



## TECHNICAL REPORT

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# Partnership for HIV-Free Survival Community Demonstration Project in Gaza, Mozambique

MAY 2015

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This report was prepared by University Research Co., LLC (URC) for review by the United States Agency for International Development (USAID) and authored by Kim Stover, Isac Tsambe, Amy Stern, and Ram Shrestha of URC. The community demonstration project in Gaza Province, Mozambique was implemented under the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project, which is made possible by the generous support of the American people through USAID, with funding from the U.S. President's Emergency Plan for AIDS Relief (PEPFAR).



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DISCLAIMER

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For more information on the work of the USAID ASSIST Project, please visit [www.usaidassist.org](http://www.usaidassist.org) or write [assist-info@urc-chs.com](mailto:assist-info@urc-chs.com).

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## TABLE OF CONTENTS

List of Table and Figures.....	i
Acronyms .....	ii
EXECUTIVE SUMMARY .....	iii
I. INTRODUCTION .....	1
A. Community Health Systems Strengthening Model .....	1
B. Baseline Situation .....	2
II. ORGANIZING THE COMMUNITY HEALTH SYSTEM .....	2
A. Overview of Activities.....	2
B. Lessons Learned on Organizing the Community System .....	4
C. Improving Care for Pregnant Women .....	6
D. Community Voices .....	8
III. RESULTS .....	9
A. Licilo Health Center.....	9
B. Chissano Health Center.....	12
C. Incaia Health Center .....	13
IV. DISCUSSION.....	14
V. RECOMMENDATIONS.....	15

### List of Table and Figures

Table 1. Primary indicators followed by the PHFS community teams in Gaza Province.....	10
Figure 1. Number of pregnant women identified by all community groups, Licilo Health Center .....	10
Figure 2. Percent of community-identified pregnant women who received first ANC in the same month, Licilo Health Center (15 <i>bairros</i> ) .....	11
Figure 3. Pregnant women attending first ANC by weeks of gestation, Licilo Health Center.....	12
Figure 4. Number of pregnant women identified by community groups per month, Chissano Health Center (11 <i>bairros</i> ).....	12
Figure 5. Percent of community-identified pregnant women who received first ANC in the same month, Chissano Health Center (11 <i>bairros</i> ) .....	13
Figure 6. Number of pregnant women identified by all community groups, Incaia Health Center (13 <i>bairros</i> ) .....	14
Figure 7. Percent of community-identified pregnant women who received ANC in the same month, Incaia Health Center (13 <i>bairros</i> ).....	14

## **Acronyms**

ANC	Antenatal care
ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
EMTCT	Elimination of mother-to-child transmission
IP	Implementing partner
MOH	Ministry of Health
OMM	Organization of Mozambican Women
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PHFS	Partnership for HIV-Free Survival
PLHIV	People living with HIV/AIDS
PNC	Postnatal care
QI	Quality improvement
URC	University Research Co., LLC
USAID	United States Agency for International Development

# EXECUTIVE SUMMARY

## Introduction

Beginning in late 2013, the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project began to provide technical support for community-level improvement of elimination of mother-to-child transmission (EMTCT) services to the Ministry of Health of Mozambique as part of the PEPFAR-funded Partnership for HIV-Free Survival (PHFS). The project took place in Bilene District in Gaza, Province in three health centers (Licilo, Chissano and Incaia) and their associated catchment areas which included 15, 11 and 13 *bairros* (communities) respectively. The goal of the PHFS Community Demonstration Project was to contribute to EMTCT through increased community awareness, improved community-facility linkages, and increased access to services for pregnant women.

The project focused on increasing the number of pregnant women identified by the community who sought antenatal care (ANC) at the health center and who were tested for HIV. These improvement aims were not comprehensive of all necessary EMTCT activities, but were the first critical steps in getting pregnant women connected to and comfortable with facility-level care as early as possible. The demonstration project employed the *community health system strengthening* model to improve the quality of PHFS services at the community level. In the Community Health System Strengthening model, the improvement intervention is managed by representatives from each community group, representatives from the facilities, and delegates from the local government, who all come together to serve as the community improvement team for the purposes of identifying local health gaps and participate in developing and testing strategies to overcome those gaps.

## Organizing a community system

Following a situational analysis, USAID ASSIST conducted an initial training in February 2014 on improvement and the community health system strengthening model for coaches and selected community members in Gaza Province. Following the training, these community members began recruiting community groups interested in participating by dedicating a short time in each meeting to health issues. In each of the 39 *bairros*, *bairro* committees were formed of community group representatives whose responsibility it was to support *activistas* (community health workers) in their work, pass on health messages from the health center to the household level, collect data, follow up with clients, and discuss strategies for improving care. USAID ASSIST provided technical support to these communities in organizing themselves through coaching visits monthly or even more frequently. A coordinating committee, called a Health Committee, was set up at each health center and included the nurse coach, *activistas*, and representatives from all of the catchment *bairro* quality improvement (QI) teams. In addition to regular technical support during the *bairro* committee and Health Committee meetings, USAID ASSIST worked with district leaders and nurse coaches to conduct learning sessions in May 2014 and August 2014. In March 2015, USAID held a harvest meeting with the nurse coaches, district leaders, and one representative from each *bairro* committee. The purpose of this meeting was to gather learning on organizing a community system and best approaches to supporting pregnant women.

The primary change that took place in each of these communities was the design of a new system for information and data exchange between existing community groups and the health facility through the coordinated activities of the *bairro* committees and the Health Committee. Since the nurses at the health center were unable to travel to each *bairro* due to workload, the meetings of the Health Committee provided a forum through which to review the pregnant women identified in each community, compare the list of identified women with those who went to the health center for ANC, and discuss strategies to encourage pregnant women to come to ANC. The Health Committee also served as the mechanism for the nurse to share critical health messages for community members. The nurse at each health center, district staff, and ASSIST staff provided training on key health messages around the importance of ANC

for pregnant women and treatment for HIV-positive pregnant women to prevent transmission to their children. Health Committee members brought this information to *bairro* committee members who in turn brought it to their respective community group members and their families.

Each community group agreed to set aside time during their regular meetings to discuss health issues. The community groups gathered the names of their family and neighbors who were pregnant and brought that information to the *bairro* committee, which subsequently passed it to the Health Committee and nurse. The nurse would determine which of these pregnant women had and had not been to ANC and would discuss with the Health Committee members the gaps and strategies for encouraging women to come to the facility. Health Committee members would share this information back down the chain, and *bairro* committees would determine strategies to encourage women to go to ANC. They found that one of the most effective strategies was targeting messages to mothers-in-law, since many of the men were working in mines in South Africa. They also used different strategies for following up with women who did not attend ANC based on the particular family, including asking the *activista*, religious leaders, community leaders, or other community group members to meet with her.

## Results

The results from the three health centers were mixed. In Licilo, 95 community groups identified 896 women between March 2014 and February 2015. They increased the percent of community-identified pregnant women receiving ANC in the same month from 36% in March 2014 to 97% in February 2015. Additional data collection in Licilo Health Center revealed that they also increased the percentage of women coming to ANC earlier in their pregnancy. In August 2013, 54% of woman came for first ANC between 10-20 weeks gestation, 17% between 21-30 weeks, and 29% between 31-40 weeks. By August 2014, this had shifted to 73% between 10-20 weeks, 27% between 21-30, and none after 31 weeks. Chissano identified 715 pregnant women between June 2014 and February 2015, but the increase in pregnant women attending ANC overwhelmed the health center. The percent of identified pregnant women receiving ANC in the same month fell from 87% in July 2014 to 57% in February 2015. In Incaia, 77 community groups identified 409 pregnant women between June 2014 and February 2015. Inconsistent data made a baseline determination difficult, but they ended in February 2015 with 99% of identified women receiving ANC in the same month. All three sites had consistently high rates of HIV testing and getting women found to be HIV-positive on treatment.

