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## RESEARCH REPORT

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**Knowledge, Attitudes and Practices Related to Health Care during pregnancy, birth, postpartum, and care for newborn and children up to 2 years old in Gaza, Nampula and Tete Provinces - Mozambique**



*Submitted by:*



**Maputo**  
**October, 2014**

## Technical Information

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## Abbreviations and Acronyms

EA	Enumeration Area
ANC	Antenatal Care
IUD	Intrauterine device
DHS	Demographic and Health Survey
MMI	Model Maternity Initiative
INE	National Institute of Statistics
MCHIP	Maternal and Child Health Integrated Program
MICS	Multiple Indicator Cluster Survey
MOH	Ministry of Health
ITN	Insecticide Treated Nets
LLIN	Long Lasting Insecticidal Nets
WHO	World Health Organization
FP	Family Planning (incl. HIV/AIDS and Malaria Services)
PMTCT	Prevention of Mother To Child Transmission
MNCH	Maternal, Newborn & Child Health
RH	Reproductive Health
ART	Antiretroviral Therapy
TIP	<i>Tratamento Intermitente Preventivo (com antimalárico)</i> Antimalarial Prevention Treatment
HF	Health Facility
USAID	The United States Agency for International Development
TT	Tetanus Toxoid Vaccination

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## 1 EXECUTIVE SUMMARY

This research is part of the Maternal and Child Health Integrated Program (MCHIP) developed by the Ministry of Health (MOH), in partnership with Jhpiego, Save the Children and other cooperation partners in Mozambique.

The MCHIP is a global initiative and has the overall objective to contribute to the reduction of maternal, neonatal and child mortality in Mozambique through an increased use of high-impact interventions for Maternal Newborn and Child Health (MNCH) and Reproductive Health (RH), Family Planning (FP) (including HIV/AIDS and Malaria services). The MCHIP has the following specific objectives:

- Work with the MOH and all partners of the United States Government to create a favorable environment at national level for providing high-impact interventions of MNCH/RH/FP in the community and Health Facilities (policies, new approach to connect communities and Health Facilities, Health Information System, and studies to improve MNCH/RH/FP services).
- Support the efforts of the MOH to expand national coverage of high-impact interventions for MNCH through the expansion of Model Maternity Initiative (including Prevention of Mother To Child Transmission, Malaria, Antenatal and Postnatal care), in collaboration with partners of the United States Government in all provinces.
- Support MOH to strengthen the development of human resources to deliver basic health services and broader obstetric and neonatal emergencies and RH.
- Support the expansion of the activities of Breast and Cervical Cancer Control (BCCC) using the single visit approach and help with the implementation of the "Action Plan for Strengthening and Expansion Services for Breast and Cervical Cancer Control" of MOH.
- Assist in the development and implementation of preventive measures of FP/RH services for management and referral for selected health facilities.

In this context, and in partnership with MOH, MCHIP planned to carry out this Survey in six districts located in three provinces (Gaza, Tete and Nampula). Within these districts, the study focused on communities where actions are underway to promote health under the MCHIP. The main objective of the study was to *collect information about the level of knowledge, attitudes and practices related to pregnancy, childbirth, postpartum and newborn and child care up to two years old.*

To ensure the achievement of the main objective of this study, information was collected to determine values for a total of 43 indicators of Maternal, Newborn & Child Health and Reproductive Health in different subpopulations. The questionnaire used in research had 79 questions divided into three sections, covering seven dimensions: 1) Immunization against Tetanus, 2) Maternal and Neonatal Care, 3) Breastfeeding, 4) Malaria, 5) Family Planning and Contraception, 6) HIV / AIDS and 7) Community Work.

In the six districts covered by the research, 1.607 households were visited. Among these, in 1.521 it was possible to conduct one (or two) interview(s). Excluding 34 questionnaires that had to be invalidated, 1433 women aged 18 to 49 years were interviewed and it was possible to collect data on 977 children aged up to 24 months old. Of the 1433 women surveyed, 61% have at least one child up to 24 months of age and 63% had a pregnancy and / or childbirth in the last 24 months, while almost 10% is currently pregnant.

The main results of the Research are briefly presented below:

