



Maternal Health and the Liga Inan Program

Results of a Knowledge, Practice, and Coverage Surveys in Manufahi and Ainaro Municipalities

March 2016

Health Alliance International



Contents

Background	1
Methods	1
<i>Participants</i>	<i>2</i>
<i>Area of the Program and Survey</i>	<i>2</i>
Attended Antenatal Care	3
<i>When did women go for their first ANC visit?</i>	<i>3</i>
<i>Where did women in Manufahi and Ainaro go for ANC?</i>	<i>4</i>
<i>What types of services did women get at ANC?</i>	<i>5</i>
<i>What percent of women could identify two or more danger signs during pregnancy, delivery, postpartum, and for newborns?</i>	<i>6</i>
<i>Where do women learn about danger signs?</i>	<i>6</i>
Delivery with a Skilled Birth Attendant	7
<i>Who helped women in Manufahi and Ainaro deliver?</i>	<i>7</i>
<i>How did women get to the health facility?</i>	<i>8</i>
<i>What were women's experiences delivering in a health facility?</i>	<i>9</i>
Received Postpartum Care	10
<i>When do women receive a check on their health after delivery?</i>	<i>10</i>
Received Postnatal Care	11
<i>When do infants receive care after delivery?</i>	<i>11</i>
Knowledge and Use of Family Planning	12
<i>What do women think about child spacing?</i>	<i>12</i>
<i>What methods of family planning do women know about?</i>	<i>12</i>
<i>If women are using family planning, what methods are they using?</i>	<i>13</i>
Evaluation of the Liga Inan Program in Manufahi	14
<i>Who could have participated in the Liga Inan program?</i>	<i>14</i>
<i>Who participated in the Liga Inan program in 2013-2015?</i>	<i>14</i>
<i>Where do women in Manufahi hear about the program?</i>	<i>15</i>
<i>What do women in Manufahi think the Liga Inan program does?</i>	<i>15</i>
<i>Where did women register for Liga Inan?</i>	<i>15</i>
<i>How often did women receive Liga Inan SMS messages?</i>	<i>16</i>
<i>Did they share the SMS messages with other people?</i>	<i>16</i>
<i>What type of contact did Liga Inan participants have with health staff?</i>	<i>16</i>
Future of the Liga Inan Program	17
<i>Are the messages clear and sent at the preferred time?</i>	<i>17</i>
<i>Did women change their phone numbers?</i>	<i>17</i>
<i>Is Ainaro ready to receive the Liga Inan program?</i>	<i>17</i>
Conclusion and Recommendations	18
<i>Maternal and newborn health care services</i>	<i>18</i>
<i>Family planning knowledge and uptake</i>	<i>19</i>
<i>Implementing the Liga Inan program</i>	<i>19</i>

Background

In September 2011 Health Alliance International (HAI) was awarded funding by USAID to implement a maternal and newborn care project in two municipalities of Timor-Leste, Manufahi and Ainaro. The goal of the project was to reduce maternal and neonatal morbidity and mortality by improving the health and care-seeking behavior of pregnant women and improving the quality of maternal health services delivered through the government health system. The three key approaches were: 1) to support community health volunteers (PSFs) to promote demand for skilled birth attendance and improved maternal behaviors through home visiting; 2) to improve and support the skills of municipality midwives to provide basic emergency obstetric care; and 3) to design and implement Timor-Leste's first ever mHealth program to provide health messages to pregnant women and connect them to their midwife. The overarching theme has been one of connection – connecting midwives to pregnant women through mobile phone technology, connecting the community to important health information, and connecting health staff to training and coaching on critical clinical skills. The first two approaches were carried out equally in both Manufahi and Ainaro Municipalities while the mHealth innovation was only implemented in Manufahi.

The mHealth program, called Liga Inan (Connecting Women), was developed in partnership with Catalpa International (a not-for-profit software development and services firm) and was launched in Manufahi Municipality in February 2013. Liga Inan is an innovative approach to connecting pregnant women to health information and with midwives who serve them by means of mobile phones, both through text messaging and easy telephone access to health staff. Rapidly growing ownership of mobile phones, even by relatively impoverished families, makes mobile technology a viable option for delivering health information and improving use of services, such as delivery with a skilled provider. This report describes the final survey and compares the results of that survey with baseline findings to identify changes in key program indicators that have occurred since the launch of the Liga Inan mHealth program.

Methods

The baseline and final surveys were conducted in both Ainaro and Manufahi Municipalities between February-March 2012 and September-October in 2015. Seventy-two women were randomly selected from each Administrative Post for each survey period. Women were included in the survey if they were between the ages of 15-49 and had a child who was under 2 years of age. Informed consent was given by each participant and refusals were rare. Interviewers included HAI staff as well as some short term hires with HAI staff as supervisors. Permission for both surveys was received from the National Institute of Health and the Ministry of Health.

Participants



**Baseline
2012**

**Women gave birth between
March 2010-February 2012**

581 women interviewed

- Average age: 27.8 years
- Average years schooling: 6.5 years
- Average number of children: 4.1



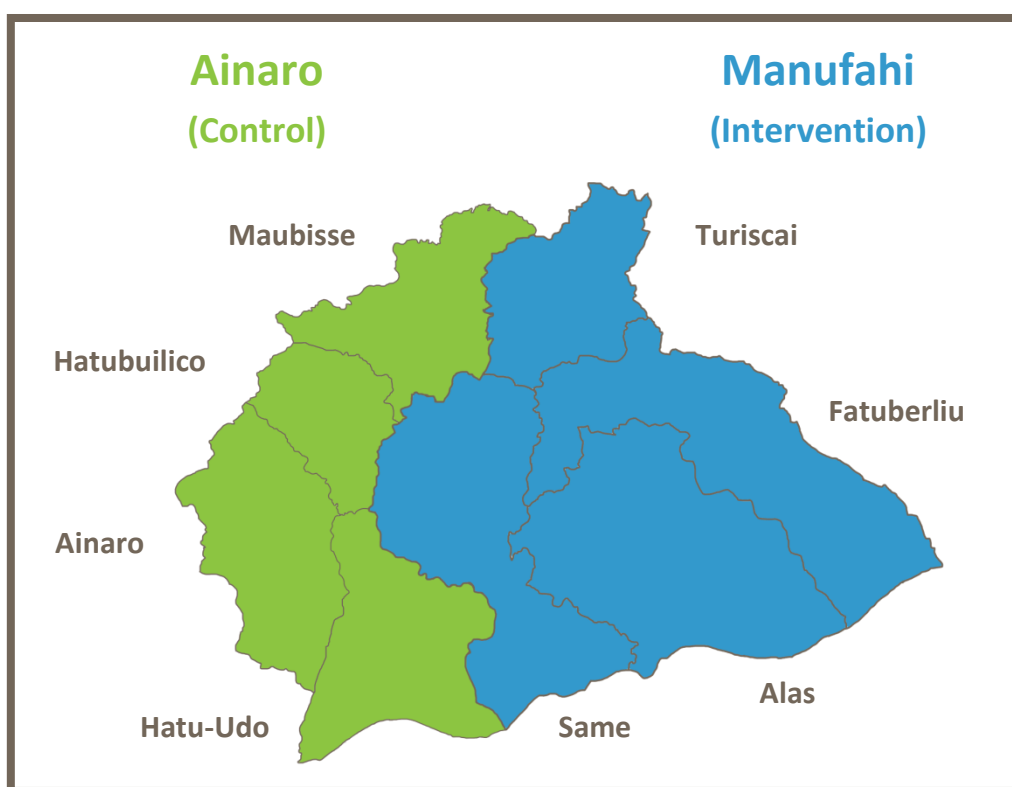
**Final
2015**

**Women gave birth between
October 2013-September 2015**

603 women interviewed

- Average age: 27.4 years
- Average years schooling: 8 years
- Average number of children: 3.2

Area of the Program and Survey



In both municipalities, PSF received training in the Mai Ita Koko health promotion package and midwives received refresher training in basic emergency obstetric care.

