengthen staffing and motivation in the centers.

The group agreed that it was important to continue to exchange ideas about service improvements, to strengthen awareness, and to document change over time in a clear way. Revising action plans over time to set new goals and targets was seen as useful.

Learning Session 2 (February 2017)

During the second learning session, the results of the third and fourth coaching visits were shared with participants with an emphasis on reviewing achievements across the revised action plans. One of the discussions focused on the lack of progress of the Farabougou Action Plan, but it was described that since this required investment expenditure to construct two blocks of buildings (still under construction), progress was always likely to remain slower than anticipated.

In terms of the quality and impact of the coaching sessions, the facilitators drew attention to the importance of promoting information sharing and understanding at all levels (e.g., including ASACOs and town hall representatives in addition to providers). During the learning session, newly elected officials required a full briefing to enable them to better understand the project, its key aims and objectives, and assessment methods across the selected sites.

Participants were divided into working groups and sites to discuss observed changes in service provision. In plenary feedback, the following key changes were reported:

- Prioritization of ‘fair days’ had reduced waiting times for patients and improved patient experiences. This was supported by the good promotion of awareness of this policy in the community;
- The impact of electrification of the center for the comfort of patients was welcomed since it enabled night-work by the providers and allowed patients to have 24-hour monitoring in Diéoura;
- The collection of FP data from the practices and pharmacy in Lambidou was regarded as a good practice, but did not help in assessments of patient satisfaction;
- The detachment of the matron to guide the patients to Farabougou was regarded as a good idea, but it was not always possible for this to happen due to lack of available staff. It was suggested that managers or community workers may be better suited to support the direction of patients;

- The health center in Lambidou used cash incentives to encourage attendance, but it was suggested that a more sustainable approach across other sites might require more positive incentives (e.g., free consultation fees) to reduce access barriers.

Participants enjoying the second learning session, and sharing their experiences in the 'knowledge café'

Photo Credit: L Coulibaly, URC

A key success story reported at the learning session related to the reduction in waiting times in the sites of Diéoura and Farabougou. Participants discussed how the patient surveys might be adapted so that they look not just at the immediate outcome (satisfaction with care) but also at impact. This might be achieved through a monthly assessment (e.g., by a teacher or caregiver) attesting to the quality of care received and the outcome of that care.

C. Surveys with decision-makers, providers, and patients

4. Decision-maker and provider surveys

The baseline survey was carried out with the objective of providing information on the current degree of knowledge, relevance, and practice of the IPCHS approach in Diéma and Yelimané and to understand key aspects that might support, accelerate, or constrain the approach in these two districts. Data collection for the baseline study was conducted from 19 to 26 January 2016. The survey included actors at three different levels (central, district and local) grouped into three types: decision makers (n=15), providers (n=15), and users who were engaged through 10 focus group meetings. Thematic analysis of the results showed that approaches to MNCH care in both Diéma and Yélimané have advanced towards the goals of IPCHS, even if this exact approach has not been articulated in policy terms. Whilst 46.7% of decision-makers surveyed stated that they had no knowledge of the meaning of IPCHS, some 60% strongly agreed that this model should be the principle of health care delivery design.

Figures 2 and **3** below summarize the scores given by providers and decision makers on the importance and performance of different aspects of care. The findings suggest that a number of key aspects of care quality in Kayes had improved in recent years including:

- More financial and transport resources;
- Development of formal mechanisms of supervision and support to staff, including representation and participation of women;
- Improved working conditions and infrastructure; and
- Raised awareness among husbands to support and pay for women to receive care.

Figure 2. Provider ratings on the importance and performance of aspects of IPCHS

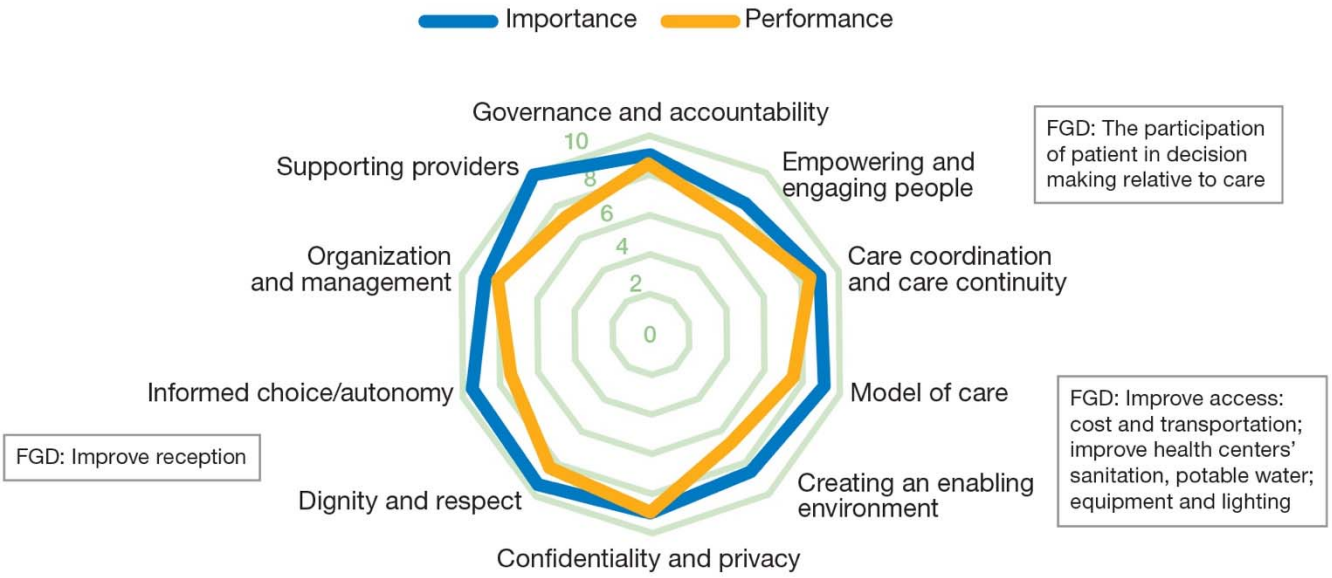
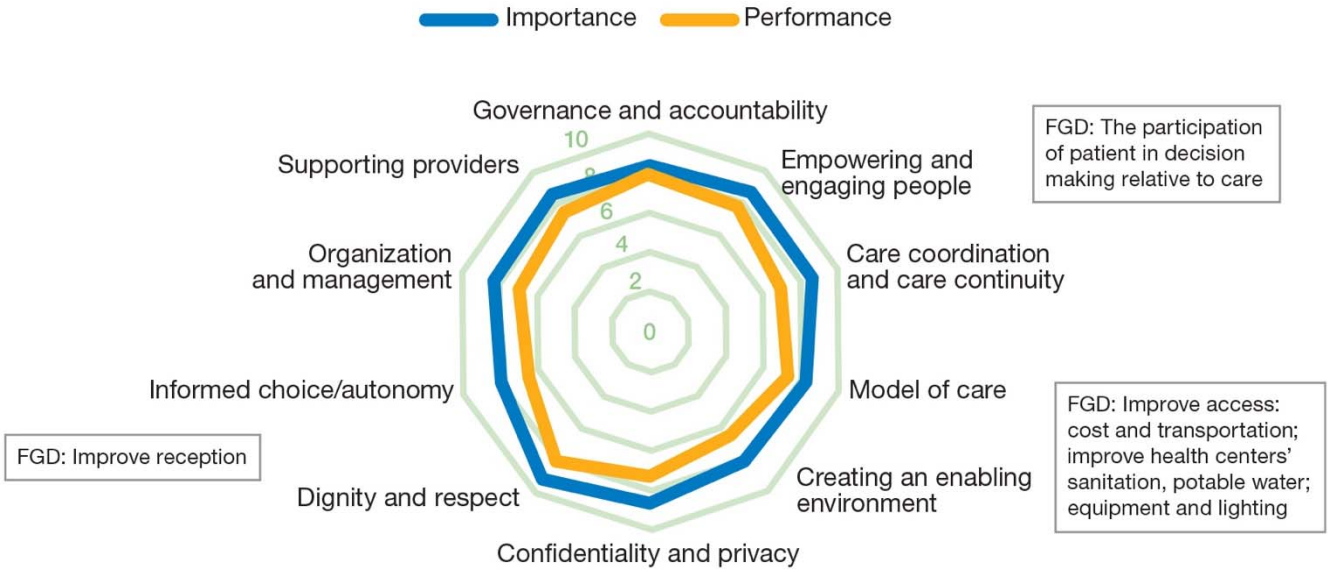


Figure 3. Decision-maker ratings on the importance and performance of aspects of IPCHS



Some 80% of health care providers and 87.7% of decision-makers reported that they were usually or always satisfied with the quality of care/services provided to their users by their health center. Similarly, 82.5% of service users of reproductive health reported that they were satisfied or very satisfied with the care received, and 89.0% of service users reported that they felt they had received the necessary services for their care. However, 23% reported problems with their stay in the center related to issues such as waiting times and the care environment.

5. Patient satisfaction surveys

Focus groups and interviews were conducted with patients during coaching visits. Focus groups highlighted significant challenges related to access to care and long waits. They also had criticisms of the poor reception and 'incompetence' of some health workers at the centers. The cleanliness, working conditions and infrastructure of the centers was also a common cause for concern. Nonetheless, the majority reported that care was better than traditional medicine and most women would recommend the centers to their friends.