**Table 1. Summary of Indicators**

<b>Dimension 1: Immunization against Tetanus</b>		
<b>1.</b>	Percentage of women aged between 18 and 49 years with children up to 24 months of age who received at least two doses of tetanus toxoid vaccine during their last pregnancy.	58%
<b>Dimension 2: Maternal and Neonatal Care</b>		
<b>1.</b>	Percentage of women aged between 18 and 49 years who are aware of at least two danger signs of pregnancy.	54% (spontaneously) 95% (after reading)
<b>2.</b>	Percentage of mothers aged between 18 and 49 years with children up to 24 months of age who have prepared at least two elements of the birth plan.	97%
<b>3.</b>	Percentage of women aged between 18 and 49 years with children up to 24 months of age who have developed their birth plans with the involvement of their partners / husbands. <sup>1</sup>	67%
<b>4.</b>	Percentage of women aged between 18 and 49 years that had at least one antenatal care consultation with a health care professional during their last pregnancy.	98%
<b>5.</b>	Percentage of women aged between 18 and 49 years with children up to 24 months of age who had at least four antenatal care consultations with a health professional during their last pregnancy.	68%
<b>6.</b>	Percentage of women aged between 18 and 49 years with children up to 24 months of age who went together with their partner / husband at least one antenatal care consultation during their last pregnancy.	37%
<b>7.</b>	Percentage of decision-makers about the attendance of women aged between 18 and 49 with children up to 24 months of age, to an antenatal care appointment.	Herself: 68% Husband/partner: 17% Joint decision: 6% Other member of the family: 8%
<b>8.</b>	Percentage of mothers aged 18 to 49 years with children up to 24 months old, whose last birth occurred in a health facility.	87%
<b>9.</b>	Percentage of women aged between 18 and 49 years with children up to 24 months of age who were assisted by a health professional during their last delivery.	85%
<b>10.</b>	Percentage of decision-makers on the choice of the birth place	Herself: 56% Husband/partner: 11% Joint decision: 5% Mother: 8% Mother-in-law: 3% Other woman: 3% Other: 14%
<b>11.</b>	Percentage of children under 6 months of age who were first seen by a health professional in the above period: a) before the 3 <sup>rd</sup> day of life, b) between the 4 <sup>th</sup> and 7 <sup>th</sup> day c) between the 8 <sup>th</sup> and 28 <sup>th</sup> day after birth	a) 42% b) 42% c) 5%
<b>12.</b>	Percentage of children under 6 months who have had . . . prior to the 28th day and in accordance with the standard: a) 1 medical appointment, b) 2 medical appointments, c) 3 medical appointments	a) 41% b) 15% c) 9%

<sup>1</sup> Considering only women who claim to have one partner.

Dimension 3: Breastfeeding		
1.	Percentage of mothers aged 18 to 49 years with children up to 24 months old who breastfed their children within the first hour after birth.	57%
2.	Percentage of children aged between 0 and 3 months who were exclusively breastfed.	85%
3.	Percentage of children aged between 0 and 6 months who were exclusively breastfed.	79%
4.	Average age at which children up to 24 months stopped being breastfed.	16 months
5.	Percentage of children 6-9 months who received breast milk and complementary foods	<i>It was not possible to indicate</i>
Dimension 4: Malaria		
1.	Percentage of pregnant women aged between 18 and 49 years that slept under an insecticide treated mosquito net in the night before the survey.	62%
2.	Percentage of women 18 to 49 years with a child up to 24 months of age who reported to have taken Fansidar during the last pregnancy for Malaria prophylaxis.	87%
3.	Percentage of children up to 24 months of age who slept under a mosquito net in the night before the survey.	78%
4.	Percentage of children up to 24 months of age who slept under an insecticide treated mosquito net in the night before the survey.	58%
5.	Percentage of children up to 24 months of age who slept, in the night before the survey, under a mosquito net that was treated with insecticide in the past six months.	28%
Dimension 5: Family Planning and Contraception		
1.	Percentage of women aged between 18 and 49 years who use a contraceptive method.	Currently: 30%; In the past 12 months: 43%
2.	Reasons why women aged between 18 and 49 years, although they want to avoid pregnancy, are not using any modern method for doing so.  <i>The proportion of women aged between 18 and 49 years, although they want to avoid pregnancy, are not using any modern method for this is 15% (of total female respondents)</i>	Husband does not allow: 28% Myths / beliefs: 18% Doesn't know how to use: 17% Amenorrhea for nursing: 16% Abstinence: 9% Was advised against: 5% Religion does not allow: 4% Collateral effects: 3% Unaware of access site: 1%
3.	Proportion of people who make the decision for women aged between 18 and 49 years to seek family planning services.	Herself: 53% Husband/partner: 28% Joint decision: 17% Other person: 3%
4.	Proportion of people who make the decision for women aged between 18 and 49, <b>married or cohabitating</b> , to seek family planning services.	Herself: 48% Husband/partner: 32% Joint decision: 18% Other person: 3%
5.	Proportion of people who make the decision for women aged between 18 and 49 years, <b>unmarried</b> , to seek family planning services.	Herself: 64% Partner: 11% Joint decision: 20% Other person: 5%
6.	Percentage of women aged between 18 and 49 years that had access to written information (brochure, poster, newspaper, etc.), radio or TV about the importance of family planning and where to go for family planning.	Had access to information: 91%; Know where to go: 98%