Only Manufahi Municipality received the Liga Inan mHealth program.

In this report, results for Ainaro are in green, Manufahi are in blue, and results for the combined municipalities are in orange.

Attended Antenatal Care

Antenatal care (ANC) is important to check on the health of mothers and babies and to provide women with health information during her pregnancy. The MOH encourages women to attend at least four visits during their pregnancy.

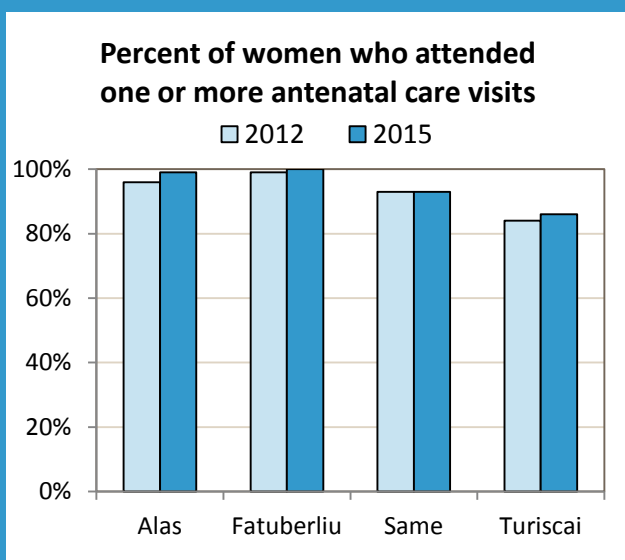
Percent of women who attended one or more ANC visits

Manufahi

93% 94%

2012

2015

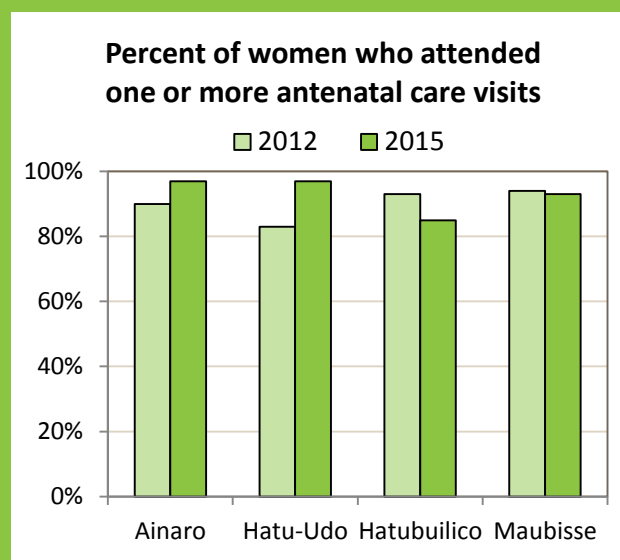


Ainaro

91% 93%

2012

2015



When did women go for their first ANC visit?



Months 1-3



Months 4-6



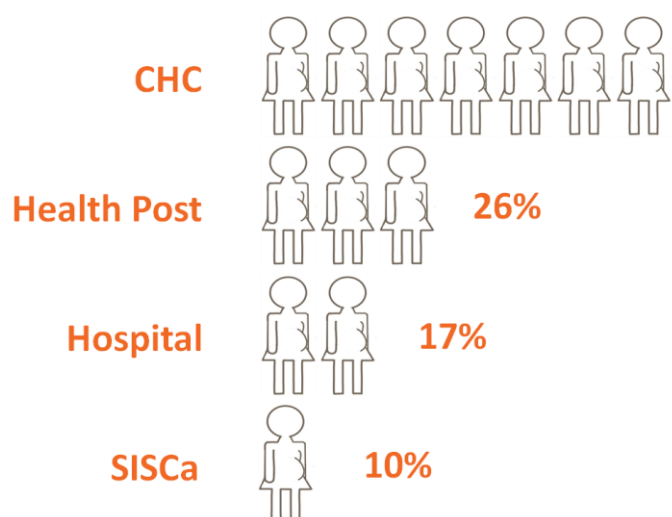
Months 7-9

Manufahi 71% 28% 1%

Ainaro 48% 47% 5%

Coming for care earlier means that women hear about key health messages and can choose good behaviors sooner in their pregnancy, like taking iron tablets and eating well.

Where did women in Manufahi and Ainaro go for ANC?



In Turiscai, almost all women (94%) went to the CHC for antenatal care

More women in Alas and Hatu-Udo said they went to health posts

Most women in Maubisse (72%) said they went to the hospital for ANC

SISCa use was highest in Alas, where over 48% of women said they had received antenatal care at SISCa

A few women also went to a private clinic or said they received care at home.
Some women received care at multiple sites during their pregnancies.

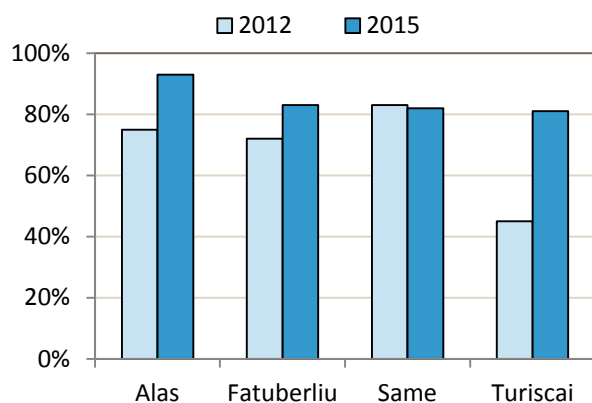
While midwives provided 75% of antenatal care, half of women also reported that a doctor provided care and 15% said a nurse provided care.

Percent of women who attended four or more ANC visits

Manufahi

76% 2012
85% 2015

Percent of women who attended four or more antenatal care visits

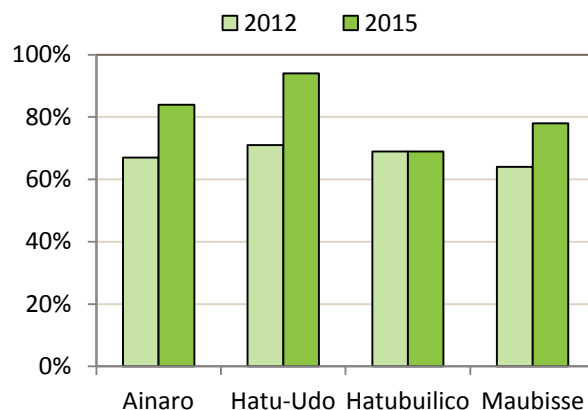


- Over 80% coverage in all Administrative Posts
- Between 2012 and 2015, coverage improved in three Administrative Posts
- Turiscai saw HUGE improvements

Ainaro

67% 2012
81% 2015

Percent of women who attended four or more antenatal care visits



- Over 80% coverage in Ainaro and Hatu-Udo
- Between 2012 and 2015, coverage improved in three Administrative Posts

What types of services did women get at ANC?