## Discussion and Recommendations

The community health system strengthening model was adapted successfully to the Mozambique context, eventually creating excitement in community groups around helping support the work of health facility staff and *activistas* and resulted in more pregnant women being connected with care earlier in pregnancy. Setting up a clear process for information exchange and a two-way feedback loop through the *bairro* and Health committees were essential to understanding the actual situation in the community and potential ways that barriers could be overcome. While it is difficult to predict the sustainability of these efforts, the ease with which pre-existing community groups were able to incorporate the improvement approach and health issues into their ongoing meetings suggests the groundwork for a sustained approach. The experience of Chissano health center points to the importance of linking community-level demand generation with facility-level improvement work to accommodate the demand.

This project focused on making the initial connection between pregnant women and the health facility so that women would be tested for HIV and put on treatment. The next step once women are connected with antenatal services is to focus on retention of HIV-positive mother-baby pairs in the postnatal period, exclusive breastfeeding, and testing for HIV-exposed infants. The experience of the PHFS community demonstration project in Gaza, Mozambique has shown that the community health systems strengthening model can be applied successfully to improve care for pregnant women as a first step in eliminating mother-to-child transmission and strengthening links between health facilities and communities.

# I. INTRODUCTION

Beginning in late 2013, the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project began to provide technical support for community-level improvement of elimination of mother-to-child transmission (EMTCT) services to the Ministry of Health of Mozambique as part of the PEPFAR-funded Partnership for HIV-Free Survival (PHFS). The project took place in Bilene District in Gaza, Province, which was chosen as a priority due to its high rate of HIV prevalence and low coverage of EMTCT services. The activities focused around three health centers (Licilo, Chissano and Incaia) and their associated catchment areas which included 15, 11 and 13 *bairros* (communities) respectively.

The goal of the PHFS community demonstration project was to contribute to EMTCT through increased community awareness, improved community-facility linkages, and increased access to services for pregnant women. The specific improvement aims for this project were to:

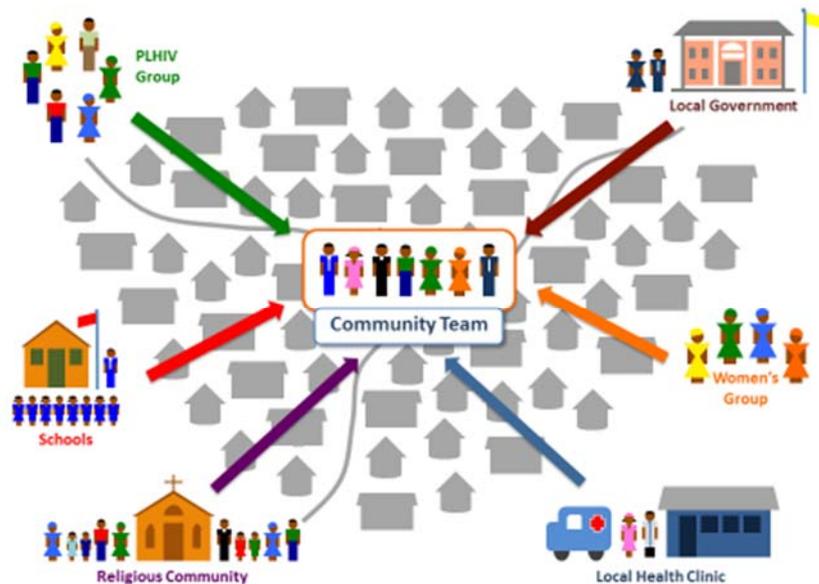
- Increase the number of pregnant women identified by the community;
- Increase the percent of women who were accessing antenatal care (ANC) services;
- Increase the percent of pregnant women tested for HIV; and
- Increase the percent of HIV-positive pregnant women who are put on treatment.

These improvement aims were not comprehensive of all necessary EMTCT activities, but were the first critical steps in getting pregnant women connected to and comfortable with facility-level care as early as possible. Given limited funding and 13-month timeframe for implementation, these were realistic initial aims. The community plays a critical role in influencing care seeking behavior. Before ongoing improvement efforts can take place, however, a system for regular communication and data exchange and review with the facility must be established. The demonstration project employed the Community Health System Strengthening model to improve the quality of PHFS services at the community level (see below).

This report is a comprehensive account of the activities and results of the USAID ASSIST PHFS activities in Gaza Province. The information in this report has been compiled from project quarterly and annual reports, discussions and interviews with *bairro* committee members, Health Committee members, health center nurses, district managers, and the USAID ASSIST Community Advisor.

## A. Community Health Systems Strengthening Model

Communities in low-resource settings possess their own informal indigenous community support and social welfare systems where community members make decisions and work together to improve the health of community members and the general welfare of the community. This system may consist of existing community groups, such as the village government, schools, religious groups, agricultural groups, groups of persons living with HIV, etc.



In the Community Health System Strengthening model, the improvement intervention is managed by representatives from each community group, representatives from the facilities, and delegates from the local government, who all come together to serve as the community improvement team for the purposes of identifying local health gaps and developing and testing strategies to overcome those gaps.

The community improvement team applies improvement principles to strengthen the performance of the community health system by identifying and strengthening the processes by which participating groups and structures function and interact with each other to provide integrated, seamless care. When all elements of the community health system are harmonized and functioning well and coordinated with the efforts of community health workers, health services become more accessible to community members, and accurate information exchange between health facilities and households occurs more rapidly and effectively. Section II below, Organizing the community health system, outlines how this approach was applied in the context of Mozambique.

## B. Baseline Situation

Before the intervention, *activistas* (a type of community health worker prevalent in Mozambique) were the main conduit of communication between the facility and community to pass on critical messages about the importance of antenatal care, testing for HIV, and treatment for pregnant women and exposed infants. While the number of *activistas* varied between *bairros* (communities), they were not able to reach all households. The maternal and child health nurses at the facilities were unable to conduct outreach visits due to the workload at their facilities.

USAID ASSIST conducted an initial PHFS situational analysis in two districts implementing the PHFS activities in Sofala Province<sup>1</sup>, which revealed that some of the barriers to care for pregnant women included long distances to facilities; weak or non-functional supervision and feedback on referrals from facility staff to community health workers; lack of participation of male partners, some of whom were working in mines in South Africa; and weak or non-existent community support structures for pregnant women and breastfeeding mothers. ASSIST activities under PHFS focused on community level interventions, so while several concerns were raised about the internal facility level care, these were outside of the mandate of ASSIST to address.

### Reasons for reluctance of pregnant women to seek care\*

- Fear of learning their HIV status and potential negative consequences, such as being turned out by their husbands
- Husbands are in South Africa working in the mines, and women need their permission before seeking care
- Long lines and waiting times at the facility
- Long distance to the facility
- Did not go for previous children and everything was all right
- Poor treatment in health facilities
- Lack of understanding of the importance of early ANC

*\*According to interviews with community group members.*

## II. ORGANIZING THE COMMUNITY HEALTH SYSTEM

### A. Overview of Activities

USAID ASSIST was requested to support three provinces involved in PHFS activities in Mozambique: Gaza, Sofala, and Zambezia. Sites in Sofala Province were supported by FHI360, and in Zambezia they were supported with World Vision and Adventist Development and Relief Agency. In December 2013 and

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<sup>1</sup> The initial situational analysis was conducted in Sofala Province as the original plan was for ASSIST to support work there. A more rapid assessment was conducted in Gaza with similar results once a decision was made for ASSIST to focus on Gaza Province.