Key factors influencing women's satisfaction with care services included:

- Kind and welcoming health officers who listen to patients and encourage them to attend the health centers;
- Health officers who provide advice on what to do, and not do, during and after pregnancy;
- Being part of a committee of women/family users; and
- Health workers who can travel to the patients' own home.

During each of the four coaching visits, patients were interviewed in each site about their experiences of care across a range of key dimensions important for the delivery of person-centered care. These key dimensions included satisfaction with: the reception of their care; information about their care; waiting times; active listening by the doctor; ability to share concerns; understanding about the different stages of their care; and whether they felt services had met all their care needs.

Overall, 112 patients across the five sites were interviewed about the services they received from providers. **Table 9** shows the levels of patient satisfaction in receiving care over time as the providers were supported by the quality improvement teams. The figures demonstrate that patients have generally held a high level of satisfaction of care throughout the period. Indeed, by the fourth round of coaching visits, patients reported 100% satisfaction in all aspects of their care across all five sites. The only exception has been satisfaction with waiting times where feedback has remained varied throughout the course of the project.

Table 9. Number of patients interviewed who were satisfied with health center performance with respect to key dimensions of person-centered care over time (May-Dec 2016)

Reception of Care at the Center							
Coaching Period	Location					Totals	% total
	D	FA	FS	L	T		
1st	5/5	7/7	7/7	10/10	10/10	39/39	100
2nd	¾	6/6	4/4	5/5	5/5	23/24	96
3rd	4/4	5/5	5/5	4/4	4/4	22/22	100
4th	5/5	5/5	5/5	7/7	5/5	27/27	100
Total	17/18	23/23	21/21	26/26	24/24	111/112	99

Key: Diéoura (D), Farabougou (FA), Fassoudebe (FS), Lambidou (L), and Torodo (T)

Information About Care							
Coaching Period	Location					Totals	% total
	D	FA	FS	L	T		
1st	5/5	7/7	7/7	10/10	10/10	39/39	100

2nd	4/4	6/6	4/4	5/5	5/5	24/24	100
3rd	4/4	5/5	5/5	4/4	4/4	22/22	100
4th	5/5	5/5	5/5	7/7	5/5	27/27	100
Total	17/18	23/23	21/21	26/26	24/24	112/112	100

Key: Diéoura (D), Farabougou (FA), Fassoudebe (FS), Lambidou (L), and Torodo (T)

Waiting Times							
	Location						%
Coaching Period	D	FA	FS	L	T	Totals	Total
1st	3/5	6/7	6/7	10/10	-	25/29	86
2nd	0/4	3/6	3/4	5/5	3/5	14/24	58
3rd	-	4/5	4/5	4/4	3/4	15/18	83
4th	-	3/5	5/5	7/7	3/5	18/22	82
Total	3/9	16/23	18/21	26/26	9/14	72/103	70

Key: Diéoura (D), Farabougou (FA), Fassoudebe (FS), Lambidou (L), and Torodo (T)

Active Listening							
	Location						%
Coaching Period	D	FA	FS	L	T	Totals	total
1st	5/5	7/7	7/7	10/10	10/10	39/39	100
2nd	3/4	6/6	4/4	5/5	5/5	23/24	96
3rd	4/4	5/5	5/5	4/4	4/4	22/22	100
4th	5/5	5/5	5/5	7/7	5/5	27/27	100
Total	17/18	23/23	21/21	26/26	24/24	111/112	99

Key: Diéoura (D), Farabougou (FA), Fassoudebe (FS), Lambidou (L), and Torodo (T)

Listening to Concerns							
	Location						%
Coaching Period	D	FA	FS	L	T	Totals	Total
1st	5/5	-	-	10/10	10/10	25/25	100
2nd	4/4	5/6	1/4	1/5	4/5	15/24	63
3rd	4/4	5/5	5/5	-	4/4	18/18	100
4th	5/5	5/5	5/5	7/7	5/5	27/27	100
Total	18/18	15/16	11/14	18/22	23/24	85/94	90

Key: Diéoura (D), Farabougou (FA), Fassoudebe (FS), Lambidou (L), and Torodo (T)

Explaining the Stages of Care							
Coaching Period	Location					Totals	% total
	D	FA	FS	L	T		
1st	5/5	7/7	7/7	10/10	10/10	39/39	100
2nd	4/4	6/6	4/4	5/5	5/5	24/24	100
3rd	4/4	5/5	5/5	4/4	4/4	22/22	100
4th	5/5	5/5	5/5	7/7	5/5	27/27	100
Total	18/18	23/23	21/21	26/26	24/24	112/112	100

Key: Diéoura (D), Farabougou (FA), Fassoudebe (FS), Lambidou (L), and Torodo (T)

Explaining the Services Required for Your Care							
Coaching Period	Location					Totals	% Total
	D	FA	FS	L	T		
1st	-	-	-	-	-	-	-
2nd	4/4	4/6	4/4	5/5	5/5	22/24	92
3rd	4/4	5/5	5/5	4/4	4/4	22/22	100
4th	5/5	5/5	5/5	7/7	5/5	27/27	100
Total	13/13	14/16	14/14	16/16	14/14	79/81	98

Key: Diéoura (D), Farabougou (FA), Fassoudebe (FS), Lambidou (L), and Torodo (T)

D. Assessing the relationship between providers and patients through observation

In addition to the customer surveys, observations of the core characteristics of patient-centered care was undertaken by coaches during the four coaching sessions with regular feedback and advice given to providers on the results of these observations. Over the time period, the vast majority of observations were of ANC (78/94), with 13/94 of post-natal visits and 3/94 of deliveries.

Table 10 describes the percentage achievement of the key characteristics of person-centered care during the observed consultations between care providers and their patients. Overall, providers demonstrated that they were able to provide a good level of person-centered care. In particular, and across all the observations, providers scored well in terms of aspects such as careful listening, explaining the stages of patient care, and the reception they received at the center itself.

Table 10. Performance of providers in people-centered care by site over time (May-Dec 2016)

Coaching Session 1

	Number of observations of clinical encounters							
sites	1 obs.	2 obs.	3 obs.	4 obs.	5 obs.	6 obs.	7 obs.	**%**
Farabougou	83%	83%	83%	83%	83%	**-**	**-**	**83%**
Diéoura	66%	83%	100%	100%	100%	**-**	**-**	**90%**

Fassoudebe	83%	100%	100%	100%	-	-	-	**96%**
Torodo	100%	100%	100%	100%	100%	100%	100%	**100%**
Lambidou	100%	100%	100%	50%	100%	100%	100%	**93%**

Coaching Session 2

	Number of observations of clinical encounters							
sites	1 obs.	2 obs.	3 obs.	4 obs.	5 obs.	6 obs.	7 obs.	**%**
Farabougou	50%	100%	100%	100%	100%	-	-	**90%**
Diéoura	83%	100%	83%	100%	-	-	-	**92%**
Fassoudebe	83%	100%	100%	100%	-	-	-	**96%**
Torodo	50%	100%	83%	100%	100%	-	-	**87%**
Lambidou	67%	100%	83%	-	-	-	-	**83%**

Coaching Session 3

	Number of observations of clinical encounters							
sites	1 obs.	2 obs.	3 obs.	4 obs.	5 obs.	6 obs.	7obs.	**%**
Farabougou	67%	100%	100%	100%	100%	-	-	**93%**
Diéoura	67%	100%	100%	100%	-	-	-	**92%**
Fassoudebe	100%	100%	100%	100%	100%	-	-	**100%**
Torodo	67%	83%	100%	100%	-	-	-	**86%**
Lambidou	750%	100%	100%	100%	-	-	-	**94%**

Coaching Session 4

	Number of observations of clinical encounters							
sites	1 obs.	2 obs.	3 obs.	4 obs.	5 obs.	6 obs.	7obs.	**%**
Farabougou	78%	100%	78%	67%	100%	-	-	**85%**
Diéoura	66%	83%	100%	100%	100%	-	-	**90%**
Fassoudebe	100%	100%	100%	100%	100%	-	-	**100%**
Torodo	89%	100%	100%	67%	100%	-	-	**91%**
Lambidou	78%	100%	100%	100%	100%	-	-	**96%**

However, there were a number of ways to improve care that were recurrent issues often overlooked by providers. These included:

- Encouraging patients to discuss their concerns, often due to issues in stimulating dialogue with the patient;
- Providing adequate information on care and treatment options (e.g., information on drug prices; explaining waiting time procedures); and

- Involving patients in decisions about their therapeutic care.

The coaches were able to provide feedback to each site regarding issues raised in the observations and combine this with survey data to suggest key actions. For example:

- After coaching session 2, coaches reminded providers of the importance of the provider-patient relationship following observations of inadequate dialogue in Diéoura and Torodo, and inadequate involvement and explanations about care in Farabougou.
- After coaching session 3, coaches discussed with providers in Diéoura, Lambidou, and Farabougou how and why they were scoring low in terms of involving patients in decision making and what they might do to improve this.