Weight Measured

96%

- Almost all women said they had their weight measured during ANC
- Fewer women in Alas said they had their weight measured, possibly because many women had ANC at SISCa

Blood Pressure Measured

96%

- Almost all women said they had their blood pressure measured during ANC

Mother Provided with Estimated Due Date

77%

- More women in Manufahi (83%) than in Ainaro (70%) said their health provider told them their due date
- Only about 60% of women in Hatubuilico or Maubisse knew their due date

Tetanus Toxoid

77%

- More than 80% of women in Alas, Fatuberliu, Same, and Ainaro had complete coverage of TT
- Turisca, Hatu-Udo, and Maubisse had 72-74% coverage of TT
- Hatubuilico only had 60% coverage of TT

Iron Tablets

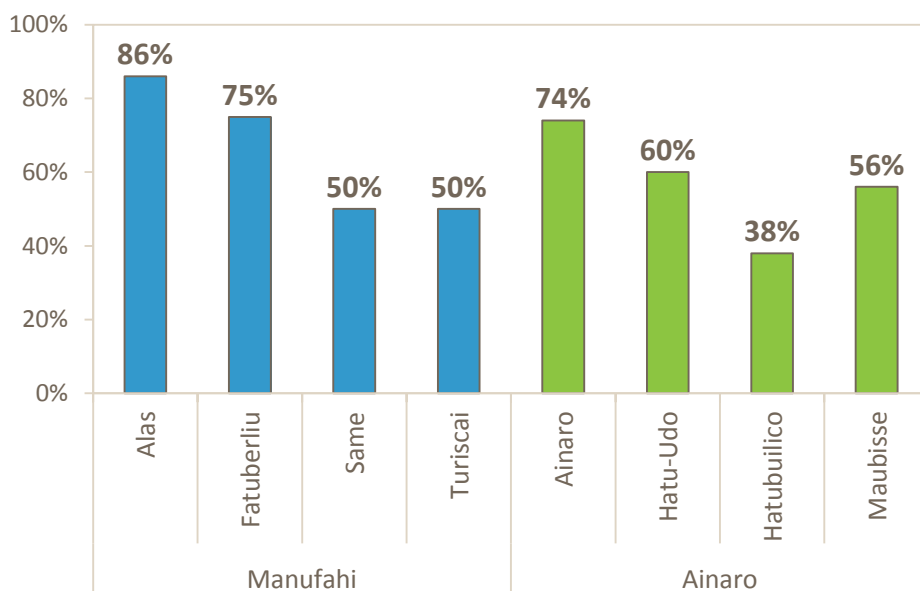
87%

Women received ANY iron tablets

57%

Women consumed 90+ iron tablets

Percent of women who consumed 90+ iron tablets

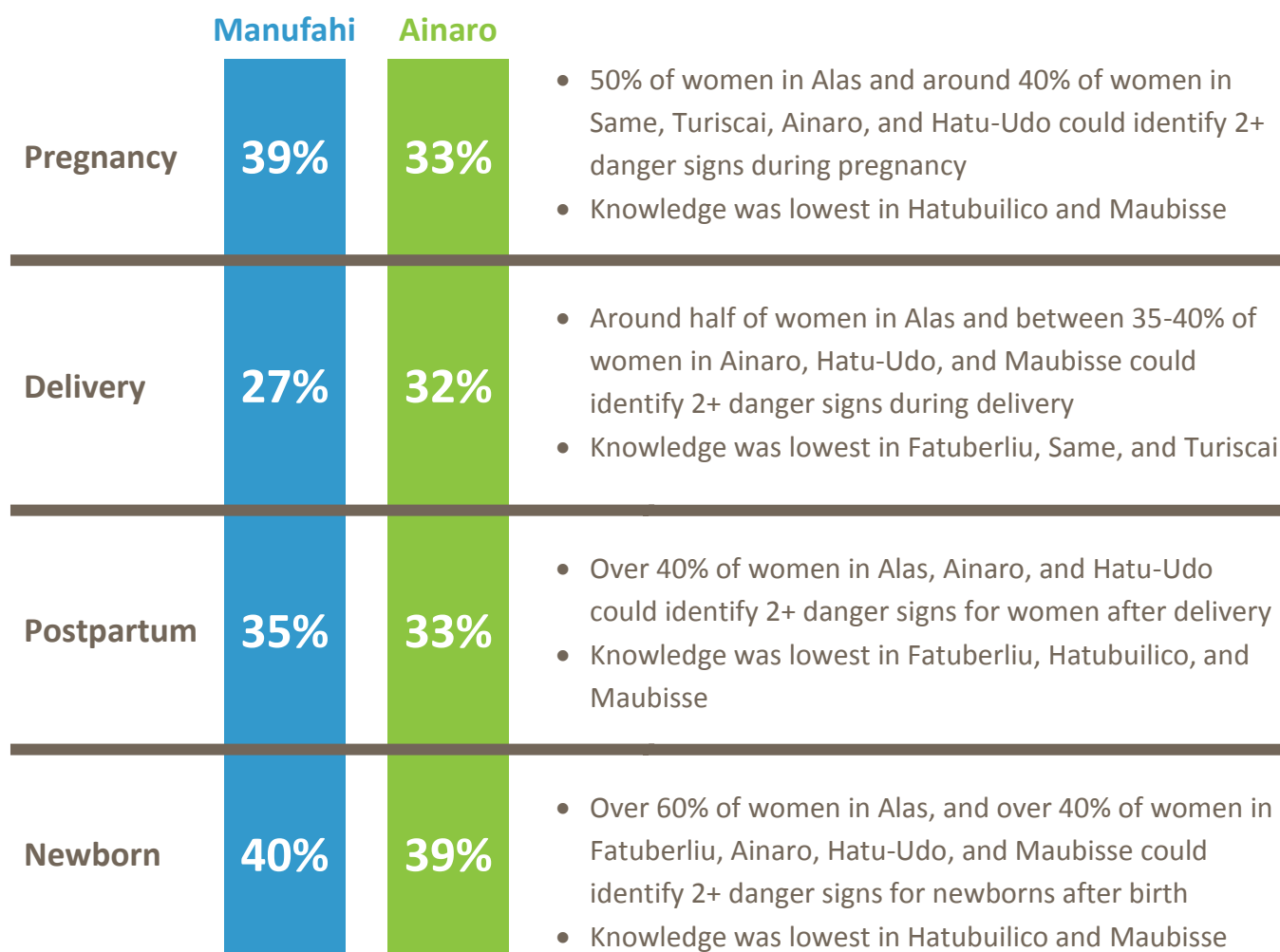


Anti-parasite Treatment

14%

- Fewer than 15% of women received anti-parasite treatment during pregnancy in six of the Administrative Posts
- Between 30-35% of women in Turisca and Hatu-Udo received anti-parasite drugs

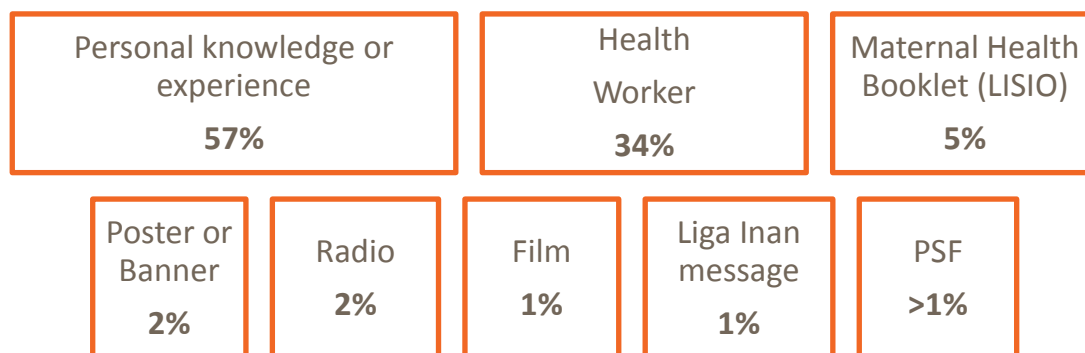
What percent of women could identify two or more danger signs during pregnancy, delivery, postpartum, and for newborns?