7.	Percentage of women aged between 18 and 49 years old who are doing some method of family planning and who were informed about the possible side effects of contraceptives.	66%
8.	Percentage of women aged between 18 and 49 years old who are doing some method of family planning and were informed on <b>what to do</b> in case of the appearance of any contraceptives side effects.	59%
9.	Proportion of women between 18 and 49 years than in the last 12 months stopped using a particular method of family planning.	38%
10.	Proportion of the reasons that caused a change of the previous method of family planning (used in the past 12 months) to the current, in women aged between 18 and 49 years.	Wish to become pregnant: 45% Uncomfortable: 28% Side effects: 11% Other reasons: 15%
<b>Dimension 6: HIV/AIDS</b>		
1.	Percentage of women aged between 18 and 49 years already tested for HIV.	91%
2.	Percentage of women aged between 18 and 49 years who were tested in the past 12 months and received the results of the last test.	56%
3.	Percentage of women aged between 18 and 49 years who were tested in the past 12 months and have discussed the results with the partner.	41%
4.	Percentage of women aged between 18 and 49 years who gave birth in the last two years and have received counseling before HIV test during antenatal care consultation.	77%
5.	Percentage of women aged between 18 and 49 years who gave birth in the last two years and did an HIV test during the antenatal care consultation.	91%
6.	Percentage of women aged between 18 and 49 years who had access to information about the importance of HIV test according to the source:	Health professional: 87% Family members: 19% Husband/Partner: 9% Friend: 21% Radio: 35% Television: 19% Newspaper: 1% Other: 15%
<b>Dimension 7: Community Work</b>		
1.	Percentage of women who are aware of the existence of community structures (Health Committee and the Co-Management Committee) working to improve access and quality of health services	44%
2.	Percentage of women who have used the Health Committee: as a member, as a participant in an activity or as a person who brought a concern to the Committee	Member: 6% Participant in an activity: 13% Person who brought a concern: 0%
3.	Percentage of women aged between 18 and 49 years that in the last year received a visit from a community agent promoting reproductive health.	27%
4.	Percentage of women aged between 18 and 49 years who during the last year participated in an education session for women's and children's health organized by community agents.	21%

## 2 INTRODUCTION

This research is part of the Maternal and Child Health Integrated Program (MCHIP) developed by the Ministry of Health (MOH), in partnership with Jhpiego, Save the Children in Mozambique and other cooperation partners.

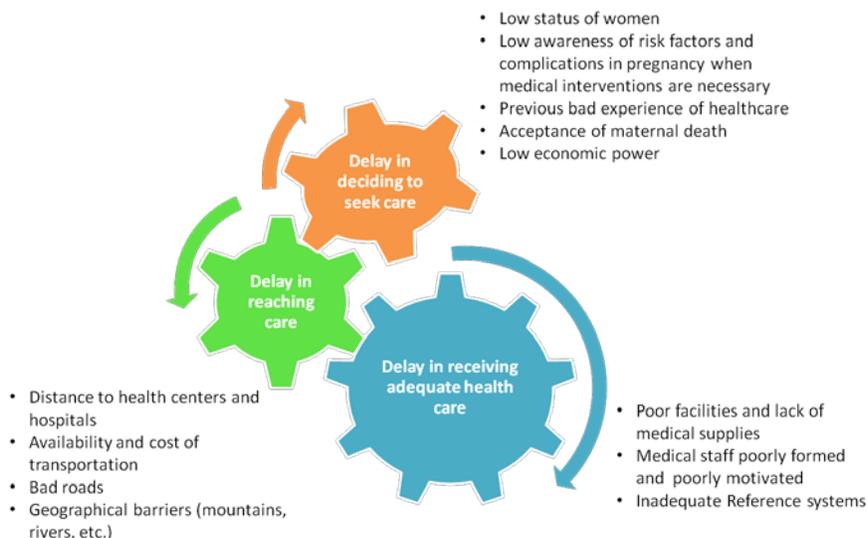
MCHIP, a program funded by the United States Agency for International Development (USAID), aims to improve the quality of maternal and newborn health services through the implementation of "Model Maternity", including obstetric and neonatal emergency care and preventive services for family planning and reproductive health.

The main approach of the MCHIP is the humanization of maternal care which consists of:

- Focus on the individual;
- Emphasize the fundamental rights of mothers, newborns and families; and
- Promote evidence-based practices that recognize women's preferences and needs.

It is known worldwide the nature and complexity of the interconnection between the various factors that can prevent women from having access to high quality maternal care and family planning.

The integrated approach of maternal health is based on the model of the "Three Delays" that acknowledges the different barriers that women face in achieving timely and effectively health care needed to prevent deaths in pregnancy and childbirth. The model identifies three groups of factors that may prevent women from accessing levels of maternal health care they need, as outlined in the following figure.



**Figure 1: Barriers to Maternal Health**

Adapted from the Three Delays Model of Thadeus & Maine (1994)<sup>2</sup>

<sup>2</sup> Thadeus S & Maine D (1994) Too far to walk: maternal mortality in context. *Social Science and Medicine* 38(8), 1091–1110

The components of MCHIP address the different barriers: the component of working with communities tries to address the barriers 1 and 2 and the clinical component attempts to address the third barrier.

MCHIP's support to MOH in the implementation of the Model Maternity Initiative (MMI) began in 2009 through the introduction / strengthening a process of quality improvement and humanization focusing on performance standards in Maternal and Child Health Services. Initially, MCHIP supported the implementation of the MMI in 34 hospitals in 11 provinces. By 2014, MCHIP has been providing support to MOH to expand the MMI in 124 maternity wards throughout the country

In addition to the support to strengthen health services, MCHIP also works with communities to create greater individual and community ownership and collective action to improve maternal, newborn and child health. To address the social and behavioral determinants of maternal, neonatal and child health through the promotion of positive health practices in individual, family and community, the program aims to promote a greater use of health services provided by health facilities. The program also aims to include the community in improving quality care, especially from the perspective of the customer, through the Co-Management Committees. As the program's resources were not enough to include a community component for each of the health facilities involved in the MMI, 22 communities were selected in collaboration with the MOH as **intensive focus communities**.