January 2014, USAID ASSIST conducted situational analyses in all three provinces with community volunteers and members who were within the catchment area of health centers participating in PHFS activities. Given that Sofala and Zambezia province sites were supported by other implementing partners (IP), USAID ASSIST began providing direct and ongoing technical assistance only to Gaza Province, but provided training and limited technical assistance to the other PHFS IPs.

USAID ASSIST in collaboration with the Ministry of Health (MOH) chose Bilene District in Gaza Province for the intervention based on low coverage of antenatal care, postnatal (PNC) care, and EMTCT services, and high prevalence of HIV, which in Gaza was as high as 29.9% for women and 16.8% for men according to a 2009 study.<sup>2</sup> The intervention was implemented in three health centers within Bilene district based on the prevalence in the area and their proximity to each other and Maputo. Only three health centers were chosen given the limited funding for the project.

USAID ASSIST and Bilene District Health Office staff visited community leaders in each of the communities within the catchment areas of Licilo, Chissano and Incaia health centers to orient them to the objectives and approach of the activity and request that they identify community group representatives to attend an initial training. In February 2014, a first training for coaches and selected community members in Gaza Province was conducted. The coaches consisted of one maternal and child nurse from each of the participating health centers and community members such as teachers and religious leaders who could help organize and run activities in the village. The training included how to form *bairro* committees, the roles of team members, how to collect and understand data, the quality improvement process, understanding the community system and how to begin working with community groups.

Upon return from the training, community representatives met with the community leader to explain the goals of the activity, the importance of getting pregnant women into ANC early, and what was needed from the leader and community. Specifically, representatives who attended the training requested that the community leader provide them with a list of all active community groups in the *bairro* and set up a meeting for all community groups. At this meeting, the leader gave the representatives a chance to explain the importance of ANC and working to identify pregnant women and connect them with services. In one case, the trained community members began to attend the regular meetings of existing groups to explain the activity and encourage the group to participate.

In each of the 39 *bairros*, *bairro* committees were formed whose responsibility it was to support *activistas* in their work, pass on health messages from the health center to the household level, collect data, follow up with clients, and discuss strategies for improving care. These committees consisted of one representative from each of the participating community groups and the *activistas* which were active in that *bairro*. Representatives were chosen by the community groups; in some cases these were the group leaders, and in other cases they chose one member to represent them on the *bairro* committee by consensus. *Bairro* committees met once a month and were tasked with developing and improving a process for supporting pregnant women, including addressing the barriers and reluctance to seek care mentioned previously

USAID ASSIST provided technical support to these communities in organizing themselves through coaching visits at least monthly and often several times per month. It was clear, however, that the nurse coaches at the health centers would not be able to travel to each *bairro* due to their workloads. Therefore, a coordinating committee, called a Health Committee, was set up at each health center and included the nurse coach, *activistas*, and representatives from all of the catchment *bairro* committees. Given the

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<sup>2</sup> Mozambique National Survey on Prevalence, Behavior Risks and Information about HIV and AIDS (2009 INSIDA) Key Findings. <http://dhsprogram.com/pubs/pdf/SR179/SR179.pdf>.

limited ability of nurses to travel to the *bairros*, each of the Health Committees appointed one or more focal points to help organize meetings and share committee information with the *bairro* committee representatives. The USAID ASSIST Community Advisor attended both *bairro* committee and Health Committee meetings.

In addition to regular technical support during the *bairro* committee and Health Committee meetings, USAID ASSIST worked with district leaders and nurse coaches to conduct learning sessions in May 2014 and August 2014. Learning sessions were workshops held to promote sharing of experience between teams, exchange learning on what changes work to overcome barriers, review data, reinforce HIV messages, and strengthen improvement knowledge. In addition to creating a forum for sharing progress and experiences, the first learning session focused on community organization, mobilization, and group orientation, and the second one focused on the introduction of QI into the communities in rural settings, addressing issues of literacy and numeracy. The learning sessions included community representatives, *activistas*, nurse coaches, district staff, and IP representatives.

In March 2015, USAID ASSIST held a harvest meeting with the nurse coaches, district leaders, and one representative from each *bairro* committee. The purpose of this meeting was to gather learning on organizing a community system and on the best approaches to supporting pregnant women.

## **B. Lessons Learned on Organizing the Community System**

The following areas are lessons learned on setting up the community health system through conversations with USAID ASSIST Mozambique staff, nurse coaches, Health Committee members, and *bairro* committee members.

- **Criteria for choosing community groups to participate need to be flexible.** The training participants were given three primary criteria for choosing community groups to participate: 1) Groups should have at least 10 members; 2) The groups should already be meeting twice per month; and 3) The groups will work on a strictly volunteer basis as there would be no compensation for them. These criteria served as guidance but were not always strictly adhered to. For example, the minimum number of group members became a flexible criterion. If *bairro* representatives found a group that was willing and interested to work with them, they included these groups even when they had members as few as five. Another reason for the variation was due to the size of the *bairro* itself or the type of organization; for example, smaller *bairros* had smaller community groups, and church groups were bigger than groups of *activistas* (community health workers). Some groups refused to participate due to the voluntary nature of the activity, as participation with external projects comes with the expectation of monetary or non-monetary (t-shirts, hats, soap, etc.) incentives. One participant in Licilo gave an example that a group of traditional healers was reluctant to participate in the program, but eventually invited a member of the *bairro* committee to come talk to them about the importance of ANC and joined the activity.
- **Actively involving existing community health workers allowed for strengthening relationships and effectiveness.** All existing *activistas* in the community, whether focused on HIV or not, were invited to participate in the *bairro* committee. The participating *activistas* were both women and men, who reported being equally at ease discussing the importance of ANC in different venues. They were able to spread health messages much quicker using the *bairro* committee and subsequent community group meetings. They also had improved links with the nurse in order to ask questions and gain clarifications. They felt that they were supported in addressing barriers. This activity increased their visibility within the community, but they also reported challenges of not having proper identification so it took some community members time to accept them. During interviews, *activistas* frequently asked for simple compensation such as soap, hats, or t-shirts.



Incaia Health Committee *Photo credit: Kim Stover, URC*

- Overcoming reluctance of some community groups to participate required intensive work from an external change agent.** Uptake of activities in Licilo was much faster than in Incaia and Chissano. Part of the reason for this was the willingness of community group members in Licilo to work on a volunteer basis. Initially, groups in Incaia and Chissano were slow joining the *bairro* committees because of lack of payment, lack of trust in USAID ASSIST as an outside organization, and misunderstandings about the objectives of the project. Before May 2014, 17 out of 39 villages were active. The USAID ASSIST Community Advisor spent time with community groups in Incaia and Chissano, involving both formal and informal structures, sensitizing them to different health issues and the importance of a healthy community. By end of June 2014, 31 *bairro* committees had been formed in 31 villages. This significant improvement in participation came as a result of the involvement of community leaders in mobilizing the beneficiary households. By August 2014, all 39 villages had active *bairro* committee. Even after *bairro* committees were formed, new community groups continued to join. By February 2015, 240 community groups were actively participating in identifying pregnant women, spreading messages about the importance of ANC, and actively working to connect women with services.
- There was a wide variety in the types of community groups, which reflected the specific local situation.** In general there were a range of community groups involved in the activity, such as church groups, community leaders, *activistas*, Organization of Mozambique Women (OMM in Portuguese), well groups, savings and loans groups, kindergarten groups, literacy groups, school groups, zone groups (sub-division of *bairro*), and artist groups. For each of the Health Center catchment areas, there appeared to be one dominant group that had the best reach and coverage for those particular *bairros*. Licilo had large *bairros*, and the zone groups (each one with a leader and representing 50 households) had the largest participation in the *bairro* committees. The 50 families making up a zone were further divided into groups of 10 households, each with a leader. This structure represented an efficient way to pass on messages and collect information about a large number of households. In Incaia, church groups were the predominant groups participating, and in Chissano, they were well groups. One notably absent category of groups was groups of people living with HIV/AIDS (PLHIV). Despite efforts to find formal and informal groups of PLHIV, USAID ASSIST staff, nurse coaches, and Health Committee members came to the conclusion that these were not present or active in these *bairros*.