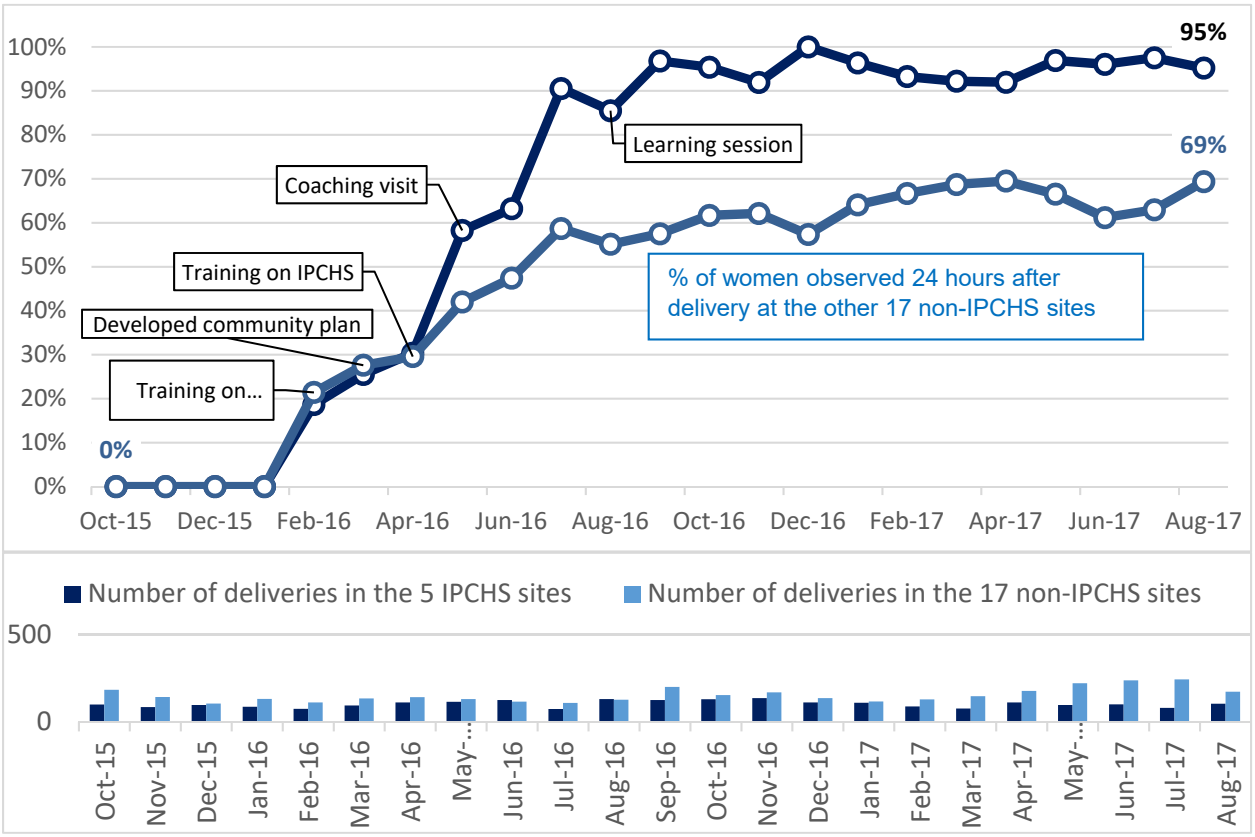
It should be stressed, however, that most providers understood the value of a person-centered approach to care with results suggesting a high overall degree of achievement.

E. Results from quality improvement teams

The five pilot IPCHS sites in Diéma also had QI teams that were being supported by ASSIST to undertake improvements in the quality of maternal and newborn care, in addition to activities related to IPCHS. These teams regularly tracked key quality of care indicators, as did other teams supported by ASSIST that were not engaged in promoting IPCHS. To understand whether the IPCHS approach added value above and beyond the existing MNCH QI activities, we compared results for the five sites implementing the IPCHS approach with results from the other 17 sites in Diéma District that received ASSIST QI support but with no emphasis on IPCHS.

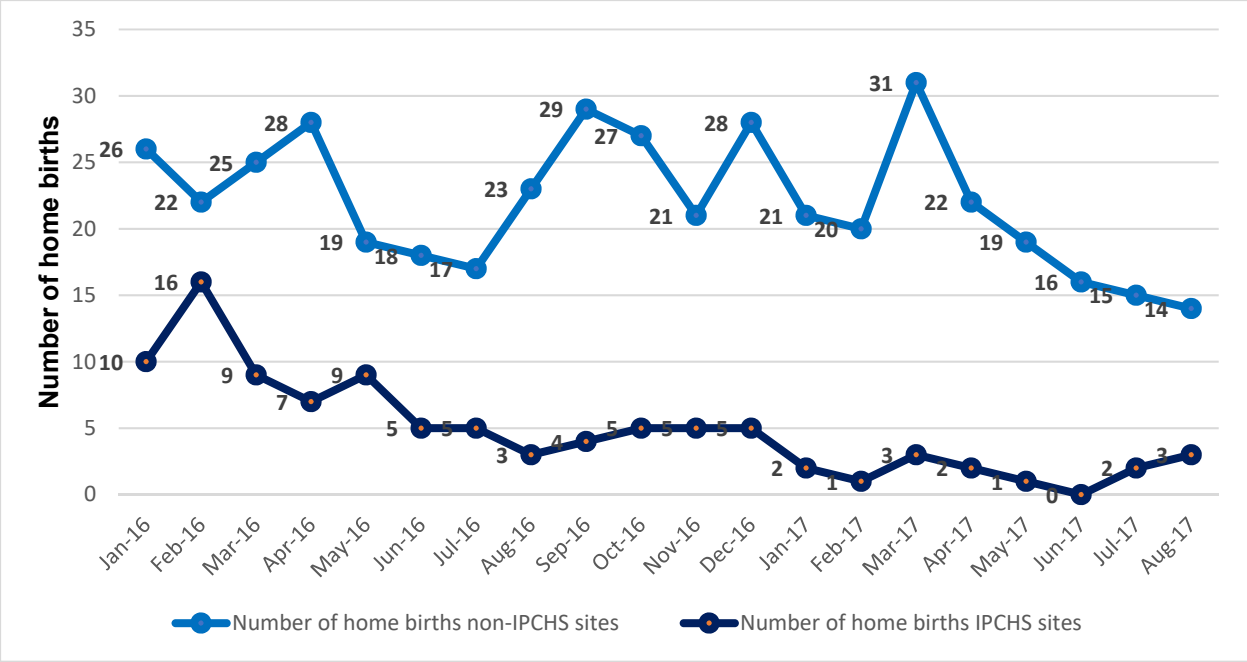
Figure 4 shows results for 24-hour surveillance of the mother and baby after delivery. It shows that while the quality of surveillance for 24 hours after delivery for mother and baby significantly improved in all sites, the sites where IPCHS was applied saw a much higher level of improvement than the sites where IPCHS was not implemented. Activities implemented in the IPCHS sites included training of providers in IPCHS; the development of community plans to support the logistic and acceptance of 24-hour surveillance; coaching visits; and learning sessions. All sites (IPCHS and non-IPCHS) received training in the WHO Safe Childbirth Checklist. The SCC serves as a reminder and job aid for providers to follow all the tasks in a quality delivery. Providers are encouraged to explain to women during their antenatal care visits, the importance of a delivery plan to prevent complications and the importance of giving birth at the health center. At the end of the training for providers and community actors, community plans were developed and implemented to support health centers' functionality and logistics. During the first learning session, the QI teams noticed an increase in the number of women seeking services at health centers for ANC and delivery from 538 to 682 women in the six-month period in five sites. With the implementation of IPCHS, health services were better organized and became more friendly to women coming to health center. QI teams initiated more frequent meetings with communities' representatives to inform and sensitize them on the greater organization of services, which increase the acceptance rate for 24-hour surveillance for women during the post-partum period.

Figure 4. Mali: Improvement of 24-hour surveillance after delivery for mothers and babies, 22 sites, Diéma District (Oct 2015 - Aug 2017)



As **Figure 5** shows, in the five sites where the IPCHS approach was implemented, using data collected by QI teams, we found a more pronounced reduction in the number of home births compared to the 17 sites in Diéma District where IPCHS was not implemented. We have also observed that at the facility level, adding the IPCHS approach in addition to QI led to emphasizing the importance of improving the interpersonal relationship between providers and patients.

Figure 5. Mali: Using IPCHS to reduce home births, 5 IPCHS sites vs. 17 non-IPCHS sites, Diéma District (Jan 2016 – Aug 2017)



F. Celebrating good practices resulting from the IPCHS approach

One of the important results of the project is how an engagement process involving women, the community, decision-makers, and providers led to initiatives to improve the quality of care that would have been unlikely to have developed otherwise. In this section, we examine four examples of good practices that have been reported as a result of this more people-centered approach. The improvements demonstrate the power of engagement in improving quality of care including: promoting the dignity and privacy of pregnant mothers during childbirth; overcoming gaps in care delivery; improving provider-patient relationships; reducing waiting times; and improving management of referrals according to client needs.

Good Practice 1: Investing in a New Maternity Ward to Promote Women's Dignity and Privacy

During a visit by the mayor to a CSCOM in 2013, the inadequate quality of the delivery room was observed in comparison to other treatment rooms, especially related to the lack of privacy for women giving birth. The mayor worked with the municipal council and the local community to mobilize action via the Plan of Social and Cultural Economic Development. Plans for the construction of a new maternity unit within the CSCOM were agreed in the 2014 plan and adopted by the municipal council. The building project began in the same year but difficulties in managing the site meant the new delivery room was put on hold.

Following the training on IPCHS, the problem of privacy as a key quality gap for the compliance with the standards of services of ANC was recognized, and the IPCHS action plan sought to accelerate the completion of the new maternity room at the center. A follow-up mechanism with the mayor's commitment was put in place. Following the first coaching visit, it was found that there was a delay in the provision of the new building for maternity, but also the failure to take account of the tiling of rooms and the absence

of a septic tank. The QI team, after a meeting, informed the ASACO who planned to dig the septic tank and make the tile. The other coaching visits made it possible to highlight the availability of the new room to women and the local community as an improved offer of services of ANC in enabling the privacy of patients.