This research falls under this context and its main objective is:

- *To collect information about the level of knowledge, attitudes and practices related to pregnancy, childbirth, postpartum and newborn care and child under two years of age to serve for evaluating the actions of community mobilization on health populations in the areas covered by MCHIP interventions.*

The specific objectives of the research are:

1. Identify the level of knowledge and practices of women between 18 and 49 years of age in family planning and in terms of contraceptive usage and methods, as well as the reasons why they use or not;
2. Evaluate the coverage of the utilization of maternal and child health services on pregnancy related to antenatal and postnatal care, childbirth, breastfeeding and vaccination;
3. Identify attitudes and practices related to malaria prevention in women aged between 18 and 49 years old who gave birth in the last 24 months and in children under 24 months;
4. Measure the levels of knowledge, attitudes and behaviors of women aged 18 to 49 years with regard to counseling and testing of HIV / AIDS;
5. Estimate the level of knowledge and participation of women aged 18 to 49 on actions to improve the access and quality of health services, promoted by community structures.

The relevance of this study lies mainly in the fact that its contents were gathered from primary sources and can serve as: a) input for decision making regarding the approaches and strategies for intervention with the target subpopulations; b) points of reference and comparison with future studies on the same subject.

### 3 METHODOLOGICAL APPROACH

#### 3.1 SAMPLING

##### 3.1.1 Definition of the domain and sampling units

The main goal of this study is to obtain information on the level of knowledge and attitudes related to pregnancy, childbirth, postpartum, newborn and child (up to two years old) care with the purpose of monitoring the actions of community mobilization under the MCHIP program in six districts located in the provinces of Gaza, Nampula and Tete. Within these districts, some with urban characteristics and with other rural characteristics, the study focuses on communities where work is underway under the Program, communities called as "intensive focus". These communities shall be known as the "intervention area".

The MCHIP program was responsible for the selection of the six districts; the extent of the area of intervention was based on information provided by Save the Children (see Appendix 1). It was intended to obtain valid indicators with acceptable accuracy within the **area of intervention in each of the six districts**.

The following Table provides some demographic data of each of the six districts

**Table 2. Demographic data of the six districts covered by the survey**

Province	District	Population	Number of Households	Women between 18 and 49 years	Children up to 24 months
Nampula	Nampula City	471.717	88.651	112.937	33.110
	Angoche	276.471	68.739	62.483	18.573
Tete	Tete City	155.870	26.511	34.671	10.506
	Mutarara	207.010	41.918	44.560	15.000
Gaza	Xai-Xai District	209.434	39.726	51.612	14.000
	Mandlakaze	165.071	38.354	36.662	10.750

Source: Data from the 2007 Census, provided by INE

This study aims to determine a total of 43 indicators divided into seven dimensions. A list of these indicators is presented in Annex 2. One factor that impaired the methodological design of the study is that the indicators are defined in terms of different populations - some are formulated in terms of women, others are defined in terms of children – and subpopulations such as single women, women with children under 24 months of age, pregnant women, children aged 0 to 3 months, children aged 0 to 6 months, etc. All 43 indicators define a total of 18 different subpopulations. More details on these subpopulations can be found in Annex 3.

The elements of subpopulation – women and children – are called *sampling units*. Creating 18 different samples would be unfeasible, so it was decided to create a sample with a sufficient number of women 18-49 years of age and children under 24 months of age. This option results in a limited loss of accuracy in some indicators. While some of the indicators can be calculated with an acceptable level of accuracy for the intervention area in each district, others can only be calculated at the level of the entire intervention area. A comparison between districts is not possible for all indicators.

### 3.1.2 Sample Design

To ensure the estimates for the intervention area in each district with a certain margin of error (and with a certain confidence level), the minimum size of a simple random sampling could be calculated using the usual formulas<sup>3</sup>. These calculations indicate that a simple random sample of about 200 per district would be enough to ensure a margin of error not exceeding 7%, while in a sample of 150 provides a margin of error of 8% at a confidence level of 95%.

Practically speaking, this means that is necessary to use more complex sample designs, which introduces a "design effect" which implies a greater margin of error for the same sample size. In other words - in order to maintain the same level of accuracy it is necessary to increase the sample size. There is no formula to calculate the effect of design in advance. The sampling design followed in this study was the multi-step statistical comparison.

The selection of respondents was done in stages. The first step consisted in choosing the number of clusters in each intervention area at the district level. A cluster corresponds to an Enumeration Area (EA), set during the last General Population and Housing Census, in 2007. In general, each rural EA has between 80 and 100 households while an urban EA has between 100 and 150 households.

The selection of clusters was made by the National Statistics Institute (INE) with Probability Proportional to Size (PPS), using the number of households in each cluster as a measure of size. In total, 65 clusters (see Annex 4) were selected. The number of clusters varied slightly between districts (10-12) due to the variability in demographic characteristics such as the number of women and children per household.

Within each cluster, the households to be visited were randomly selected. The number of households to visit in each cluster was set to 24 in urban areas and 28 in rural areas. The difference between these numbers is explained by the INE, depending on factors such as the greater heterogeneity of the variables in urban areas. This number of clusters should be large enough to find in them a sufficient number of eligible women and children<sup>4</sup>. The Research team requested INE to provide estimates of the minimum number of clusters - based on updated data on the composition of the population in each cluster - but unfortunately the INE did not provide this data.