The nurse in Licilo also pointed out that while their primary target audience of pregnant women may not be organized into a formal group, they should be represented at the *bairro* committee and Health Committee meetings.

## C. Improving Care for Pregnant Women

Once community groups were found and oriented and agreed to be part of the activity, the groups began to improve care for pregnant women in their communities.

- **Community groups can provide a quick and low- cost way to spread health messaging for pregnant women, their families, and community members.** By choosing to participate, each community group had agreed to add health discussions into the agenda of their regular

meetings. Generally this was between 30 and 45 minutes at the end of their normal meetings. Participants of the initial training and of learning sessions were given critical health messages about the importance of early ANC for ensuring that HIV-positive mothers were put on treatment so that their babies would be HIV-free. In addition, at Health Committee meetings, the nurse midwife would provide recommended messages for discussion at community group meetings. Community group members would then pass these messages on to family members and pregnant women in their social circles.

- **Stigma led to avoidance of discussing HIV openly with pregnant women.** While community groups have been extremely helpful in getting messages to a wider audience than an *activista* alone, there are still strong issues of stigma around HIV. The nurse, Health Committee, and *bairro* committees recognized that they were trying to bring women into care earlier in part to get them tested for HIV and be put on treatment to improve the health of the mother and prevent transmission to the baby. However, when speaking with community members, they explained that they do not ever discuss HIV directly, as many women are scared to learn their status for fear of being divorced. The community group members would talk about other important factors for pregnant women to attend ANC early, including the testing for and treatment of infections in a generic way, checking for anemia, receiving bed nets to prevent malaria, and checking for any potential danger signs that would need a higher level of care.

QI team member reporting the number of pregnant women identified by Community Group members



### Community group in action – Artist Group

One very large and active community group was a singing and drama group. This group created songs and skits around the importance of early ANC for pregnant women which they would perform at market days and other gatherings. As they sang and taught about the importance of identifying yourself and connecting with the health facility, one of the members would canvas the audience for pregnant women and encourage them to seek care.

- **Community group members represent a large portion of households and are able to identify more pregnant women than an *activista* alone.** Identification of pregnant women in the community served as a first step in linking women with the formal health system. At community group meetings, members were either asked to self-identify as pregnant or report any pregnant women within their households. In other cases, the community group members would try to identify women in their community by visual signs that suggested pregnancy. Community group members interviewed emphasized that they encouraged women or family members, such as husbands and mothers-in-law, to self-identify early in pregnancy as they found this the most effective way to reach women. Women who were approached and asked whether they were pregnant were more reluctant to talk about their possible pregnancy. Once they had identified a woman, the community group members would tell the designated person from the group who would record her name in the register. Those who knew the woman would encourage her to attend the ANC clinic at the nearest health center.

- **An articulated two-way information and data flow process can link the community and health facility.** A two-way data flow process is critical to the functioning of a community health system that links the community and facility. For these sites, the data flow process was as follows:



- The designated person from the community group would record the name of all identified pregnant women in the group's register.
- The community group representative brings all the names of identified pregnant women to the *bairro* committee meeting.
- The leader of the *bairro* committee collects all of the names from across community groups once per month and brings the list to the Health Committee meeting at the health center.
- The Health Committee members take turns informing the nurse of the pregnant women in their communities.
- The nurse compares these names to the women in the ANC register. Each Health Committee member notes the women from their *bairros* who have not attended ANC.
- The Health Committee members return to their respective *bairros* and at the next *bairro* committee meeting, they share the names of women who need to be followed up.

In addition to the comparison of *bairro* and health center records, the *bairro* committees tried using a referral form which they would give to the woman noting that she was identified in the community and referred. The *bairro* committee members or community group members would follow up with her to check whether her referral form or ANC card were completed by the nurse. This also helped the team to know whether she had received care at another facility.

- **There were different strategies for encouraging pregnant women to attend ANC, but often these required addressing family barriers in creative ways.** At the Health Committee meetings, members discussed difficulties bringing women into care, shared experiences and advice, and brainstormed possible solutions to be carried out at the *bairro* level. The *bairro* committee also discussed specific approaches to encourage pregnant women to go to the facility. Each *bairro* had a slightly different system for following up with women. Approaches included

some of the following: the community group member who identified a woman followed up with her; the *activistas* responsible for that *bairro*, if there were any, would follow up with the woman; if there was a specific focal point, such as a teacher, they would be assigned to follow up with specific women. Several Health Committee members mentioned that if the woman was still reluctant to go, they would send a community leader to talk to her.

In addition to assigning a specific person to follow up with the woman, the *bairro* committee would consider and discuss her circumstances and potential barriers to care. In many cases, the husbands were in South Africa working in the mines, so the primary care-seeking decision lay with the mother-in-law. Community groups began to target messaging about the importance of ANC at mothers-in-law as well as visiting the mothers-in-law of women who were identified but did not go to the health center. While in many of these communities the mothers-in-law were critical due to the husbands' work in the mines, mothers-in-law in most community settings have influence over the care seeking decisions of pregnant women. Men who were present in the community received messages about the importance of ANC through different community groups and would be asked about their wives' pregnancies. However, spreading key health messages to men working in the mines about ANC and HIV testing remained a challenge for the communities.

In Licilo, the Health Committee noticed that several of the women not attending ANC belonged to the same religious sect. The Health Committee designated a member to talk to the leaders of the sect, who in turn encouraged pregnant women to attend ANC at the end of their service.

#### D. Community Voices

- **The community system extended the reach of the *activistas* and health center staff.** The workload of the maternal and child nurses at the three health centers did not enable them to conduct outreach visits in the communities. There were some trained *activistas* working in the catchment areas of these health centers, but the number of *activistas* varied between *bairros*, with some *bairros* having none. *Activistas* were still not able to identify and track all pregnant women in the community. The community system drew on already existing, actively meeting community groups and asked these groups for an incremental increase in their activities in the form of spreading health messages, collecting information on pregnant women, and following up with them and sharing this information with the *bairro* committee. As a result, the community groups extended the reach of health messaging and information flow to the majority of the households in these *bairros*. At the harvest meeting, the nurses and *activistas* repeatedly mentioned how the community system had made their work easier.

*"With this program, there was a great change here. There is a population of 17,580 and before I was the only responsible for pregnant women. I found this program helpful because it makes my work easier when these groups spread messages. I find [the community system] important for my work here. If [a woman] comes from a group that is already sensitized, she is prepared for the visit and that gives me more time for other patients."*

-- Licilo Health Center Nurse

- **The community group members and nurses faced several challenges in completing their work.** Some of the barriers they faced in the community included:
  - Women would be referred to the health center, went, but came home without being seen because of long lines.
  - People were often suspicious of community group members coming to talk about whether their women were pregnant. Some would mock them or simply not listen.
  - Women had a fear of learning their HIV status so they would not want to go to the health center. The community group members would try to convince them by talking about

things like bednets, anemia, or giving examples of families with tragic outcomes who had not gone.