Knowledge of danger signs was similar between Ainaro and Manufahi.

More women in Alas were aware of danger signs throughout pregnancy than any other Administrative Post, followed by Ainaro and Hatu-Udo. Fewer than 1 in 4 women in Hatubuilico could identify 2 or more danger signs for any stage of pregnancy.

Where do women learn about danger signs?



60% of women in Alas and around 50% of women in Turisca and Hatu-Udo said that they had learned about danger signs from health staff.

Delivery with a Skilled Birth Attendant

Delivering with a skilled birth attendant (SBA) improves the likelihood that a woman will survive any complications arising during delivery and ensures women in greatest need are more quickly referred to a higher level health

Who helped women in Manufahi and Ainaro deliver?

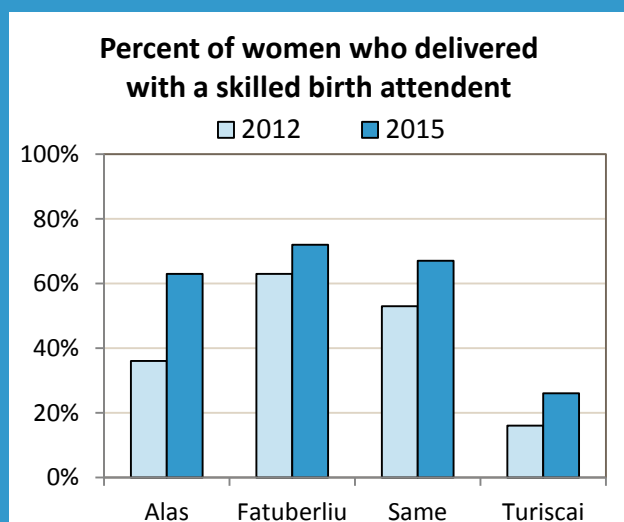


Midwives assisted at 42% of births, doctor assisted at 16% of births, and nurses assisted at 3% of births. Sometimes multiple providers were present.

Percent of women who delivered with a skilled birth attendant

Manufahi

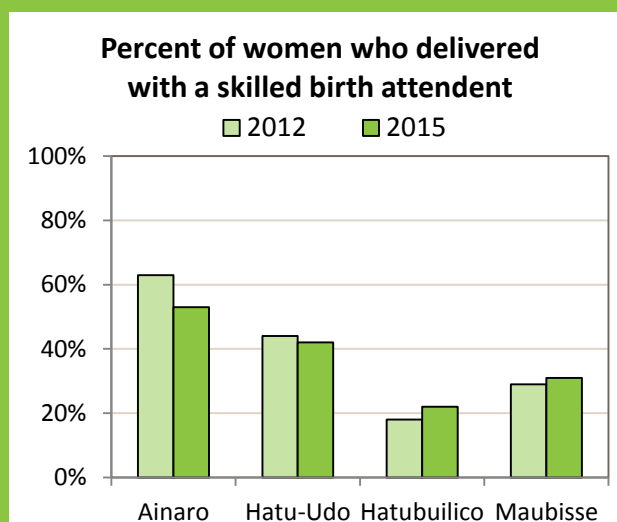
48% 2012
62% 2015



- Between 2012 and 2015, skilled birth attendance increased in EVERY Administrative Post
- Over 60% of women in Alas, Fatuberliu, and Same gave birth with a SBA
- Only 26% of women in Turiscaí delivered with a skilled birth attendant

Ainaro

38% 2012
36% 2015



- Between 2012 and 2015, SBA decreased slightly in Ainaro
- While more women in Hatubuilico delivered with a SBA than in 2012, Hatubuilico still had more women delivering ALONE than in any other Administrative Post

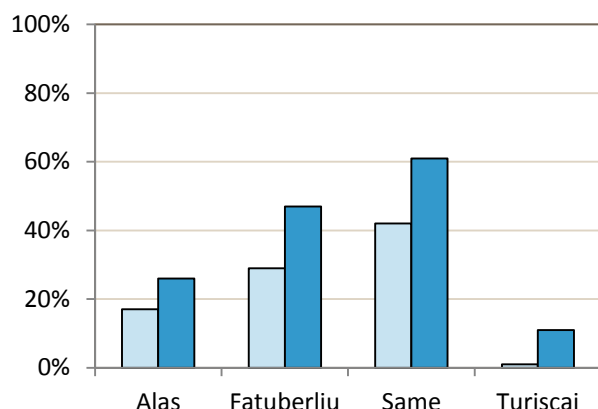
Percent of women who gave birth in a health facility

Manufahi

32% 49%
2012 2015

Percent of women who gave birth in a health facility

2012 2015



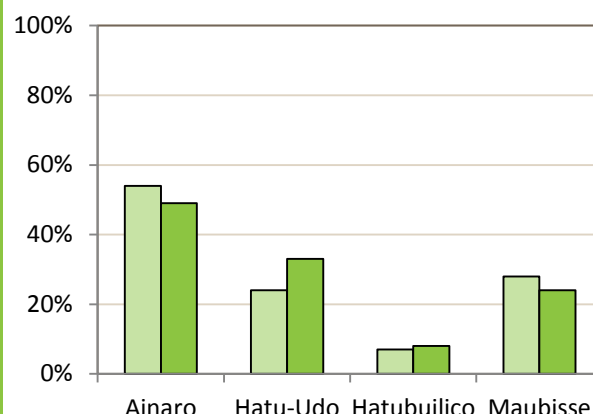
- Between 2012 and 2015, more women gave birth in a health facility in EVERY Administrative Post

Ainaro

29% 28%
2012 2015

Percent of women who gave birth in a health facility

2012 2015



- Between 2012 and 2015, the only improvements in facility deliveries were in Hatu-Udo

41% of women in Manufahi and Ainaro live within 30 minutes of a health facility where they can deliver

*More women in Ainaro Villa and Same Villa were within 30 minutes.
Fewer women in Turiscail, Hatubuilico, and Maubisse were within 30 minutes.*

How did women get to the health facility?

Ambulance

75%

Walked to facility

5%

Private car

5%

Paid transport

2%

Other (including motorbike and government vehicle)

12%

In 2015, fewer women reported walking to reach a health facility (down from 12% in 2012) and more women reported using an ambulance (up from 64% in 2012).

What were women's experiences delivering in a health facility?