Based on a countrywide statistical data it was feared that there was a real possibility of not achieving the defined minimum numbers of eligible women (at least 200 per district) and especially of children (at least 150 per district). Therefore it was decided to introduce quotas: a minimum number of women (20) and children (15) per cluster. In each cluster, the interviewers should visit the set number of aggregates and, if necessary, continue to visit households to the minimum number of women and, if still necessary, continue to achieve the minimum number of children. Table 3 below shows the resulting sample plan.

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<sup>3</sup> The formula to calculate the sample size is  $n = \frac{z_c^2 pqN}{z_c^2 pq + \varepsilon^2(N-1)}$ ; at a confidence level of 95%, so  $p = q = 0,5$  and to N large enough, the value of  $n$  reaches  $n = \frac{1}{\varepsilon^2}$ .

<sup>4</sup> Women between 18 and 49 years old and children up to 24 months old.

**Table 3. Sampling**

Province	District	EA	Households	Women between 18 and 49 years	Children up to 24 months
Nampula	Nampula City	12	288	240	180
	Angoche	11	264	220	165
Tete	Tete City	10	240	200	150
	Mutarara	11	296	220	165
Gaza	Xai-Xai City	11	300	220	165
	Mandlakaze	10	280	200	150
<b>Total</b>		<b>65</b>	<b>1668</b>	<b>1300</b>	<b>975</b>

Without prior information on which households had eligible women and children, and in an attempt to gain time, we chose to draft a complete listing of all households residing in the cluster. From these lists the households with eligible women and children would be randomly selected. In this context, the forms were drawn and sent to the field officers of the MCHIP who were responsible for the coordination and development of the aforementioned lists.

In each household, a listing of all habitually resident members was drafted to determine the number of eligible women and children. For this purpose, Page 2 of the Questionnaire<sup>5</sup> was used. In households with more than one eligible woman, the selection was based using the *next-birthday method* - regardless of her having or not having a child. This woman would respond to Section A of the Questionnaire and to Section B, when applicable. For women with a child up to 24 months old, information about this child was also collected (Section C). If she did not have a child in this age group, when possible, the youngest eligible child in the household was selected. It was also checked whether there were any women in the household that could accurately respond questions about this child, and the selected woman was then interviewed. This method was chosen to ensure a relative (though not perfect) independence between samples of women and children without greatly compromising the logistics (and cost) of the study.

### 3.1.3 Adjustments to the methodology

Unfortunately, the data provided by INE were not detailed enough to accurately locate all selected enumeration areas; INE did not provide mapping information, or geographic coordinates. The location of the areas of the survey depended mainly on the names (districts, blocks, villages, communities and other subdivisions) provided. The identification of these areas was made in conjunction with field officers of MCHIP.

In the case of the districts of Angoche and Nampula City, the information provided by the INE did not match the reality on the ground (according to local authorities, all the names given referred to areas in neighboring districts, which forced an identification exercise on the ground of areas that could be used as substitutes for the enumeration areas defined by INE within the same community.

<sup>5</sup> For more details see Subsection 3.2.

In two cases, the Enumeration Areas had to be replaced, due to the poor roads conditions and lack of access (one on Mandlakaze and one in Mutarara). In the case of Mandlakaze, unfortunately the replaced community was not part of the intervention area of the program and the data collected had to be invalidated.

The listing of all residential structures was used in the first enumeration areas where the study took place (in the district of Xai-Xai). However, this proved to be impractical since the lists made by the field officers were of poor quality, resulting in the selection of households that did not correspond to the list.

The Research team then decided to go for systematic selection. Interviewers would move in different directions from a central point, visiting every n-th residence to complete the set number of households, women and children. The number "n" was chosen by the supervisor on the basis of an estimate of the number of households and the extent of enumeration area that should not be too large when the cluster was small or too small when the cluster was big. When it was not possible to collect data in a specific household in the first visit, the household would be revisited later, up to a maximum of three visits.

More details on the sample carried out can be found in Annex 5.

### 3.2 DATA COLLECTION TOOL

For data collection, a Questionnaire with a total of 79 Questions was used. The Questionnaire covered the indicators set by MCHIP in the following 7 dimensions defined for this study:

1. Immunization against Tetanus
2. Maternal and Neonatal Care
3. Breastfeeding
4. Malaria
5. Family Planning and Contraception
6. HIV/AIDS
7. Community Work

The Questionnaire is attached to this document – Annex 6 and it is divided into three sections.

Section A collects information about women aged between 18 and 49 years old.

Section B collects information about women aged between 18 and 49 years that fitted in at least one of the following categories:

1. Has a child up to 24 months old;
2. Is currently pregnant;
3. Had a pregnancy in the last 24 months;
4. Had a delivery in the last 24 months.

Section C has questions regarding children up to 24 months old.

The combination of sections filled varied depending on the composition of each household. As shown in the following table, in about 60% of the cases all the Sections were filled. In total, Section A was completed

1433 times, Section B, 1016 times and Section C, 977 times. The numbers in this Table refers only to valid questionnaires.