Good Practice 2: Improved Screening for Anemia

In Mali, the prevention and treatment of iron deficiency is a major public health goal, especially in women and children. During the coaching visits the results of client interviews on satisfaction with services revealed a concern about the lack of hemoglobin testing during ANC, which negatively influenced the quality of services. This was discussed as a team, and the ASACO was informed to facilitate the acquisition of a hemocue device. Actions were immediately taken to find out about the supplier, estimate the cost of the equipment, mobilize funds, and send a training officer to the CSRef to explain how to use the device. Following this, the hemocue was purchased and made available in the center.

Between Nov 31, 2016 and Jan 31, 2017 some 60% (66/110) of women in Diéoura and 56% (166/297) in Fassoudébé seen in ANC were screened for anemia.

Photo credit: I Niambété

Good Practice 3: Improving Communication between Provider and Patient

The results from various coaching visits demonstrated that pregnant women were often experiencing difficulties in communication with providers. In taking this finding forward, the need for a good mutual understanding between provider and the patient was discussed with the ASACO who then took the initiative to meet as a board of directors and estimate the costs for retraining nursing assistants in midwifery to strengthen care teams and help communicate better with patients about their pregnancy. These new caregivers were sent for training over a 12-month period funded by ASACO. Improved patient-provider relationships have since been observed.

Good Practice 4: Reducing Waiting Times

Long waits at health centers for consultation and treatment have been a significant issue reported by women and local communities across the region. In one site, after a wide consultation between the providers to examine how to reduce waiting times, it was decided to allocate a day termed ‘fair for the consultation’ for the women of the village served by the CSCOM site (except in case of emergency). To facilitate this, awareness messages were developed and disseminated through community radio, so women users of the services were informed and sensitized to change. This has helped the provider to better schedule appointments and organize their care and help to reduce long waits for patients.

IV. COMPARATIVE EVALUATION

A. Objective

In addition to the data collected as part of implementation, a comparative evaluation was conducted. The evaluation sought to assess the impact of the implementation of the WHO Framework on integrated people-centred health services to MNCH using a QI approach (compared to the QI approach only) on patient satisfaction, and community, providers and decision makers’ perspectives. Findings are expected to contribute the learning regarding the implementation of WHO IPCHS Framework.

Specifically, this evaluation aimed to**:**

- Evaluate the impact of the approach on patient satisfaction;
- Determine the perspectives that community members have on the approach;
- Determine how providers perceive the approach;
- Determine the perception of decision-makers; and
- Identify the facilitating factors and barriers to the implementation of the pilot project.

The results of this evaluation were designed to be used to determine the impact of the patient-centered approach on quality of care using a comparison group and contribute to global understanding of the application of the patient-centered approach in the context of QI.

B. Methodology

1. Evaluation design

This evaluation was conducted in two districts of the Kayes region (Diéma and Yélimané). Data were collected from 10 sites (5 sites per district). These districts were chosen as implementation sites for the WHO Framework because of their maturity in terms of certain technical contents related to pregnancy and childbirth, their accessibility throughout the year, the existence of functional and committed community health associations, and the availability of staff for activities in the facilities.

This evaluation used a modified stepped wedge design with two phases. At the start of the study, the 5 intervention sites were facilities in the Diéma district implementing the WHO Framework on integrated people-centred health services to MNCH combined with ASSIST's QI approach. The control sites consisted of five facilities in the Yélimané district that were part of the ASSIST improvement collaborative only. Activities conducted in the intervention and control sites are listed in **Table 11**. During the second phase of the evaluation, the QI-only sites added the WHO Framework approach so that at the end of the study all sites were part of the intervention. This allowed the delivery of an intervention, thought to be beneficial, to all sites.

Table 11. Description of the comparative evaluation phases

	PHASE 1 January 2016-April 17		**PHASE 2 May2017 -August 2017**	
Components	**Diéma (Intervention)**	**Yélimané (Control)**	**Diéma (Intervention)**	**Yélimané (Intervention)**
Implementation of the WHO Framework on integrated people-centred health services	Yes	No	Yes	Yes
Integrated people-centered approach in training	Yes	No	Yes	Yes
Clinical training of providers	Yes	Yes	Yes	Yes
Quality improvement training	Yes	Yes	Yes	Yes
Quality improvement teams	Yes	Yes	Yes	Yes
Coaching visits	Yes	Yes	Yes	Yes
Learning sessions	Yes	Yes	Yes	Yes

2. Study population

The study population consists of:

- Pregnant women and those who gave birth during the data collection period at the study sites. These are all women users of ANC and delivery services at the sites during the implementation period of the approach.
- Community representatives
- Health providers who interact with patients
- Technical directors of the centers and district management teams.

3. Data collection

Facility-level data: Three rounds of data collection were conducted for all 10 sites.

1. First data collection (January 2016): Sites had not started implementing the intervention. Data was collected immediately before Diéma sites joined the intervention. However, trainings had started a few months prior to baseline data collection in Diéma (October-December 2015).
2. Second data collection, end of phase 1 (April 2017): Only Diéma sites were receiving the intervention. Data was collected at the end of phase 1 of the implementation immediately before the Yelimane sites joined the interventions. However, trainings had started in Yelimane in April 2017
3. Third data collection, end of phase 2 (August 208): Sites in Diéma and Yelimane were all receiving the intervention.

Data collection was undertaken by investigators recruited and trained on the tools by the project team. Data collection methods included:

- *Interviews with women in ANC and women who have delivered* (baseline, end of phase 1, end of phase 2).
- *Interviews with providers:* Professionals involved in ANC visits, childbirth, and postpartum care (baseline, end of phase 1, end of phase 2).
- *Interviews with decision-makers:* Technical directors of centers and/or maternity officers of each CSCOM as well as representatives of the management teams of the two districts (end of phase 2).
- *Focus groups discussions:* Focus groups with women in the community sought to determine people's perception of the approach and examine their relationship with the sites (at the end of phase 2).

C. Comparative evaluation findings

1. Characteristics of sample

Patients

Data were collected over three time periods. A total of 1,227 women were interviewed, including 512 women who gave birth and 712 women attending antenatal care services across the two districts. Overall, 635 women were interviewed in Diéma and 592 in Yélimané district (**Table 12**). Overall, the characteristics of women who gave birth were similar to those of women attending ANC (**Table 13** and **Table 14**).

Table 12. Number of interviewed women in the two districts

	Data Collection 1		Data Collection 2		Data Collection 3		Total		
	Gave birth	**ANC**	**Gave birth**	**ANC**	**Gave birth**	**ANC**	**Gave birth**	**ANC**	**Total**
Diéma	95	117	86	126	72	96	253	339	592
Yélimané	80	130	90	121	92	122	262	373	635
Total	175	247	176	247	164	218	515	712	**1227**

Women who gave birth: A total of 515 women who gave birth were interviewed. **Table 13** shows characteristics of women who gave birth for each data collection period. The mean age of these patients varied between 24.3 and 26.6 years old across districts and data collection periods. Nearly all women were married (96.3%-100%) and most women (50-63%) had at least 3 children. The majority of women interviewed (63.8% -77.9%) were not literate. The two districts did not differ in terms of patient characteristics such as marital status and number of children alive. However, women in Yélimané were slightly older than those in Diéma at baseline for the third data collection ($p<0.05$).

Table 13. Characteristics of women who gave birth interviewed in the two districts

	Data collection 1			Data collection 2			Data collection 3		
	Diéma	Yélimané	P value	Diéma	Yélimané	P value	Diéma	Yélimané	P value
Mean age (standard deviation)	24.7 (6.0)	26.6 (6.3)	0.046	24.3 (6.5)	24.8 (5.8)	0.593	25.3 (6.7)	25.6 (6.6)	0.001
Marital status Single Married Divorced Widowed	0 (0.0%) 95 (100%) 0 (0.0%) 0 (0.0%)	2 (2.5%) 77 (96.3%) 0 (0.0%) 1 (1.3%)	0.163	0 (0.0%) 86 (100%) 0 (0.0%) 0 (0.0%)	0 (0.0%) 90 (100%) 0 (0.0%) 0 (0.0%)	0.098	0 (0.0%) 72 (100%) 0 (0.0%) 0 (0.0%)	2 (2.2%) 90 (97.8%) 0 (0.0%) 0 (0.0%)	0.208
Education level Not Literate Literate	74 (77.9%) 5 (5.3%)	51 (63.8%) 12 (15.0%)	0.102	56 (65.1%) 14 (16.3%)	66 (73.3%) 10 (11.1%)	0.439	60 (83.3%) 2 (22.8%)	62 (67.4%) 4 (4.3%) 21 (22.8%)	0.122

	Data collection 1			Data collection 2			Data collection 3		
	Diéma	Yélimané	P value	Diéma	Yélimané	P value	Diéma	Yélimané	P value
Primary	15 (15.8%)	15 (18.8%)		16 (18.6%)	13 (14.4%)		10 (13.9%)	4 (4.3%)	
Secondary	1 (1.1%)	2 (2.5%)		0 (0.0%)	1 (1.1%)		0 (0.0%)	1 (1.1%)	
Superior	0 (0.0%)	0 (0.0%)		0 (0.0%)	0 (0.0%)		0 (0.0%)		
			0.066			0.223			0.682
Number of children Alive								13 (14.1%)	
None	5 (5.3%)	7 (8.8%)		8 (9.3%)	10 (11.1%)		9 (12.5%)	29 (31.5%)	
1-2	34 (35.8%)	17 (21.3%)		24 (27.9%)	35 (38.8%)		19 (26.4%)	50 (54.3%)	
3 and plus	48 (50.5%)	52 (65.0%)		54 (62.8%)	45 (50.0%)		44 (61.1%)	0 (0.0%)	
Missing	8 (8.4%)	4 (5.0%)		0 (0.0%)	0 (0.0%)		0 (0.0%)		

Women who attend ANC: Table 14 shows the characteristics of women attending ANC who were interviewed for each data collection period. The mean age of these patients varied between 22.9 and 26.0 years old. Most women were married (98.5 – 100%) and had 3 children or more (43.7-67.5%). The majority of interviewed women were not literate. The two districts did not differ in terms of patient characteristics such as marital status and education level. However, the two districts differed in terms of age and number of children (**Table 14**).