4%
**of women said they
were left alone
during delivery**

- More women in Ainaro (7%) said they were left alone during delivery in a health facility than in Manufahi (2%)
- More women in Turiscai (13%) and Haubuilico (20%) said they were left alone during delivery in a health facility
- No women in Alas reported being left alone
- 14% of women who did not deliver in a facility said they had heard of a woman delivering alone

9%
**of women said they
were yelled at by
health staff**

- More women in Alas (16%) and Maubisse (18%) said they were yelled at during delivery in a health facility
- No women in Turiscai or Hatubuilico reported being yelled at
- 31% of women who did not deliver in a health facility said they had heard of a woman being yelled at when she went for delivery, and, again, these were highest in Alas (40%) and Maubisse (47%)

11%
**of women said they
did not deliver in a
private location in a
health facility**

- More women in Ainaro (15%) said they did not deliver in a private location in a health facility than in Manufahi (9%)
- Almost 1 out of 4 women in Ainaro Vila said they did not deliver in a private location in a health facility
- All women in Turiscai and Hatubuilico who delivered in a health facility said they delivered in a private location

13%
**of women said
there was no bed
sheet provided on
the delivery bed**

- More women in Ainaro (16%) said there was no sheet on the bed in the facility than in Manufahi (11%)
- Almost 1 out of 4 women who delivered in a health facility in Ainaro Vila said there was no sheet on the bed in the facility
- Almost all women in Turiscai, Hatu-Udo, and Hatubuilico said there was a sheet on the bed for delivery

Receiving high quality care is important to women when they are choosing to deliver at home or in a health facility. While only a few women were left alone or yelled at, other women in the community had heard about these experiences. Additionally, some women said there was no private location for delivery or no sheet on the bed. Experiences like these may become a barrier to women choosing to deliver in a health facility.

Received Postpartum Care

Postpartum care (PPC) is important to check on the health of mothers within two days of their delivery. In Timor-Leste, women receive Vitamin A during this visit.

When do women receive a check on their health after delivery?

	0-2 days	After 2 days	Never
Manufahi	51%	17%	32%
Ainaro	25%	18%	56%

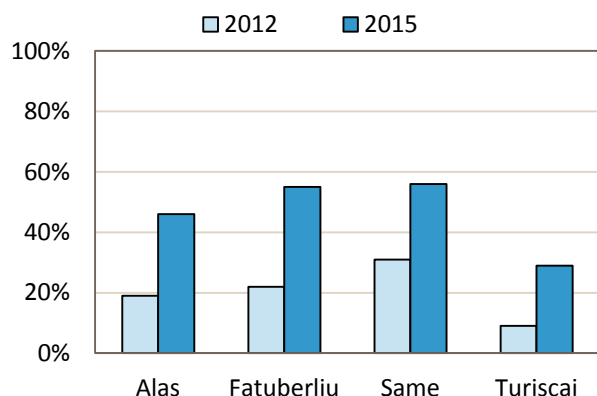
Less than half of women reported that their health was checked within two days. Many women said a health provider NEVER checked their health.

Percent of women who received PPC within two days

Manufahi

26% 51%
2012 2015

Percent of women who received PPC within 2 days of delivery

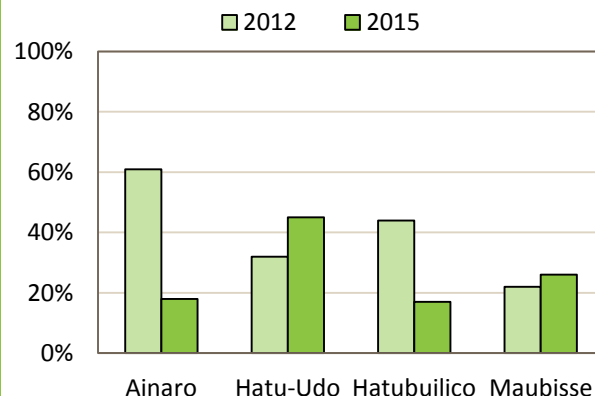


- Between 2012 and 2015, early PPC improved in EVERY Administrative Post

Ainaro

38% 25%
2012 2015

Percent of women who received PPC within 2 days of delivery



- Between 2012 and 2015, early PPC increased in Hatu-Udo and Maubisse, but decreased in Ainaro and Hatubuilico

Why are these coverage rates lower than reported rates of skilled birth attendance?

Women may not be recalling that a provider checked their health or health staff may not have completed a full exam 6-48 hours after delivery.

Midwives were present at 58%, doctors were present at 57%, and nurses were present at 8% of postpartum visits. Sometimes multiple providers were present.

Received Postnatal Care

Postnatal care (PNC) is important to check on the health of infants within two days of their delivery. Most cases of newborn illness and deaths occur within the first two days, so it is important to check their health in this early time frame.

When do infants receive care after delivery?

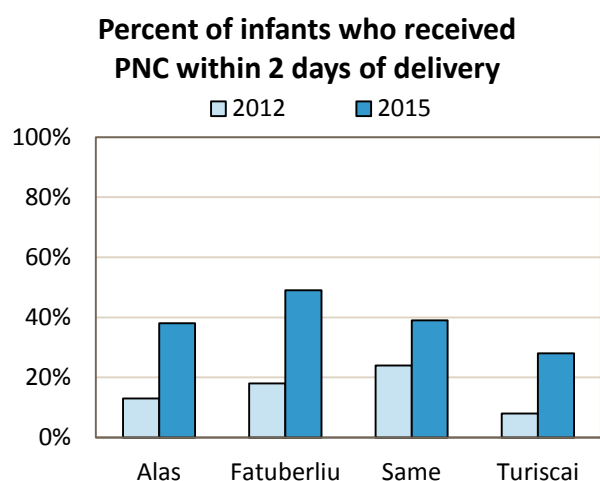
	0-2 days	After 2 days	Never
Manufahi	39%	37%	25%
Ainaro	22%	46%	32%

Less than half of infants have their health checked within the first two days after birth.

Percent of women who received PNC within two days

Manufahi

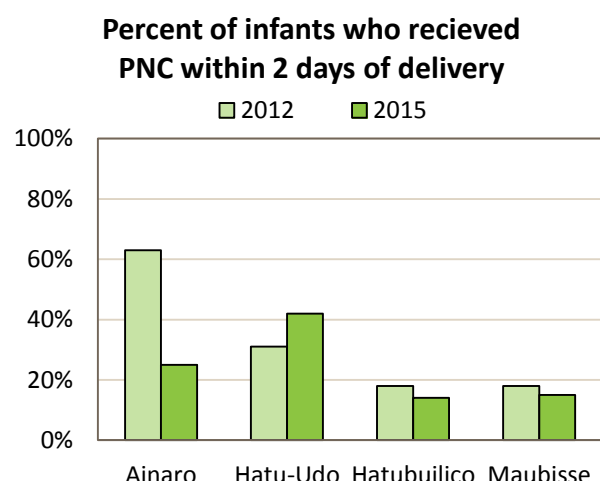
20% 39%
2012 2015



- Between 2012 and 2015, early PNC improved in EVERY Administrative Post

Ainaro

32% 22%
2012 2015



- Between 2012 and 2015, only Hatu-Udo saw improvements in early PNC

Why are these coverage rates lower than reported rates of skilled birth attendance?