**Table 4. Completed Sections in the Questionnaire**

		N	%
<b>Sections</b>	A	375	25,2
	A and B	135	9,1
	A, B and C	881	59,2
	A and C	42	2,8
	C	54	3,6
	<b>Total</b>	<b>1487</b>	<b>100,0</b>

### 3.3 PROCEDURES

#### 3.3.1 *Preparing for Data Collection*

Previous to the beginning of the fieldwork, a "pilot" was conducted in the Municipal District of Ka tembe in order to verify the quality of the questionnaire and procedures for the data collection in a population that has similarities to the target group of this study. The experience of this "pilot" showed the need for a profound reorganization of the questionnaire, which was subsequently undertaken and resulted in the version presented in Annex 6. The experience of the pilot study also showed the need to work exclusively with female interviewers.

The fieldwork took place between the months of May and June 2014, and it was decided to collect, in first place, the data from the province of Gaza, following by the Tete province, and finally, in Nampula province, according to the plan initially set.

All fieldwork was coordinated by a highly experienced person in data collection and coordination of interviewers' team. The interviewers were recruited and selected locally, based on the following requirements:

- To be Mozambican and to be resident in the Province (being surveyed);
- To be aged between 18 and 40 years;
- To speak fluently the local languages (of the Province being surveyed);
- To have experience in health studies;
- To have a high sense of responsibility;
- To have completed the 12<sup>th</sup> Grade at least.

The interviewers were all residents in the respective surveyed provinces. In each province there was at least one interviewer with a Higher Education degree. All interviewers had more than five years of experience in similar work in various areas, particularly in Health, having worked in household interviews for studies like the DHS, MICS, etc.

In each province, we dedicated three whole days to carry out an intensive training for the field team. The covered issues were: Objectives of Survey and target group; Sampling; How to conduct the interview;

Respect for ethical issues; Questionnaire sections and instructions to complete it; The process of supervision, control and verification of the work of interviewers and instructions for field work. The last day of the training was dedicated to performing a practical simulation exercise in the field. The results of this training ensured the necessary knowledge for the field work.

Based on the training results, four interviewers were selected (out of the five attending the training) for the data collection phase, and one remained as a substitute, if needed.

As part of the logistic for the field work, we prepared and delivered Credentials to the Field Coordinator and all interviewers, in order to facilitate their introduction to mobilize support for the field work with the local structures in the districts.

### **3.3.2 Data Collection**

The willingness to participate and to provide data was a principle respected throughout the data collection process. For this purpose, prior to the interviews, the interviewers would read the contents of the information sheet to the participant, ensuring that it was understood and the desire to cooperate in the research was clear – confirmed by signing the Consent Form. The Information and Consent Sheets are attached to this Report - Annexes 7 and 8.

Similarly, before any interview and, in some cases, even throughout the interview, the interviewers explained to the interviewees that the data they were providing was confidential and would be treated in a way that would not reveal their identity.

All interviews were conducted privately and individually to ensure that the respondents were comfortable to talk about the proposed themes and to offer serious and truthful answers.

During the fieldwork, the coordinator carried out the verification of the questionnaires to ensure the quality of the interviewers work.

### **3.3.3 Data Processing**

At the end of the fieldwork, the questionnaires were rechecked and entered into a software by a team of data entry clercks, who were specifically trained for this task. One portion of the information was entered twice, to reduce the occurrence of typing errors. For data entry, it was used software called CSPro 5.0 (Census and Survey Processing System), of public domain, available from the US Census Bureau (cf, <http://www.census.gov/>). CSPro is a specialized software for entering, editing, and tabulation of data from surveys and censuses, but its ability for data analysis is limited in comparison with specialized statistical software packages. For practical reasons, the information about the composition of each household was treated separately from the rest of the questionnaire. For both sides a digital version of the questionnaire was developed to ease the work of the data entry clercks.

After data entry, the data was exported to SPSS and cleaned-up. After this, analysis and calculation of the indicators using descriptive statistical procedures, frequency tables, calculating averages, etc was conducted. Quality assurance routines were developed and applied throughout this process in order to eliminate all coding errors (by the interviewers) and data entry clercks.

Of 1,521 completed questionnaires, 32 had to be eliminated because they were made in a community (Macuacua, in the district of Mandlakaze) that is not part of the program intervention area. Two other questionnaires were invalidated because they were filled incompletely or inconsistently. The total number of valid questionnaires was thus 1487.

### 3.4 STUDY LIMITATIONS

Studies like this, entailing thematic complexity and diverse in objectives, are subject to various limitations and constraints.

Some of these limitations stem from the instrument used. A questionnaire is a convenient way to collect standardized data from many people in a short period of time, but there are several studies showing that the answers are influenced by numerous factors. One factor is the inclination to please the interviewer, giving a response considered "right" or a more socially acceptable answer. When the questionnaire has questions about a sensitive subject, on which some of the interviewed are not used to speak openly, it can complicate the situation even more. Despite all the efforts made to gain the trust of respondents and to respect their opinions, we cannot be 100% sure that the answers reflect the exact reality.

This aspect should be taken into account when interpreting the results and if some indicators have higher values than expected (the number of labors in a Health Facility and antenatal appointments, the percentage that use a mosquito net, etc.). The hypothesis that these values were "inflated" by factors such as those mentioned above cannot be excluded.