Table 14. Characteristics of ANC women in the two districts

	Data collection 1			Data collection 2			Data collection 3		
	Diéma	Yélimané	P value	Diéma	Yélimané	P value	Diéma	Yélimané	P value
Age mean (and standard deviation)	25.6 (6.058)	26.0 (6.450)	0.604	24.1 (6.365)	25.8 (6.359)	0.038	22.9 (6.008)	25.9 (6.672)	0.001
Marital status									
Single	0 (0.0%)	2 (1.5%)		1 (0.8%)	2 (1.7%)		3 (3.2%)	0 (0.0%)	
Married	117 (100%)	128 (98.5%)	0.499	124 (98.4%)	118 (97.5%)	0.492	92 (95.8%)	122 (100%)	0.075
Divorced	0 (0.0%)	0 (0.0%)		0 (0.0%)	1 (0.8%)		0 (0.0%)	0 (0.0%)	

	Data collection 1			Data collection 2			Data collection 3		
	Diéma	Yélimané	P value	Diéma	Yélimané	P value	Diéma	Yélimané	P value
Widowed	0 (0.0%)	0 (0.0%)		0 (0.0%)	0 (0.0%)		1 (1.0%)	0 (0.0%)	
	0 (0.0%)			1 (0.8%)	0 (0.0%)		0 (0.0%)	0 (0.0%)	
Education level									
Illiterate	95 (81.2%)	94 (72.3%)	0.433	81 (64.3%)	92 (76.0%)		69 (71.9%)	77 (63.1%)	
Literate	7 (6.0%)	10 (7.7%)		19 (15.1%)	13 (10.7%)	0.238	7 (7.3%)	13 (10.7%)	0.377
Primary	12 (10.3%)	22 (16.9%)		25 (19.8%)	15 (12.4%)		18 (18.8%)	25 (20.5%)	
Secondary	3 (2.6%)	3 (2.3%)		1 (0.8%)	1 (0.8%)		2 (2.1%)	7 (5.7%)	
Superior	0 (0.0%)	1 (0.8%)		0 (0.0%)	0 (0.0%)		0 (0.0%)	0 (0.0%)	
# Children alive									
0									
1-2	4 (3.4%)	26 (20.0%)	0.000	31 (24.6%)	24 (19.8%)	0.667	32 (33.3%)	26 (21.3%)	0.120
3 and plus	34 (29.1%)	31 (23.8%)		40 (31.7%)	41 (33.9%)		28 (29.2%)	38 (31.1%)	
	79 (67.5%)	72 (55.4%)		55 (43.7%)	56 (46.3%)		36 (37.5%)	58 (47.5%)	

Providers

A total of 108 providers were interviewed in the two districts; 64 in Diéma and 44 in Yélimané (**Table 15**).

Table 15. Number of providers interviewed in the two districts

	Data collection 1	**Data collection 2**	**Data collection 3**	**Total**
Diéma	14	15	35	64
Yélimané	10	6	28	44
Total	24	21	63	108

Table 16 shows the characteristics of providers interviewed in the three districts for each data collection period. Most providers were women. Most providers were matrons, nurses, or doctors and managed facility staff. Most had experience of managing workers in the facilities and had been working at the facility for a least 3 years.

Table 16. Characteristics of providers interviewed in the intervention and control districts

	Collection 1			Collection 2			Collection 3		
	Diéma	Yélimané	P value	Diéma	Yélimané	P value	Diéma	Yélimané	P value
Age (mean and standard deviation	35.2 8.350	32.0 5.715	0.305	32.6 7.395	31.0 5.797	0.012	34.1 7725	31.4 5847	0.130
Sex Men women	4 (28.6%) 10 (71.4%)	3(30.0%) 7 (70.0%)	0.939	5 (33.3%) 10 (66.7%)	4 (66.7%) 2 (33.3%)	0.163	13 (37.1%) 22 (62.9%)	10 (35.7%) 18 (64.3%)	0.150
Time at health center Less 1 year 1-2 years 3-5 years 6-10 years >10 years	1 (7.1%) 1 (7.1%) 4 (28.6%) 5 (35.7%) 3 (21.4%)	3 (30.0%) 0 (0.0%) 4 (40.0%) 3 (30.0%) 0 (0.0%)	0.290	2 (13.3%0 3 (20.0%) 2 (13.3%) 6 (40.0%) 2 (13.3%)	2 (33.3%) 0 (0.0%) 3 (50.0%) 1 (16.7%) 0 (0.0%)	0.198	3 (8.6%) 5 (14.3%) 7 (20.0%) 14 (40.0%) 6 (17.1%)	5 (17.9%) 3 (10.7%) 12 (42.9%) 6 (21.4%) 2 (7.1%)	0.329
Manage staff	10 (71.4%)	7 (70.0%)	0.939	12 (80.0%)	6 (100%)	0.237	28 (80.0%)	24 (85.7%)	0.75

Decision-makers

A total of 104 decision-makers were interviewed in the two districts across the 3 data collection periods; 58 in Diéma and 46 in Yélimané (**Table 17**).

Table 17. Number of decision-makers interviewed in the two districts

	Data collection 1	Data collection 2	Data collection 3	Total
Diéma	14	12	32	58
Yélimané	10	6	30	46
Total	24	18	62	104

Table 18 shows the characteristics of decision-makers interviewed. Most decision-makers were men (75 to 93%). Managers interviewed included ASACO members (community organization that manages facilities), district health management team members, and mayors.

Table 18. Characteristics of decision-makers interviewed in the two districts

Characteristics	Data collection 1			Data collection 2			Data collection 3		
	Diéma	Yélimané	P value	Diéma	Yélimané	P value	Diéma	Yélimané	P value
Age (mean and standard deviation	47.7 8.908	46.7 8.945	0.779	48.0 12.158	57.1 6.047	0.104	47.3 9577	51.2 9770	0.123
Sexual status Men women	11 (78.6%) 3 (21.4%)	9 (90.0%) 1 (10.0%)	0.459	9 (75.0%) 3 (25.0%)	6 (100%) 0 (0.0%)	0.180	24 (75%) 8 (25%)	28 (93.3%) 2 (6.7%)	0.051
Type of manager 1. Mayor 2. ASACO 3.DHMT 4. Other	1 (7.1%) 8 (57.1%) 2 (14.3%) 3 (21.4%)	5 (50.0%) 3 (30.0%) 2 (20.0%) 0 (0.0%)	0.058	3 (27.3%) 5 (45.5%) 2 (18.2%) 1 (9.1%)	2 (33.3%) 4 (66.7%) 0 (0.0%) 0 (0.0%)	0.569	6 (19.4%) 16 (51.6%) 5 (16.1%) 4 (12.9%)	11 (36.7%) 15 (50.0%) 4 (13.3%) 0 (0.0%)	0.303

2. Changes in IPCHS measures

Patient interviews

Respectful care: At baseline, the percentage of women who reported that they were treated with respect at all times during care was higher in Diéma than Yélimané among women who delivered as well as women in ANC (85.3% versus 77.5% and 82.1% versus 73.8%, respectively). During the second round of data collection, although only sites in Diéma had joined the intervention, the percentage of women who reported being treated with respected increased in both districts for both women who delivered (100% versus 98.9%) as well as those in ANC (100% versus 98.0%). Following the implementation of the intervention in Yélimané, the percentage did not change among delivery women and increased slightly among ANC women (98.8% to 100%) while it decreased among women in Diéma (from 100% to 94.4% among women who delivered and from 100% to 95.5% among ANC women). By third data collection, there was nearly no difference between the two districts for both women who delivered and women receiving ANC (**Figures 6** and **7**).