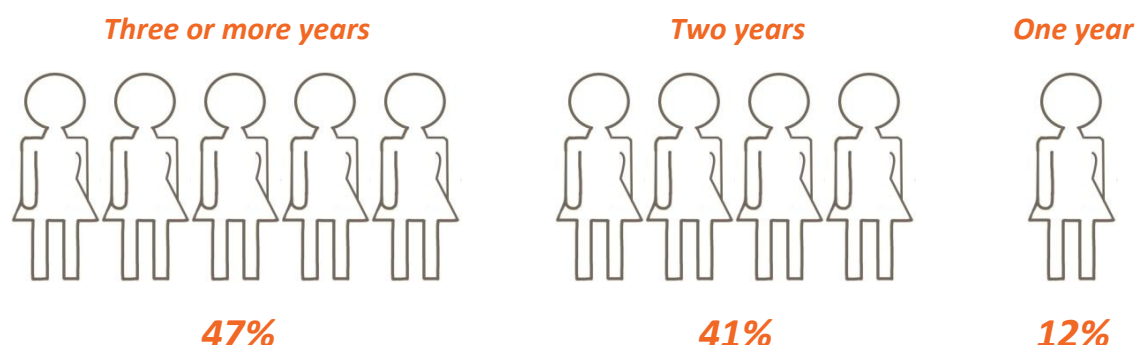
Women may not be recalling that a provider checked their health of their baby or health staff may not have completed a full exam 6-48 hours after delivery.

Midwives were present at 52%, doctors were present at 47%, and nurses were present at 21% of postnatal visits. Sometimes multiple providers were present.

Knowledge and Use of Family Planning

What do women think about child spacing?

Percent of women who want to wait 1, 2, or 3+ years before their next child

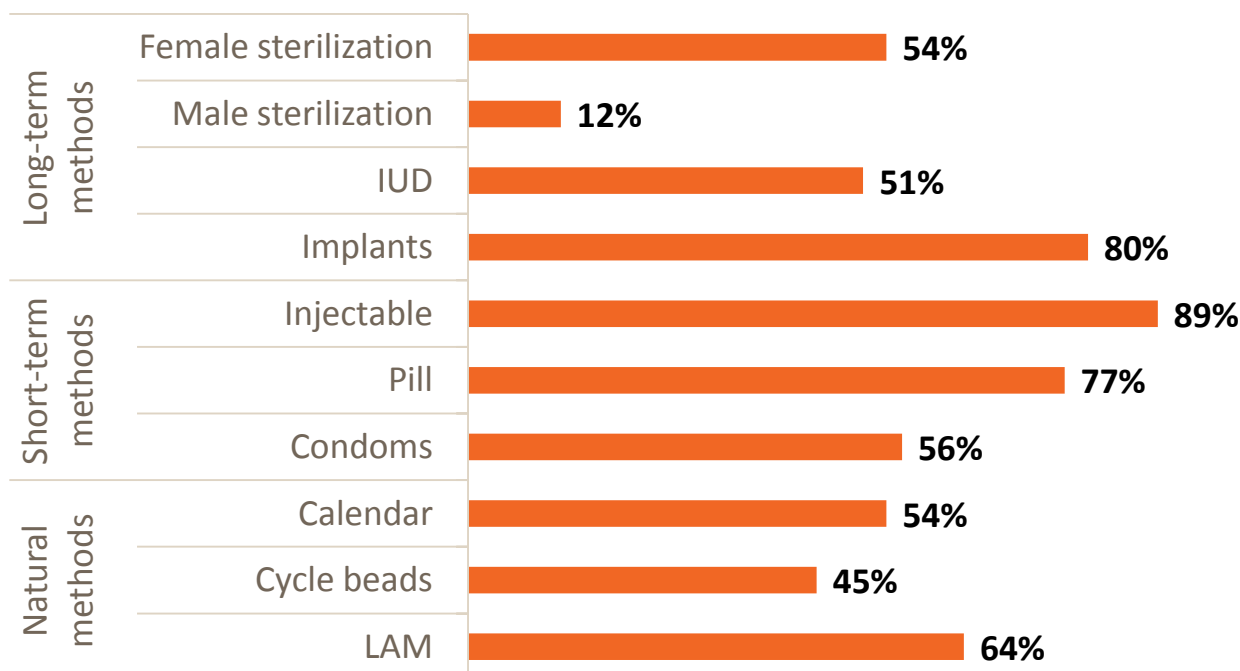


Most women knew that short spaces between births can be bad for the health of the mother or baby or said that there is not opportunity for women to work between pregnancies.

Few women identified specific risks like babies being born early or small, increased risk of miscarriage, or risk to mother's life.

What methods of family planning do women know about?

Percent of women who recognized each family planning method



When asked to name family planning methods, the majority of women listed injectables. In 2015, however, more women identified implants, contraceptive pills, and IUDs as additional methods of family planning when compared to the baseline survey in 2012.

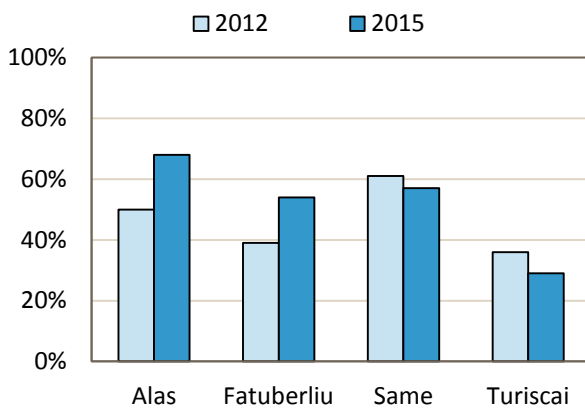
Percent of women who are using modern methods of family planning

Manufahi

54%
2012

55%
2015

Percent of women who are using a modern family planning method



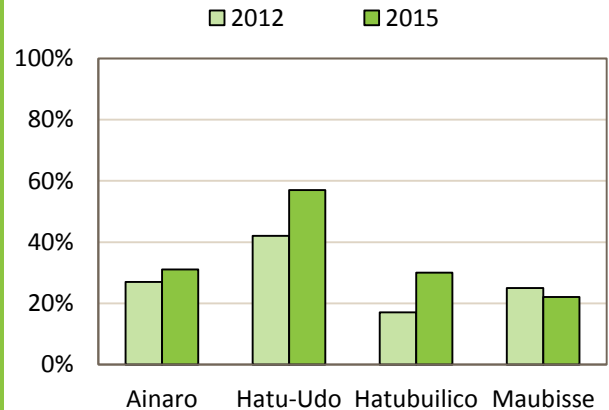
- Use of modern methods of family planning remained high in Manufahi
- Alas had the highest rates of use: 68% of women with children under 2 years of age reported using a modern method
- Family planning use was lowest in Turisca (29%)

Ainaro

23%
2012

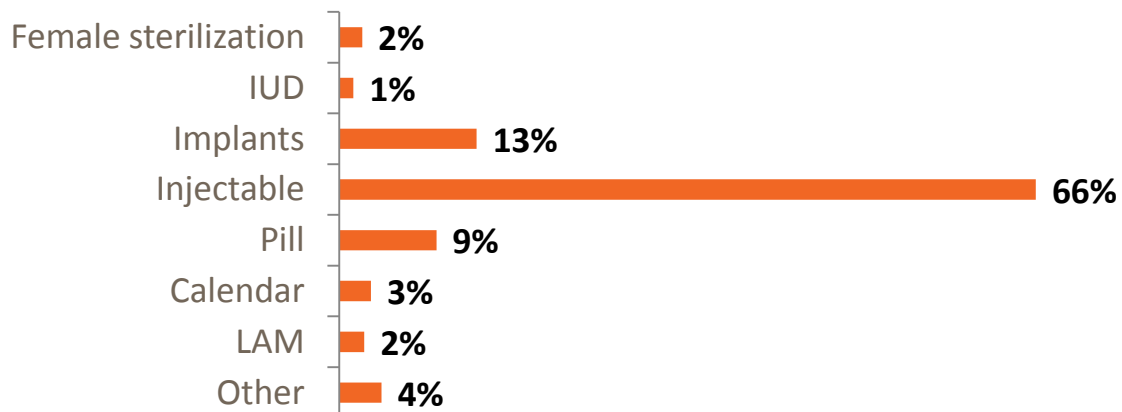
32%
2015

Percent of women who are using a modern family planning method



- Between 2012 and 2015, use of modern methods of family planning improved in three Administrative Posts
- Over half of women with a child under 2 years of age in Hatu-Udo were using a modern method of family planning
- Family planning use was lowest in Maubisse (22%)

If women are using family planning, what methods are they using?