In other cases, the answer may not match to the reality due the lack of information. If we ask, for example, if the woman in question was seen by a physician or health professional, she may not know the professional category of the person who assisted her, yet she might feel compelled to give an answer.

The expectations regarding the purpose of the study also influence how the questions are answered. The respondent may, for example, deny having a mosquito net at home hoping that the Program will offer her one.

As with all surveys, there is the problem of non-response and incomplete answers, which negatively influence the representativeness of the results. Despite all the efforts made during the training phase, there will always be human errors in writing down or interpreting the answer, or in following the structure of the questionnaire.

In the data processing phase it is necessary to make decisions when it comes to inconsistent responses; in some cases the option is to invalidate one or more answers (as if the questions were not answered), in others it is necessary to invalidate the entire questionnaire. Due the effort of preparing the questionnaire and the proper care when asking the questions, only two questionnaires had to be invalidated for inconsistency.

The study limits the target to women between 18 and 49 years and children up to 24 months old. But many people, particularly in rural areas, do not know their age or of others. As a result, data of women or children outside this range may have been entered in this study, however we believe that will be very few cases, if any.

The reality in the field sometimes requires the replacement of the selected enumeration areas (EAs) for sampling by others with similar characteristics. In this study, there were several replacements because of wrong information provided by INE or due the roads conditis and lack of access. In one case, the

replacement area was not part of the MCHIP program intervention area and consequently all data obtained in this EA had to be invalidated.

The collaboration with INE was unfortunately disappointing. The EAs used in the Census did not normally constitute an easily recognizable unit on the field and in most cases the local population does not know where one EA ends and where another one starts. This problem could have been overcome if INE had provided maps from the last Census indicating the location of each EA. Without a clear definition of the location and boundaries of the EA, the delimitation of the area where the interviews should be made is prone to errors.

The mistakes made by the INE in the definition of EAs, especially in Nampula and Angoche, where the names were not recognized locally, and according to local authorities, they belong to other districts, forced replacements. Although the replacements were done in cooperation with people involved in the Program, this was not ideal.

One of the consequences of the forced replacements is that it is no longer possible to calculate the weighting factors (which should be based on updated data on the number and composition of households in each EA). Since the number of households, women and children interviewed by district is roughly proportional to the respective totals by province (cf. Tables 2 and 5), we can say that even without weighting, the aggregate data are reasonably representative for the total area of intervention.

The definition of the 43 indicators in this study for different populations and sub-populations is another limitation. In a study of relatively limited size, it is not possible to achieve a large and diverse sample to answer all indicators with the same accuracy. In future studies of this nature it is preferable to define the indicators in terms of the same population (e.g., some of the indicators on "children up to 24 months old" could be redefined in terms of "women with children up to 24 months old" without losing much information) and limit the number of subgroups.

There were also unexpected external factors which influence the field work and its results, at some extent. In some cases, local authorities did not show up in the scheduled day to give their approval, creating constraints in meeting the pre-established schedule.

The fieldwork in the last two districts – Angoche and Nampula – coincided with the celebration of the National Health Week (16-20 June), promoted by the Ministry of Health. During this week the main issues addressed are related to maternal and child health and the importance of vaccinations. This may have influenced the answers of respondents (e.g. in access to family planning information and knowledge of danger signs during pregnancy).

In Nampula City, the change in the Municipal Government created some constraints at the community level. There was one case where conflicts between the outgoing Secretary and its successor forced to interrupt the interviews before completing the established quota. In another case, the interview had to be stopped because the interviewer was kicked out of the house when the husband of the respondent arrived.

## 4 RESULTS

Due to the invalidation of a total of 34 questionnaires for reasons explained in section 3.3, the actual sample (see Annex 5) is different from the validated sample for analysis. Thus, the results presented in this chapter are based on the analysis of the sample shown in Table 5 below.

Annex 9 of this document presents the indicators listed in Table 1 of the Executive Summary disaggregated by district.

**Table 5. Validated Sample**

Province	District	EA	Households	Women between 18 and 49 years	Children up to 24 months
Nampula	Nampula City	12	284	283	199
	Angoche	11	261	257	184
Tete	Tete City	10	229	218	151
	Mutarara	11	249	236	163
Gaza	Xai-Xai City	10	238	219	156
	Mandlakaze	10	226	220	124
<b>Total</b>		<b>64</b>	<b>1487</b>	<b>1433</b>	<b>977</b>

Of the 1433 women surveyed, 61% had children under 24 months of age and 10% were pregnant at the time the survey was conducted. At the same time, 907 reported having been pregnant and given birth in the 24 months preceding the survey, as shown in the following table. Evidently these events are not mutually exclusive, which explains why the sum of the percentages in Table does not equal 100.

**Table 6. Gestational situation of women surveyed**

		Overall	Na	An	Te	Mu	XX	Ma	
Status of the women interviewed	Has child up to 24 months	N	877	191	175	130	144	130	107
		%	61,2	67,5	68,1	59,6	61,0	59,4	48,6
	Currently pregnant	N	138	31	32	18	27	17	13
		%	9,6	11,0	12,5	8,3	11,4	7,8	5,9
	Had a pregnancy in the past 24 months	N	907	194	179	132	146	139	117
		%	63,3	68,6	69,6	60,6	61,9	63,5	53,2
	Gave birth in the past 24 months	N	907	194	176	132	147	141	117
		%	63,3	68,6	68,5	60,6	62,3	64,4	53,2
	None of the above	N	417	66	56	68	67	66	94
		%	29,1	23,3	21,8	31,2	28,4	30,1	42,7

**Caption:** Na –Nampula City, An – Angoche, Te –Tete City, Mu – Mutarara, XX – Xai-Xai, Ma - Mandlakaze

The following Sections show in detail results of this study per indicator. When relevant and possible, the results are compared with the findings of the Demographic Health Survey (DHS) of 2011.