Figure 6. Percentage of women who reported being treated with respect (delivery)

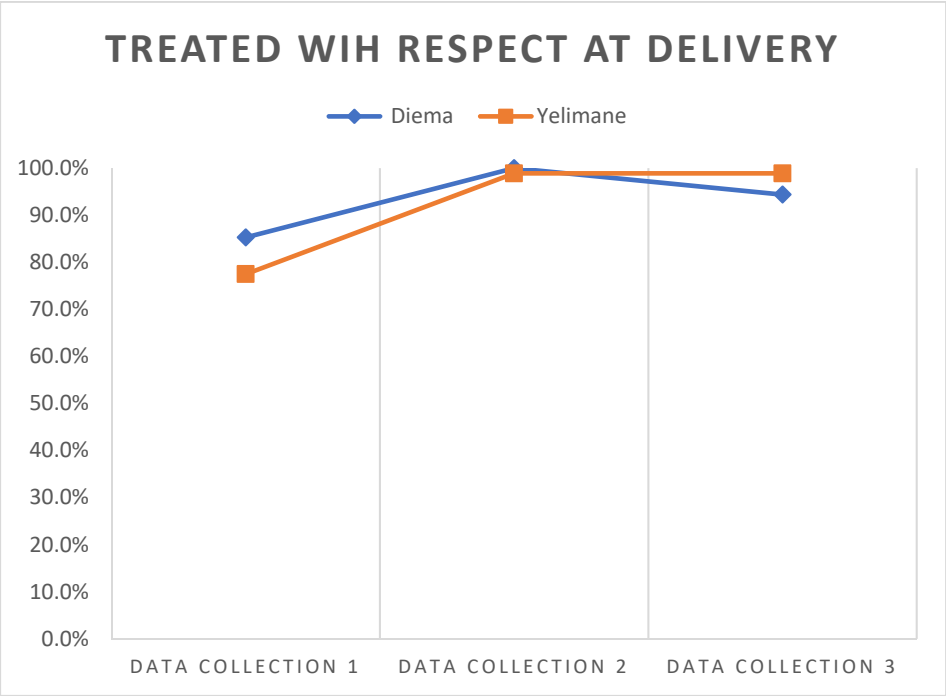
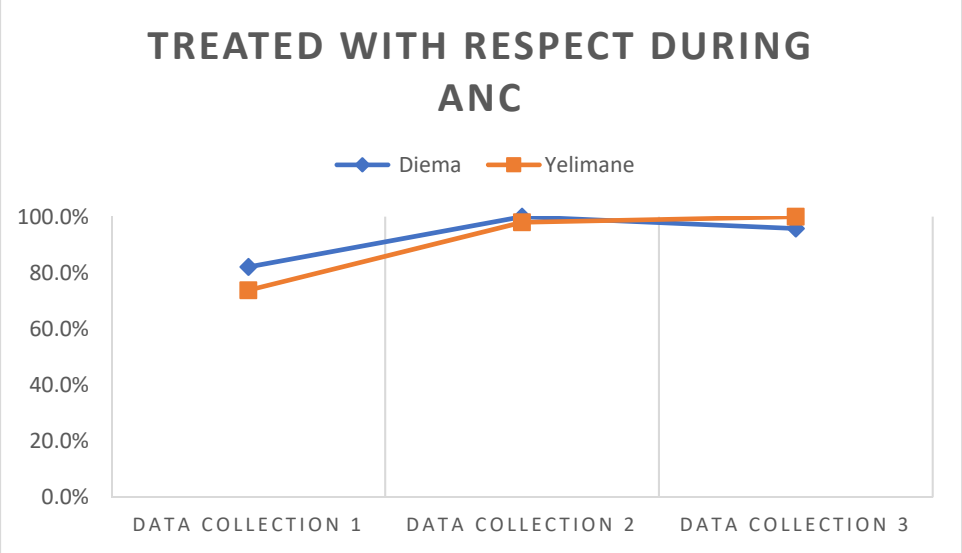


Figure 7. Percentage of women who reported being treated with respect (ANC)



Satisfaction with services: Satisfaction with care received was very high at baseline in Diéma (100% among women who delivered at 97.0% among ANC women). Surprisingly, satisfaction decreased slightly in Diéma but increased notably in Yélimané by the second data collection despite the fact that only Diéma sites had joined the intervention (100% to 97.7% versus 61.9% to 96.7% for women who delivered and 97.0% to 96.7% versus 74.8% to 94% for ANC women). By the third data collection, satisfaction had declined slightly in both groups and satisfaction was higher in Yélimané than Diéma for ANC women (**Figures 8** and **9**).

Figure 8. Satisfaction with care received (delivery)

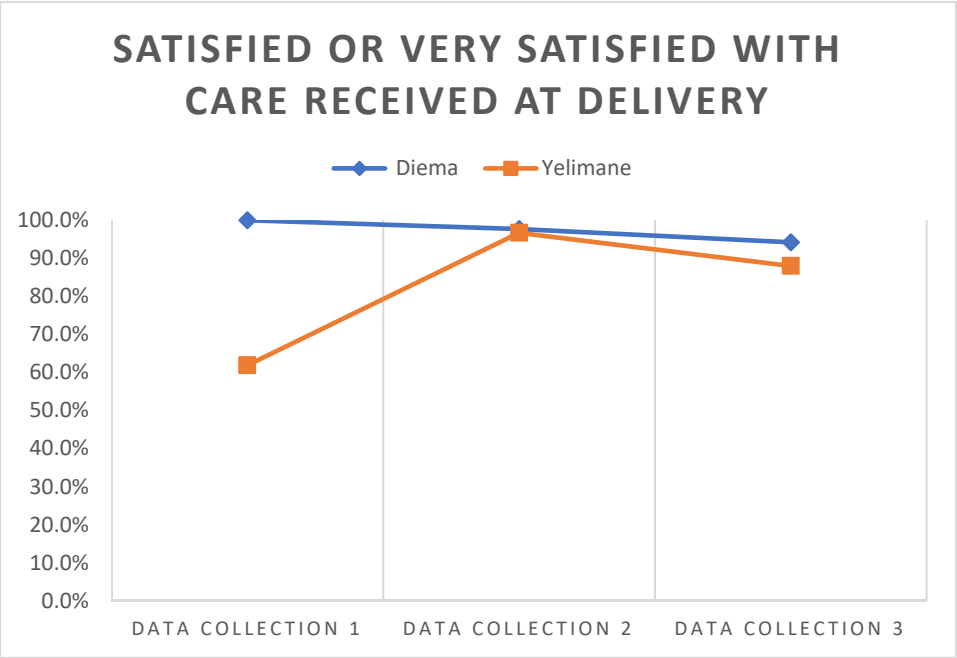
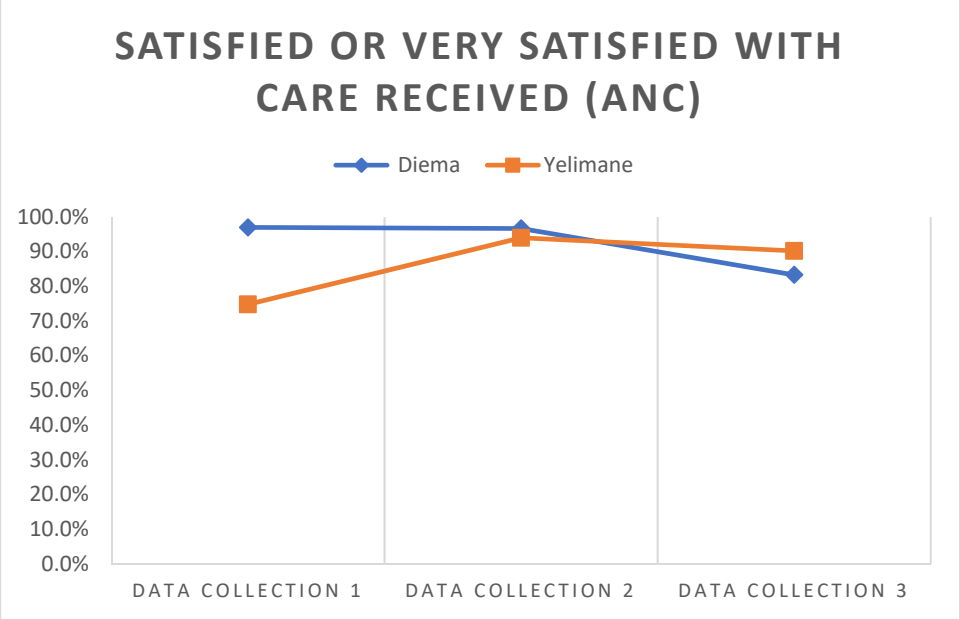


Figure 9. Satisfaction with care received (ANC)



Waiting time: The percentage of patients who reported that waiting time was not too long was higher in Diéma than Yélimané (**Figures 10** and **11**). However, during the second data collection point, while only Diéma had joined the intervention, the percentage of patients who reported that the waiting time was not too long was higher in Yélimané, the control group, than in Diéma, the intervention group. By the third data collection point, this measure remained unchanged in Diéma but decreased in Yélimané which had now joined the intervention. There was nearly no difference between the two districts by the third data collection point.