No women reported using condoms, Cycle Beads, or male sterilization with their partners.
Use of long-term methods like IUDs and implants was highest in Alas, Fatuberliu, and Hatu-Udo.

Evaluation of the Liga Inan Program in Manufahi

Who could have participated in the Liga Inan program?

Women who had a mobile phone during pregnancy

90%

- Almost all women had a mobile phone in their home during pregnancy, including 83% of women in Turiscai

Women who received any ANC

94%

- Almost all women received antenatal care, including 86% of women in Turiscai

Women who can read short messages in Tetun

86%

- Tetun literacy was highest in Fatuberliu (94%) and lowest in Turiscai (76%)

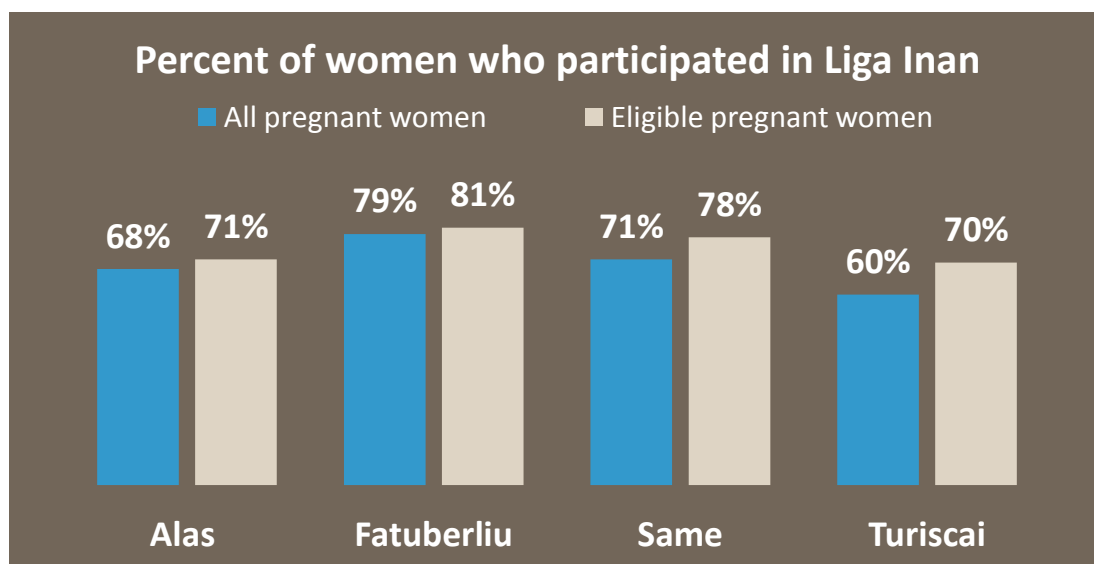
Since most women had someone who could help them read messages, we considered a woman “eligible” if she had a phone AND attended ANC.

84% of women were ELIGIBLE to participate in Liga Inan

Who participated in the Liga Inan program in 2013-2015?

70% of ALL pregnant women participated in Liga Inan

77% of ELIGIBLE pregnant women participated in Liga Inan



Why are these percentage rates higher than previous program estimates?

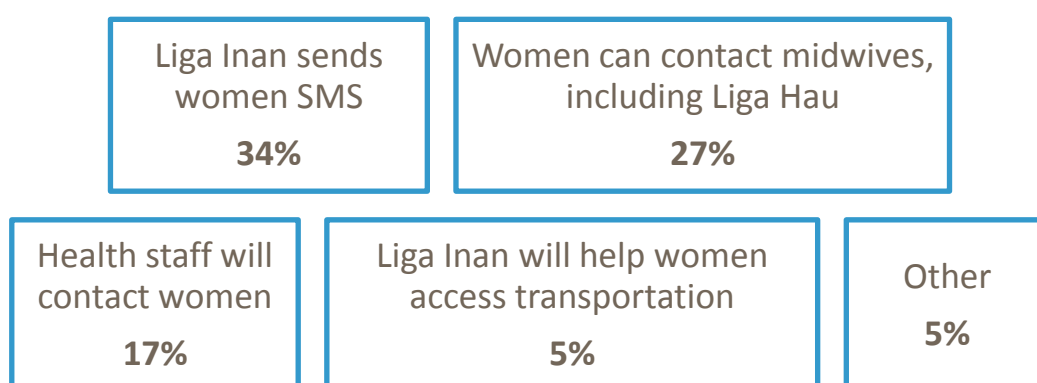
The Liga Inan program has been using population projections from the MOH to estimate the percent of pregnant women who participated each year. These estimates were based on the numbers of children women were having in 2010. As we saw earlier in this report, more women were using family planning in 2013-2015, so fewer women were likely pregnant during this time.

Where do women in Manufahi hear about the program?

69%
of women heard
about the program
from health staff

- 5% of women heard about Liga Inan at SISCa (15% of women in Alas)
- 5% of women heard about Liga Inan through a community meeting (10% of women in Alas)
- 4% of women saw a billboard advertising the program
- 3% of women heard a message about Liga Inan on the radio
- 1% heard about Liga Inan through a PSF

What do women in Manufahi think the Liga Inan program does?



The two parts of the program that women mentioned the most were that they receive SMS messages and that they are able to contact midwives.

Where did women register for Liga Inan?

Administrative Post	CHC or Maternity	Health Post	SISCa Post	Community Event	Other
Alas	28%	31%	41%	-	-
Fatuberliu	74%	10%	7%	7%	2%
Same	82%	16%	2%	-	-
Turiscail	96%	-	2%	2%	-

Each Administrative Post had a slightly different pattern of registrations that are similar to how women access antenatal care.

For example, note the high level of registrations at SISCa and in health posts in Alas, and how women almost exclusively registered at the CHC in Turiscail.

How often did women receive Liga Inan SMS messages?

Twice a week

56%

Once a week

37%

Less frequently

7%

These rates were the same across all Administrative Posts.

Why are these rates lower than previous program estimates?

Follow-up phone calls with women who were actively participating in the Liga Inan program have consistently shown higher rates of women receiving two messages each week. Women participating in this survey may have participated in Liga Inan many weeks, months, or even years before they participated in this survey, and may no longer accurately recall how many messages they received each week.

Did they share the SMS messages with other people?

Around HALF of Liga Inan participants discussed the SMS messages with another person.

These people included:

Friend or neighbor 32%	Husband 26%	Sibling 26%
Health staff 7%	In-laws 5%	Other 8%

What type of contact did Liga Inan participants have with health staff?

Received an SMS announcement about date of SISCa

87%

- Over 90% of women in Fatuberliu and Same, 84% of women in Alas, and 63% of women in Turiscaí received a SISCa announcement on their phone

Tried to contact health staff during pregnancy

70%

- 45% of women said they called health staff directly
- 26% used Liga Hau, but this was higher in Alas where almost half of women used Liga Hau
- 4% used a missed call to contact health staff

Received a call from health staff before delivery

52%

- 63% of women in Fatuberliu, around half of women in Alas and Same, and **only 30% of women in Turiscaí said they received a phone call from health staff before delivery**

Future of the Liga Inan Program

Are the messages clear and sent at the preferred time?