- Women would want to go to the health center later in pregnancy because they didn't want to have to go multiple times to the health center due to the distance.
- Women may not take the medications as prescribed by the nurse for different reasons, including lack of food and their husbands in South Africa forbidding them from taking medications.
- In *bairros* that were equidistant from two health centers, women sometimes chose to go to a health center not participating in the activity. In that case, the teams would look at whether her ANC card had been completed.
- Many of the community members were illiterate and innumerate so they had to find creative solutions to recording names. In some cases, older community members used school children to record the names of the pregnant women identified.

*Bairro* committee members repeatedly requested t-shirts, hats, bags, or some other identification which they felt would give them more legitimacy throughout the community. Although they were working without compensation, they requested compensation in the form of soap or transport money.

- **The community group members expressed an interest in continuing to use the community system to address health issues.** Community group members and the health center nurses felt confident that the work they were doing to bring pregnant women into care would continue beyond the life of USAID ASSIST support because these were existing, independent groups who had seen the benefit to the community. Several community members also expressed interest in using the system to help support “all suffering people.” The Bilene District Director requested a training for district staff on how to set up and support community systems, but budget limitations did not allow for this to take place.

### III. RESULTS

The results for the three health center catchment areas were mixed. The results for the four main indicators used by the community teams and health centers are in Table 1. These indicators correlate to the four main improvement aims discussed earlier, which were to:

- Increase the number of pregnant women identified by the community;
- Increase the percent of women who were accessing antenatal care (ANC) services;
- Increase the percent of pregnant women tested for HIV; and
- Increase the percent of HIV-positive pregnant women who are put on treatment.

Again, these were just the first steps providing care to HIV positive pregnant women. All of these indicators reflect improved linkages between the community and health centers. If the work were to continue, additional improvement aims would include default rates and transmission rates.

#### A. Licilo Health Center

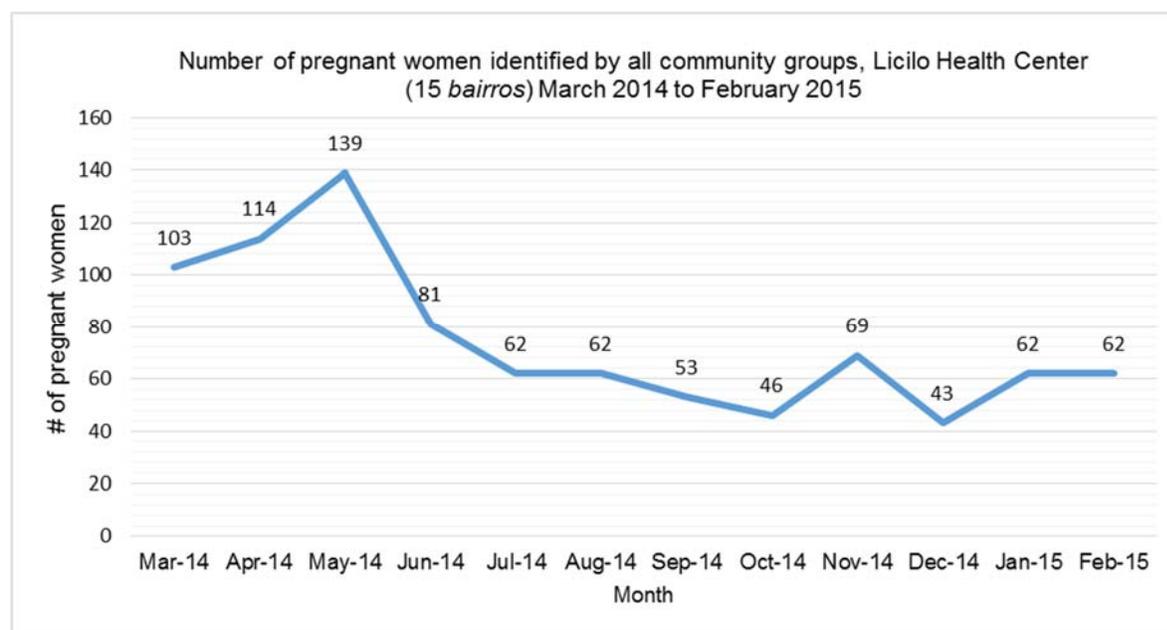
Licilo Health Center had the largest catchment area of the three sites and had the most success of the three health centers. Licilo Health Center and its associated *bairros* were the most receptive to the PHFS activity and interested in the community health systems model. Strategically, USAID ASSIST staff first focused on getting the community system up and running in Licilo, which then could and did serve as a model for the *bairros* under the Chissano and Incaia health centers. In total, 95 community groups in the 15 *bairros* of Licilo were identified and actively participating in identifying pregnant women. Figure 1 shows the total number of pregnant women identified by these groups in Licilo.

**Table 1. Primary indicators followed by the PHFS community teams in Gaza Province**

Indicator	Source	Data collection method
Number of pregnant women identified by all community groups each month	Community group and <i>bairro</i> committee records	Each community group recorded the pregnant women found by their members. They then brought this information to the <i>bairro</i> committee where the women's names were entered into a central register for the <i>bairro</i> .
Percent of identified pregnant women receiving ANC in the same month as they were identified*	Community group and <i>bairro</i> committee records and health center records	The Bairro QI Team focal point brought the register to the health committee meeting. Each bairro focal point then would read the names of the pregnant women identified and the nurse would look to see if she had been to ANC. If she had, the bairro focal point would note the date she went to ANC in their register.
Percent of pregnant women receiving ANC who were tested for HIV each month	Health center records	The Maternal and Child Nurse would review the registers and records at the end of each month to collect this data.
Percent of pregnant women who were found to be HIV-positive put on treatment each month**	Health center records	The Maternal and Child Nurse would review the registers and records at the end of each month to collect this data.

\*There was some confusion between sites as to whether the numerator should be all women receiving ANC in a given month or whether it should be the subset of the women who were identified by the community. The ASSIST Community Advisor worked with the *bairro* committees and health committees to clarify this. While some of the data may not be consistent in their use of this numerator, the indicator still gives us a general sense as to whether communities and facilities were able to work together to get pregnant women into care.