Figure 10. Percentage of patients who reported that waiting time was not long (ANC)

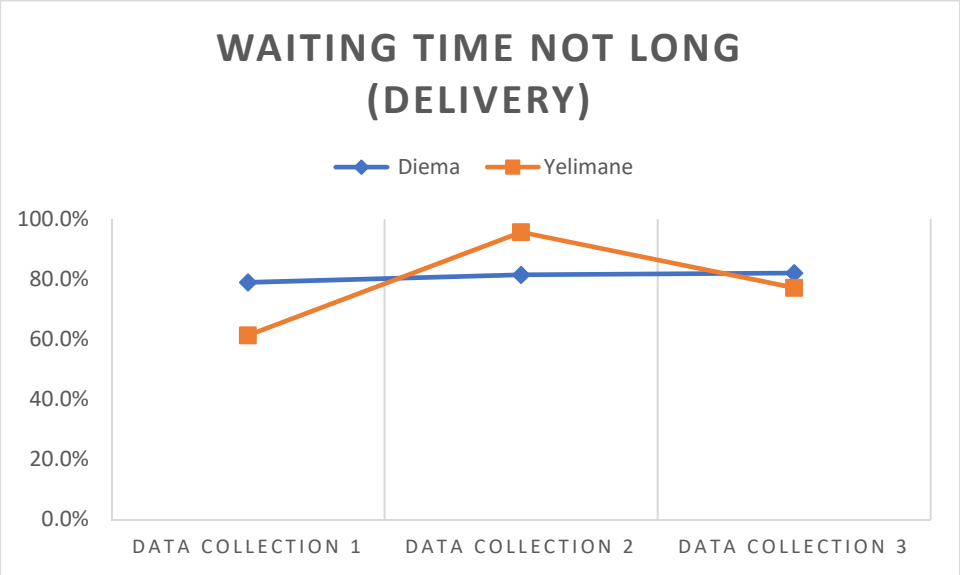
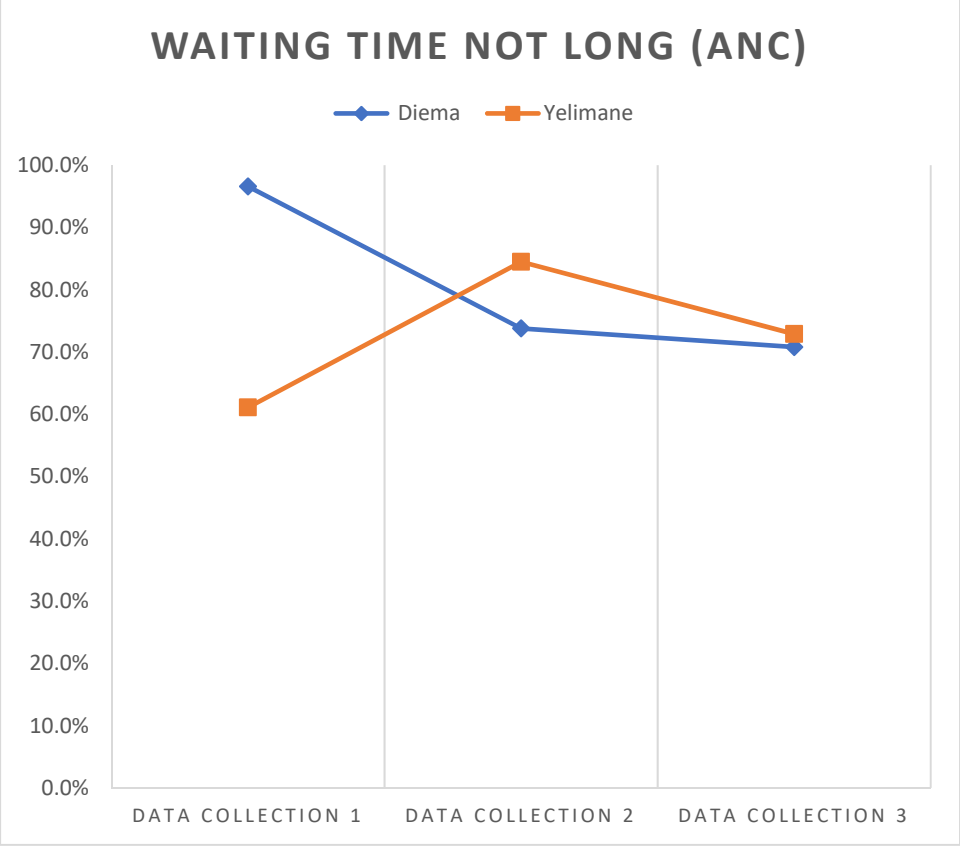


Figure 11. Percentage of patients who reported that waiting time was not long (ANC)



3. Focus group discussion with women in the community

Focus group discussions were organized with women in the community to shed more light on their experiences during ANC and delivery and their perceptions of the care received in facilities where the intervention was implemented.

Respectful care: As illustrated by the quotes below, women in both districts felt that they were now treated with respect at the health facilities.

> *"They respect us a lot… even more than our husbands… we do not even want to leave the health center," Woman, Diéma*

> *"Before, some providers used to yell at us to explain things to us. Now it is so much better that we even exchange phone numbers," Woman, Yélimané*

Involvement in care: Women were asked to what extent they were involved in their care. Responses varied. Some women reported that their involvement was welcomed by providers while others reported negative reactions from providers.

> *"I went to the health center the other day to tell them that the medicine I was taking was making me vomit…they changed it and gave me a syrup instead," Woman, Diéma*

> *"... when we show our choice when it comes to medicine, get receive unpleasant reaction from health providers," Woman, Yélimané*

Relationship with providers: Focus groups participants in both districts reported that overall people in the community trust providers at the health facilities. Women in the community even described their relationship with providers as a good relation that is a times "sisterly" or 'brotherly". One women reported:

> *"I saw once a patient who could not take her medicine without eating so the provider gave her food," Woman, Yélimané*

Another woman stated:

> *"Once a provider lent me his/her gas cannister so I could cook for my child," Woman, Yélimané*

Areas for improvement: When asked what could be improved, most responses focused on making medicine and equipment more readily available and increasing space at the facilities. Additionally, women stated that the reception given to patients and waiting time could be improved

4. Providers

Changes in measures: There was little change over time in terms of measures such as providers' ability to discuss concerns openly and the percentage of providers who believed that patients' needs were met at their sites since these measures were already very high as baseline in both groups. Although there was a slight decline in this measure, they remained above 90% at the end of phase 2 (**Figures 12** and **13**).

Figure 12. Providers' ability to discuss concerns openly

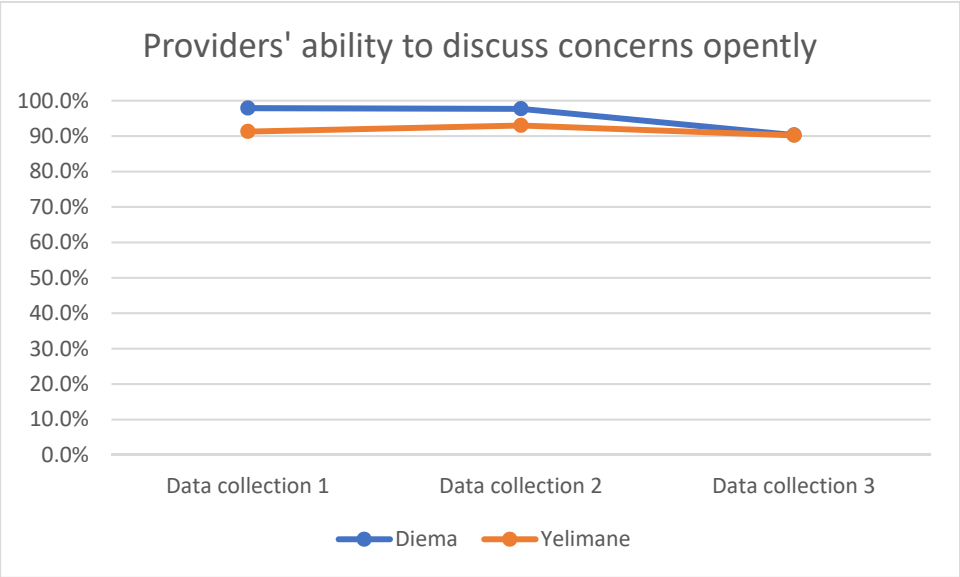
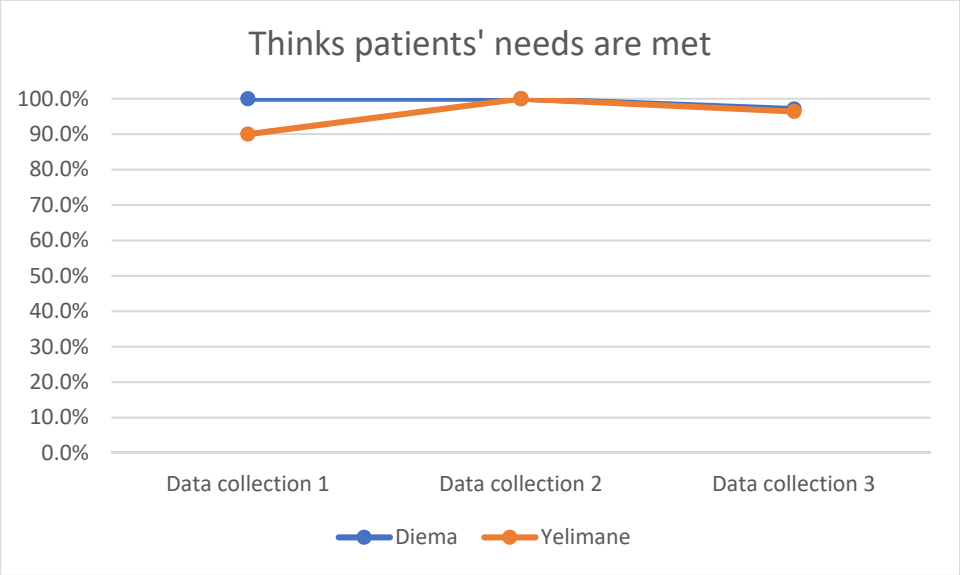


Figure 13. Percentage of providers who think their patients' needs are met



Facilitators of and barriers to the IPCHS approach: At the end of phase 2, providers were asked what the main facilitators of the implementation of IPCHS approach were. Good collaboration with the community, competence of the personnel were the most frequently listed factors (**Table 19**). Barriers to the implementation of IPCHS reported by providers are listed in **Table 20**. Overall, providers reported financial and material barriers as well as issues related to communications. Providers listed suggestions to improve the implementation of the IPCHS approach in **Table 21**; these focused on procuring more material, accelerating the construction of new buildings, and recruiting more personnel.