Messages were easy to understand

97%

- 98-100% of women in Alas, Fatuberliu, and Same said the messages were easy to understand
- 90% of women in Turiscaí, where literacy is lowest in the municipality, said the messages were easy to understand

Prefer messages in Tetun

99%

- Additionally, 98% of women in Ainaro said they would prefer to receive messages in Tetun
- 3% of women requested the local language, Mambae
- Very few women wanted Bahasa Indonesian

Prefer to receive messages in the...

Morning 55%

Afternoon 24%

Evening 8%

11% of women have no preference

Did women change their phone numbers?

41%
of women had changed their phone number since they participated in Liga Inan

One of the big challenges to Liga Inan program is when women change their phone numbers and do not alert midwives to this change. These results show that this is a valid concern for the program. Health staff should remember to ask women if they have changed their number and update women's information each month.

Is Ainaro ready to receive the Liga Inan program?

Women who have a mobile phone

85%

- Almost all women have a mobile phone in their home, with the lowest percent of women in Maubisse (83%) and the highest in Hatu-Udo (99%)

Women who received any ANC

93%

- Most women attend antenatal care, with the lowest coverage rates in Hatubuilico (85%)

Women who can read short messages in Tetun

71%

- Tetun literacy was highest in Hatu-Udo (82%) and lowest in Hatubuilico (53%)

The majority of women in Ainaro should be able to participate in the Liga Inan program.

Conclusion and Recommendations

Maternal and newborn health care services

There are many notable strengths and improvements in the health system uptake in Manufahi and Ainaro during the period of 2012 to 2015.

Almost all women in Manufahi and Ainaro attended antenatal care (ANC) at least once during their pregnancy, and over 80% of women in both municipalities attended four or more ANC visits. Women in Manufahi started ANC earlier in their pregnancies than women in Ainaro. The majority of women in both municipalities attended ANC at a CHC, and only 10% of women received ANC at SISCa. Further investigations are necessary to find out if SISCa were not operating or if women simply preferred to receive care elsewhere. In Alas almost half of women (48%) said they received ANC at a SISCa event, which proves that they can be used successfully to deliver this service. During ANC, most women reported that their weight was measured and blood pressure taken, however less than 60% of women are receiving adequate amounts of iron tablets and very few received anti-parasite drugs.

During the last few years, more women delivered with a skilled birth attendant (SBA) and in health facilities in Manufahi, however there were not many changes in Ainaro during this time. This may suggest that the Liga Inan program helped to connect women and health staff in Manufahi and effectively prompted women to seek care at delivery. Women's experiences during delivery may also have an impact on whether women choose to deliver in a health facility: while only 9% of women reported they were yelled at during delivery in a health facility, almost 1 in 3 women who did not deliver in a facility said they had heard stories of women being yelled at. Women who deliver at home may still have a fear of delivering in a health facility that should be overcome with outreach and kindness and not reprimands.

Many women did not think they had received postpartum care for themselves or postnatal care for their babies, despite the high numbers of women who delivered with health staff. It is possible that women did not remember these services well, or that they did not receive an explanation about the health check occurring if, for example, it was done before a woman and her baby left a health facility following delivery. It is also possible that their health and that of their baby was not examined during the 6-48 hour period after delivery.

Traditionally, midwives have provided all maternal and newborn health services in Timor-Leste. The results of this survey show that doctors are now providing much of this care as well. Doctors were present at around half of ANC visits (51%) and half of newborn checks (47%), and more than half of postpartum checks for women (58%). They were also present for 16% of deliveries. Nurses also provided some antenatal care (15%) and postnatal care for newborns (21%). Oftentimes, doctors and nurses have not received proper training in how to deliver these services, but this survey demonstrates there is a clear need for them to also receive such training.

Recommendations for further improving maternal health care access and services:

- Municipality health leadership should re-examine the role SISCa can play in delivering care to mothers and newborns before and after birth, and recommit to this health outreach in areas where service coverage has not been maximized.
- Since doctors are providing many maternal health services, we must ensure they receive the proper training to provide these services with adequate quality and skill. They may need to receive further training in Safe and Clean Delivery and Essential Newborn Care.
- To continue to improve women's experiences in delivery, and hopefully reduce barriers to women seeking care in health facilities, health staff should examine their behaviors during delivery and the birthing environment to see how they can make health facilities more inviting.

Family planning knowledge and uptake

Knowledge of family planning is improving in Manufahi and Ainaro. More women could identify a variety of family planning methods compared to the earlier 2012 survey. Women's knowledge on specific risks and benefits of child spacing still appears low, however more women with children under 2 years of age are using contraceptive methods now. Increases in family planning use were seen in five Administrative Posts. In Ainaro, Hautbuilico, Maubisse, and Turiscai, however, uptake of modern methods remained low, especially the use of long-term methods. And while women are more aware of different methods in 2015, they still have a strong preference for injectable contraception over other family planning methods.

Recommendations for further improving family planning access and services:

- Health staff should provide more information on the specific risks and benefits of child spacing, such as reducing the risk of miscarriage or low birth weight newborns.
- During Family Planning counseling, health staff should provide information on all the contraception methods available.
- More efforts should be made in Hatubuilico, Maubisse, and Turiscai to improve awareness of and access to family planning services.

Implementing the Liga Inan program

Seventy percent of all women who were pregnant in Manufahi in 2013-2015 participated in the Liga Inan program. The health staff in Manufahi worked hard to ensure so many women could participate and this is a great achievement. Around half of women participating in the program received phone calls during their pregnancies and the majority of them (87%) also received SISCa announcements through the program's broadcast messaging function. Women reported that the messages were easy to understand and half of women shared the messages with family members or friends.

This survey has highlighted a few areas where we could continue to improve the program: ensuring that more eligible women participate in the program and helping women to continue to receive all the benefits of the program during the length of their pregnancy.

Health staff appear to be key gatekeepers to the program. Almost all women learned about the program through health staff, which puts the responsibility on health staff to clearly explain all aspects of the Liga Inan program to all pregnant women who attend ANC, wherever that might occur. Alas has been a good example of how health staff can use SISCa events to explain Liga Inan to women and to enroll more women in the program. During this survey, interviewers met a few women who knew about Liga Inan but did not participate because health staff never invited them. These women were too shy to ask to participate. It is important that health staff remember to ask all women if they are interested in the Liga Inan program.

We should also work to ensure that women who participate have the best experience possible through the Liga Inan program. This means that women should understand how the program works, they should receive the SMS messages regularly, and they should be called by health staff before delivery. For women to receive messages, it is important that health staff update a woman's phone number if she changes it during her pregnancy. Finally, only about half of women (52%) said a health provider called them before delivery. If health staff have the correct phone number, they should be able to reach a woman by phone.

Recommendations for further improving implementation of the Liga Inan program:

- Health staff should be sure to explain the Liga Inan program clearly to all women who attend ANC.
- Health staff should be sure to follow-up with women at each ANC visit to ask whether she is still using the same phone number or has any questions about the Liga Inan program.
- Health staff should attempt to call women 3 weeks before their expected date of delivery to help encourage them to deliver with a skilled birth attendant and/or in a health facility.