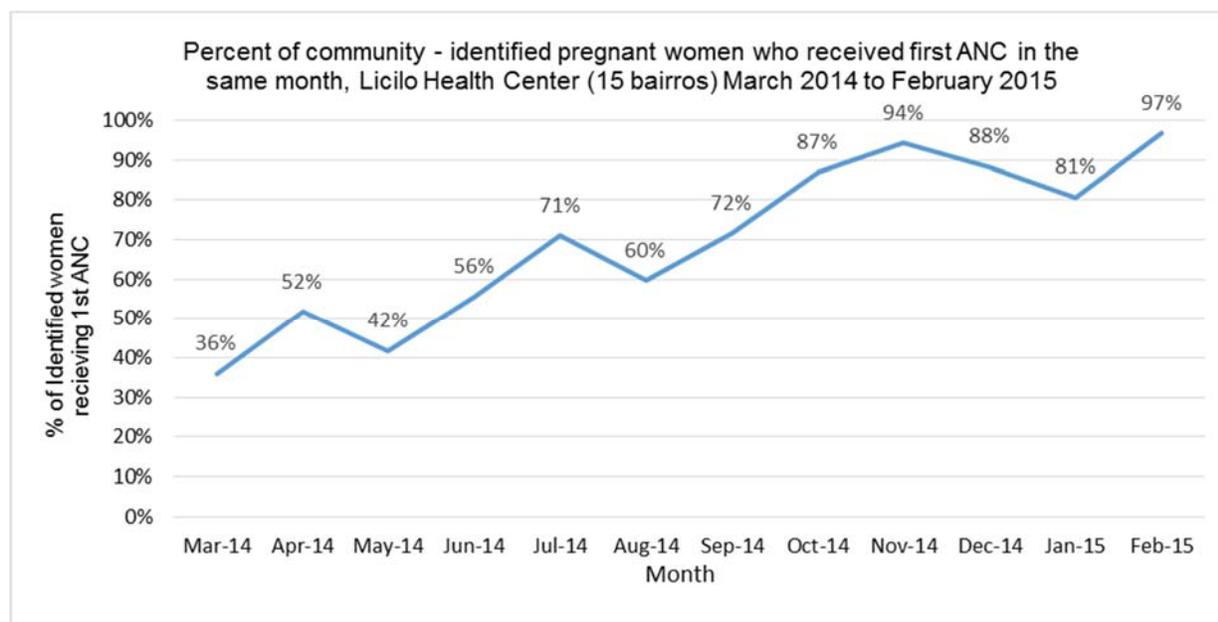
**Figure 1. Number of pregnant women identified by all community groups, Licilo Health Center**



When community groups began identifying pregnant women in Licilo, there was an initial spike of pregnant women as the community identified all of the currently pregnant women who may be at any gestational age (see Figure 1). As time went on, the number identified leveled off to be mainly newly pregnant women in their first and early second trimesters. In total, the community groups in the catchment area of Licilo Health Center identified a total of 896 pregnant women between March 2014 and February 2015.

The work of the Licilo Health Committee and the *bairro* committees resulted in an increase in the percentage of pregnant women who were identified by the community having their first ANC visit in the same month as they were identified. As shown in Figure 2, there was an increase from 36% in March 2014 to 97% in February 2015. The Health Committee and *bairro* committees in Licilo have created a sustained process for identifying women and getting them to care immediately. The initial poor coverage of ANC is also a product of the high number of women who were initially identified and the introduction of a new system for follow-up. Over 12 months, the cumulative percent of women who went to ANC was 64%.

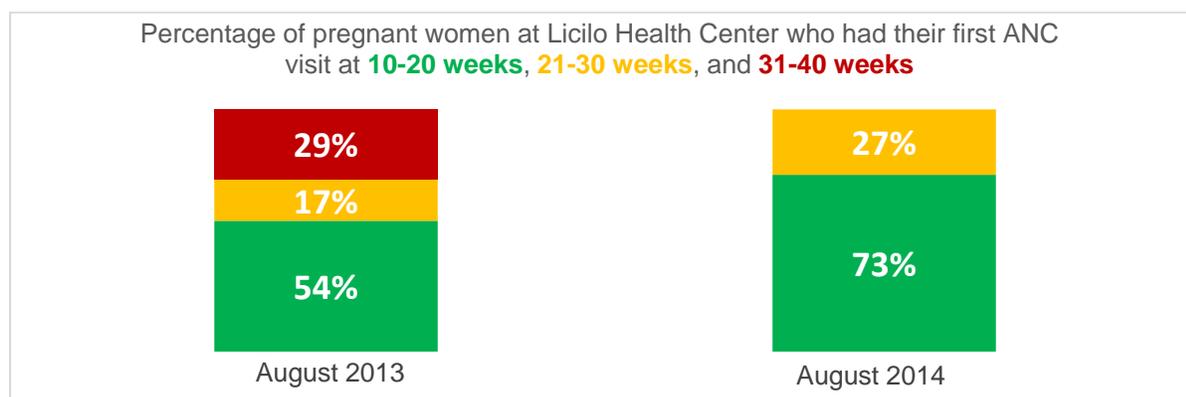
**Figure 2. Percent of community-identified pregnant women who received first ANC in the same month, Licilo Health Center (15 *bairros*)**



Anecdotal reports from the nurse and Health Committee members that women were coming in earlier for care led to a record review of the gestational age for first ANC, comparing charts from August 2013 and August 2014. As seen in Figure 3, the chart review found that women were coming earlier for ANC.

Throughout the activity, the health center nurse was also tracking the percent of women tested for HIV out of those who received ANC and the percent of pregnant women found to be HIV-positive who were put on treatment. The median percent tested for HIV was 97%, and the median of HIV-positive women put on treatment was 100%. Therefore, the conclusion can be made in Licilo that if women were connected with ANC services, they received the appropriate initial care to prevent transmission of HIV to their child.

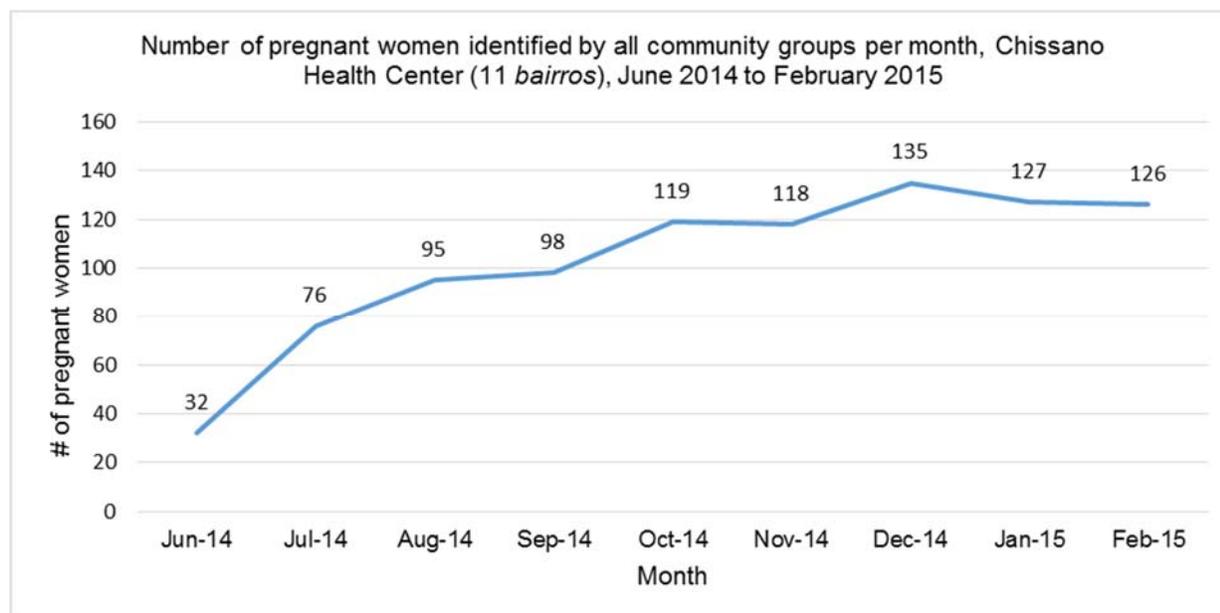
**Figure 3. Pregnant women attending first ANC by weeks of gestation, Licilo Health Center**



## B. Chissano Health Center

Chissano Health Center and the associated *bairros* were slow in getting on board because they were not interested in the volunteer nature of the activity. As of June 2014, Chissano only had three active community groups for the whole area. Intensive support and discussions with this community led to the eventual engagement of 68 community groups through 11 *bairro* committees. The lower number of pregnant women identified in Chissano, shown in Figure 4, reflects this slow start-up.