Table 19. Main facilitators to the implementation of IPCHS listed by providers by district

	Diéma	Yélimané
Good reception at facilities	12	2
Good collaboration with the community	3	4
Competent personnel	3	2
Availability of personnel and material	5	8

Table 20. Main barriers to the implementation of IPCHS listed by providers by district

	Diéma	Yélimané
Insufficient equipment	2	
No financial incentive for the personnel		2
No source of water	4	
Poorly trained ASACO members		1
Lack of spaces	5	1
Weak attendance	2	5
Insufficient personnel	1	
Communication difficulties		1

Table 21. Providers' suggestions to improve the implementation of the IPCHS approach

	Diéma	Yélimané
Accelerate construction of new buildings	3	2
Increase supervision	2	1
Procure missing material	4	2
Continuous training of personnel	2	1
Recruit more personnel	2	3
Reinforce mobilization	2	2

5. Decision-makers

Decision-makers reported that the main facilitators of the IPCHS approach in their districts included a good collaboration between providers and the community, a good ASACO, and qualified personnel (**Table 22**). Decision-makers' suggestions to improve the implementation of the approach are listed in **Table 23**. Decision-makers also listed material and financial improvements as ways to improve implementation of the IPCHS approach.

Table 22. Main facilitators to the implementation of IPCHS listed by providers by decision-makers

	Diéma	Yélimané
Good collaboration between providers and community	6	2
Performant ASACO	1	0
Qualified personnel	1	0
Availability of medicines	1	3

Table 23. Decision-makers' suggestions to improve the implementation of the IPCHS approach

	Diéma	Yélimané
Improve work conditions of providers	2	
Ensure regular follow-up from the ASACO	1	
Have enough material and equipment for facilities	2	3
Support salary of some personnel	1	
Rehabilitate heath facilities	2	1

D. Summary of comparative evaluation

The comparative evaluation showed that overall measures of IPCHS were higher in Diéma than Yelima at the first data collection. At this stage, no sites had participated in learning sessions or received coaching, but the district had started receiving trainings 1 to 4 months prior to data collection. It is therefore possible that these trainings may have had an impact on IPCHS measures in Diéma prior to the first data collection. In addition, overall these measurers increased for Yelimane to a greater extent than for Diéma by the second data collection. Although Yelimane sites had not yet received coaching visits or participated in learning sessions, providers from that district had started receiving trainings the month prior to the second data collection. By the third data collection, overall, measures appeared to decrease slightly with no notable differences between the two districts. Findings from focus group discussions with women in the community following the implementation of the IPCHS approach revealed that overall women felt respected by health providers and had a good and at times close relationship with them. Both providers and decision-makers reported that one of the main facilitators to the implementation of the IPCHS approach was a good relationship between providers and the community. They listed material and financial limitations as the main barriers to the effective implementation of the approach.

While qualitative interviewers revealed the benefit of the IPCHS approach, quantitative results from the comparative valuation do not show a clear impact of the IPCHS intervention compared to quality improvement alone. Several factors could explain this:

- Several key measures were already high at a baseline, leaving little room for improvement over time.
- An important limitation of this study is that data collection was conducted after some trainings had been implemented in the Diéma district, and the second data collection was conducted after providers' trainings had started in Yelimane. This is likely to have diluted findings as these trainings may have had an impact on the measures assessed.
- In addition, health facilities in Diéma have been implementing QI activities to improve maternal and newborn health since 2010 while those in Yelimane began implementing improvement some time after that. While these sites may not have been exposed to the IPCHS approach directly in

the past, these sites may therefore be more prone to improving than sites who have not been implementing QI approaches. This may have further contributed to diluting the effect of the IPCHS approach comparing the two districts.

V. CONCLUSIONS, RECOMMENDATIONS AND WAY FORWARD

This report has sought to provide an overarching narrative on the implementation and subsequent impact of the promotion of IPCHS in MNCH care in five sites of Diéma District in Mali.

A. Meeting its objectives

The first key objective of the pilot was to build capacity in the community to participate in the management of their own health issues. Through the work of coaches to facilitate discussions over the course of the project, communication and engagement between providers, ASACO members, and community actors has advanced. This is witnessed by the development of co-produced action plans following the initial learning sessions and feedback from local stakeholders of improved communication and relationships.

However, it may be observed that this has required the leadership and support from the coaches and other managers locally to drive forward change. Feedback from the coaching sessions demonstrated that it was the coaches who most often initiated strategies and/or sought to take processes forward with providers and the local community. Without such agents for change working continuously with the sites over time, it is probably less likely that progress would have been made against the original action plans.

The second key objective was to empower communities with knowledge and confidence in managing their health status. There is less direct evidence for this, though feedback from the learning sessions suggests that awareness and understanding has been enhanced. There is also evidence in some sites of greater community involvement in supporting local providers in the delivery of care and in finding funding to support investments in buildings, medicines, and equipment.

Despite this, providers commonly complained that many patients did not understand or appreciate the reasons for waits and/or did not adhere to scheduled visits. Moreover, many providers reported that women who really needed to come to the clinic (e.g., anemics) either did not understand the importance of this and/or were put off by factors such as geography, cost, or pressure from husbands. However, knowledge and confidence does seem to have improved, often as a result of engaging community groups in activities, including with women's groups.

The third key objective was to enable participation in decision-making with health providers so patients can shape decisions. The results from the patient surveys and observational studies suggest that there remain variations in the extent to which this is effective even if overall attainment appears high. Importantly, after attending the IPCHS training, all providers agreed that shared decision-making was important and legitimate.

The final objective was to promote greater independence within the community and households that support positive changes in health outcomes. Within the scope and timeframe of the study it was not possible to demonstrate such impacts objectively, although some indicators, such as rates of patient satisfaction, improved. Indeed, given the feedback from patients, future iterations of the project might seek to create 'stretch' targets as the pre-existing perceived value of MNCH care at the centers appears to have been high.

B. Developing people-centered care

The pilot also sought to examine whether health providers were being responsive to the needs and preferences of patients' holistic needs and to what extent patients and communities gained the support they needed to participate in the management of their own care. A key part of this was to evaluate patient

satisfaction, since one of the key concerns at the outset of the project was the impression that mothers and husbands were often reluctant to travel to use care facilities. Patient satisfaction with providers (other than waiting times) was reported by patients interviewed by coaches to be good.

However, mapping the activities of the five sites against the key aspects of IPCHS suggests that the focus has been primarily on strengthening the provision of primary care through investments in premises, equipment, and medicines. In one sense, this does represent IPCHS' ideals, since these decisions to improve quality came from a facilitated discussion between providers and community actors.

However, this focus suggests that less emphasis has been placed on the core aspects of IPCHS such as strategies for engaging and empowering women in their own care. This bias is clear within all the action plans, and the feedback from the surveys and learning sessions suggests that work remains to be done to develop an effective dialogue between providers and patients, to enable shared decision-making on their therapeutic needs and otherwise provide them with the understanding and skills to self-care. However, such bias is also understandable given the clear need for investments in infrastructure and essential supplies. However, it does suggest a clear need to emphasize person-centeredness in future IPCHS interventions.

C. Sustainability

A key focus of the pilot project was to promote longer term sustainability. By involving key departments working on health programs at regional and district level, the pilot has succeeded somewhat in building awareness of IPCHS and in enabling support for change amongst providers, ASACO members, and community actors. There is some evidence across the five sites of improved and deeper levels of communication and joint working to develop action plans and find solutions together. However, it is clear that key elements of coaching will be required into the future to support the five sites and other facilities to provide the essential 'process leadership' required to enable change to happen.

D. The importance of using improvement methods

Throughout the pilot project the feedback from providers, ASACO members, community actors, and others suggests that coaching support and facilitation skills have been largely welcomed and seen as an important catalyst for change. Moreover, the ability to have rapid cycles of change through regular coaching sessions has enabled certain agreed actions to be maintained when they may have lagged behind. It can be argued, then, that the kinds of improvements and investments observed during the pilot period would never have happened (or happened as quickly) without support in the management of change. Hence, given there is the ambition to expand the approach to other health districts, this presents challenges through the implication that some form of long-term QI program will be required to support adoption and implementation over time. The training of trainers and the coaching sessions within this project suggests that it is possible to develop those skills and capacities locally, but such training is likely to require both time and money.

E. Comparative evaluation

The qualitive component of the comparative evaluation provided evidence for the added value of the IPCHS approach when combined with QI. While the quantitative component of the comparative evaluation did not provide clear evidence of the impact of the IPCHS approach combined with QI (compared to QI only), this is likely due to several limitations of the study design.

F. Conclusion

The pilot program has demonstrated that much can be achieved through the use of improvement methodologies that engage providers with decision-makers and the local community in an effort to co-

produce plans and work more collaboratively together to see them succeed. Indeed, since one of the core tenets of the IPCHS framework is to encourage community engagement and involvement, then the project contributes to international learning in how improvements in MNCH might be implemented in other contexts and settings.

The pilot in Diéma District has also demonstrated that all stakeholders, including providers, recognize the legitimacy and importance of person-centered care for improving care quality and experiences when this is explained and presented to them.

Looking through the 'lens' of a people-centered approach to the benefit of pregnant mothers, their families and to local communities appears to engender understanding and support. Seemingly, this suggests the potential for a more aware and engaged community and a new type of relationship between patients and their care providers that are more sensitive to their holistic needs.

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