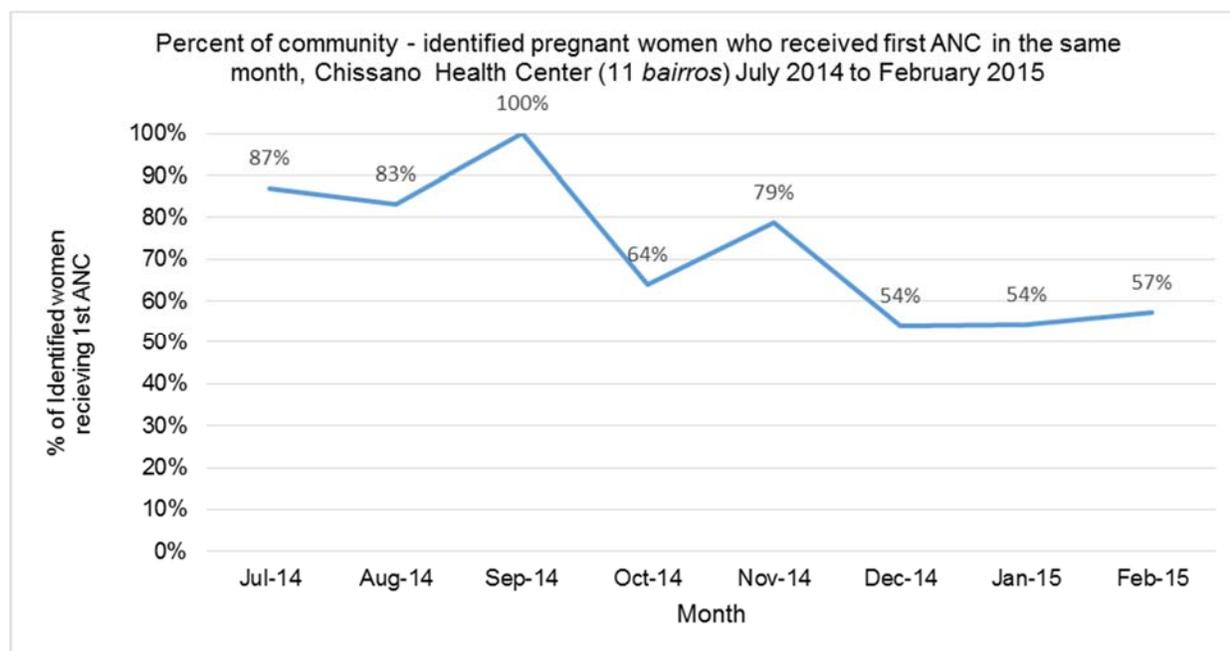
**Figure 4. Number of pregnant women identified by community groups per month, Chissano Health Center (11 *bairros*)**



The number of community groups involved in *bairro* committees and Chissano Health Committee grew, leading to additional coverage of the communities and more identification of pregnant women. In total, the Chissano community groups identified 715 pregnant women. Between October 2014 and February 2015, the community groups appear to have reached a consistent level of identification of new cases of pregnant women. The ANC coverage, however, declined with the increase in identified pregnant women. Both members of the Health Committee and the nurse from the health center said that increased workload from increased demand had led to longer wait times. Figures 4 and 5 show that there was demand created but that there was not similar work within the facility to address the supply side.

The Chissano Health Center had a median of 92% coverage of HIV testing for the period of June 2014 to February 2015, ranging from 86 to 100%, and 100% of women found to be HIV-positive were put on treatment. The intervention does not appear to have impacted the testing and treatment rates, as these were already high.

**Figure 5. Percent of community-identified pregnant women who received first ANC in the same month, Chissano Health Center (11 *bairros*)**

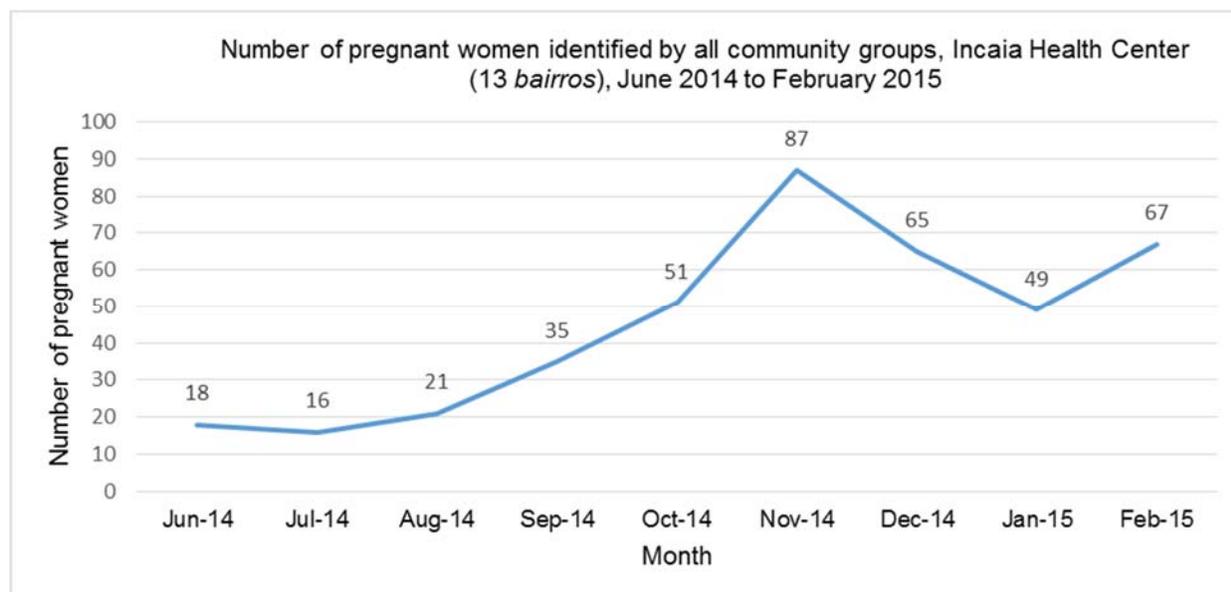


### C. Incaia Health Center

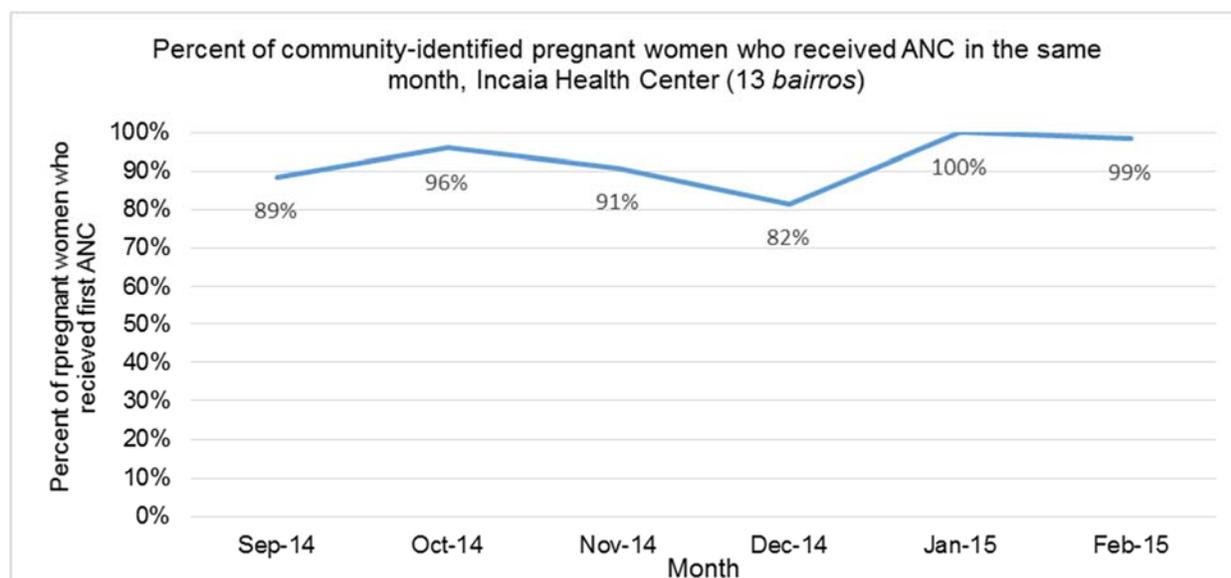
Like Chissano, the 13 *bairros* under the Incaia Health Center catchment area took time to get on board with the activities around supporting pregnant women. Over time, they were able to successfully engage 77 community groups to participate. Figure 6 shows the number of pregnant women identified by all community groups supporting Incaia Health Center. As shown in Figure 6, the data reflect a slower start in engaging and activating community group participation. From October 2014 on, the community groups appeared to be actively identifying pregnant women.

Once identified, the community groups in partnership with the Incaia Health Center were able to get the women into ANC in the same month (see Figure 7). Inconsistent data collection before September 2014 made it difficult to determine their baseline. However, data on all women attending ANC from June to August 2014 averages 45.7 women per month, whereas after more community groups became active in September 2014, the average number of women attending ANC per month increased to 54.5. While this is a modest increase, it shows movement in a positive direction.

**Figure 6. Number of pregnant women identified by all community groups, Incaia Health Center (13 *bairros*)**



**Figure 7. Percent of community-identified pregnant women who received ANC in the same month, Incaia Health Center (13 *bairros*)**



As with the other two facilities, Incaia Health Center had good rates of HIV testing, ranging between 87% and 94% during the period of September 2014 – February 2015. All women found to be HIV-positive were put on treatment.

## IV. DISCUSSION

The community health system strengthening model was adapted successfully to the Mozambique context, eventually creating excitement in community groups around helping support the work of health facility staff and *activistas* and resulting in more pregnant women being connected with care earlier in pregnancy. Unfortunately, the short timeframe for implementation meant that USAID ASSIST support

ended right as communities were excited to take on more challenging areas for improvement, such as postnatal follow-up of HIV-positive mother and baby pairs. The Health and bairro committee members felt that they would be able to sustain the community health system beyond the life of the project.

Identifying women and connecting them with care is an important first step in the elimination of mother-to-child transmission of HIV. In this case, the facilities were overwhelmed with an influx of patients, but Incaia and Licilo were able to manage that, whereas Chissano had more difficulty. HIV testing rates were high in all facilities, but had room for improvement. This would need more exploration to understand whether the problem was a social problem that the community could help with or an internal facility problem that needed facility-level improvement activities. Based on what was observed by USAID ASSIST staff, although Gaza District was among the pilot districts for the National QI Strategy roll-out, there did not appear to be any active improvement happening at the facility in the area of EMTCT. It is clear that any improvement activity at the community level needs to be linked to improvement happening within the health facilities themselves in order to achieve the greatest impact.

One of the critical achievements of the activity was the creation of mutually beneficial links between the health facility, *activistas*, and community groups. While bringing community groups on board took time, once they saw the benefits to their communities, they became motivated to provide health messages and encourage women to attend ANC. Communities felt more empowered to help their members and reported seeing healthier mothers and babies. They had improved links to the health facility and relationships with *activistas*. Setting up a clear process for information exchange and a two-way feedback loop was essential to understanding the actual situation in the community and potential ways that barriers could be overcome. This work has shown that many of the barriers to seeking care cannot be solved at the health facility level alone. Rather, it was the collective efforts of the health facility nurse, Health Committee, *bairro* committees, and community groups which led to an increased number of women receiving care.

While it is difficult to predict the sustainability of these efforts, there are some factors which should contribute to their continuation. The community groups involved existed before the community health system was organized, and these groups will continue to meet for their primary purposes beyond the life of the project. These groups were able to easily incorporate health discussions and data collection around identified women into their ongoing meeting agendas. While this meant extra time, no community members reported this as a burden. A closer, more collaborative relationship has been fostered between community groups and health facility staff. A process for collecting and passing on data and receiving feedback has been established. There was a strong conviction among the community group members interviewed that they would continue to identify pregnant women. This could serve as a platform for addressing multiple health issues, but it is unclear if they will utilize this system in other ways. One constraining factor for sustainability mentioned by community members was the distance to the health center and the burden that this created for participating in Health Committee meetings.

## V. RECOMMENDATIONS

This project focused on making the initial connection between pregnant women and the health facility so that women would be tested for HIV and put on treatment. The next steps forward once the community system is in place and women are connected with antenatal services is to focus on their retention in care and the retention of HIV-positive mother-baby pairs in the postnatal period, exclusive breastfeeding, and testing for HIV-exposed infants. Since confidentiality comes into play once a woman is known to be HIV-positive, the community system becomes more limited in the direct role community groups can play in tracking mothers and keeping them in care. The community system could assist in more general ways to support women in receiving postnatal care, keeping regular vaccination appointments for children, and providing general social support to all breastfeeding mothers. In this way, they could be assisting the whole community, including HIV-positive mothers.

Some recommendations of key steps to replicate the community health system for the Mozambique MOH and USAID-funded IPs are presented below.

- Determine appropriate change agents to assist the communities in organizing a community health system. While this may be project staff, more sustainable approaches would include district or other local leaders or facility staff.
- Take the time to orient community opinion leaders on the goals of the health or social service program and let those leaders find existing community groups and structures, both formal and informal, which could be beneficial to involve.
- Find out the values of the community groups to help them understand why using some of the meeting time on health issues is beneficial to them, such as healthy women in a savings and loans group means all can work and contribute more.
- Be flexible with inclusion criteria. While it is desirable to have groups that have a large reach into the community, smaller, enthusiastic groups can also bring motivation.
- Set up a clear system for information and data collection, exchange, and review between the community and facility. Clarify who should collect what information, how that is passed on, and what data the health facility will share with the community (general numbers or specific names), and make sure everyone understands the process.
- Determine a venue in which the facility staff can interact with community representatives to discuss what is and isn't working well and come up with solutions to test. This may be done through an existing committee structure or may need to be a new or revised committee or improvement team.
- Design a clear process for case identification, referral, counter-referral, and follow-up. This should be done jointly by the community committee and the health facility.
- Train community group representatives or the whole groups on the appropriate health messaging that needs to be delivered and their role in case identification, referral, and follow-up.
- Ensure that there is a parallel effort to make improvements at the facility level.
- Plan on a timeframe of eighteen months to two years when using the community health system to allow for time to get the system organized and then be able address multiple challenges. Specifically for EMTCT, this would include initial steps of identifying pregnant women and getting them to ANC, but also looking at supporting postnatal follow-up of mother and baby pairs.

The experience of the PHFS community demonstration project in Gaza, Mozambique has shown that the community health systems strengthening model can be applied successfully to improve care for pregnant women and increase links between health facilities and communities.



**USAID APPLYING SCIENCE TO STRENGTHEN  
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