Whenever the case asked for and wherever possible, we created cross-tabulations between the results of the indicators and the dimension of Community Work (Dimension 7) in order to assess whether there were

different results among respondents that benefited from the community work (if they had a visit from the community agent promoting Reproductive Health or if they participated in community education sessions) and those who did not benefit. A more detailed explanation and the results of the indicators of Dimension 7 are presented in Section 4.7.

#### 4.1 IMMUNIZATION AGAINST TETANNUS

The Health Sector recommends that all women in reproductive age should be vaccinated against tetanus as a way of keeping them protected and prevent neonatal tetanus at the time they decide to have children. According to MOH data, the immunization coverage against tetanus in this target group is below the recommended. For example Maputo City reported 19% coverage in 2013, 6 percentage points below the expected proportion of 25% (Directorate of Health of the City of Maputo, 2013). For this reason, the Maternal and Child Health Program provides the Tetanus Toxoid Vaccination (TT) to all pregnant women in order to prevent the occurrence of cases of neonatal tetanus. In order to achieve this purpose, pregnant women should receive at least two doses of TT during pregnancy.

In the six districts where the study was conducted, it was possible to interview 877 women aged between 18 and 49 years with children up to 24 months of age. This group was asked about the number of doses of tetanus received during their last pregnancy, and it was found that 13% (n = 118) did not receive any dose of the vaccine; 27% (n = 239) reported having received only one dose; 58% (n = 507) reported receiving two or more doses. Thus, we can conclude that about 58% of these women were protected against neonatal tetanus.

Comparatively to the findings of the DHS 2011, the proportion of pregnant women receiving at least two doses of TT in the last pregnancy is 2 percentage points higher in the districts in question, although the findings of the DHS are referring to a period of five years and not two as in this study.

As can be seen in Annex 10, of the women who claim to have been visited by a community worker, 63% said that they received at least two doses of VAT while this figure is 53% for women who did not receive a visit by a community worker. However, one cannot conclude categorically that the visit is the cause (or only cause) of this percentage difference.

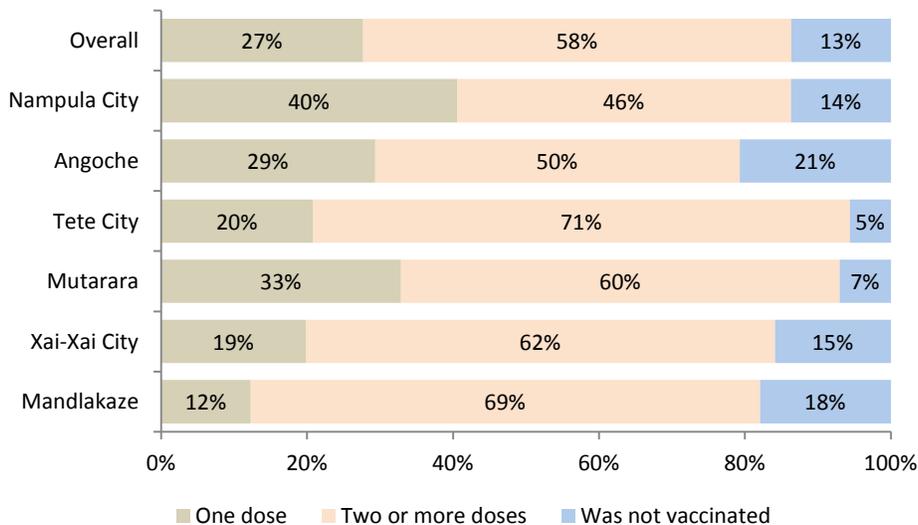
Among women who claim to have participated in an education session for women and children health, 64% said they received at least two doses of TT against 54% of women who did not participate in such sessions.

**Table 7. Percentage of women with children up to 24 months who were immunized against tetanus during their last pregnancy**

Number of the doses received	Answers	
	Frequency	Percentage
Received one dose	239	27,3
Received two or more doses	507	57,8
Was not vaccinated	118	13,8
Does not know	6	0,7
Without information	7	0,8
Total	877	100,0

When analyzing the proportion of vaccinated women by district, we notice that in all the districts most women had at least two doses compared with those who had only one. Additionally, we note that at least half of the women had two or more doses of tetanus vaccine.

In terms of proportion of women who received at least two doses, it was observed that the districts of Tete and Mandlakaze recorded the higher numbers (about 70%), while the two districts of Nampula Province (city of Nampula and Angoche) had the lowest proportions (about 50%). On the other hand, Angoche district had the highest proportion of women who did not receive any dose of the vaccine. See Figure 2.



**Figure 2. Percentage of women with children up to 24 months who were immunized against tetanus during their last pregnancy, by district**

Although the overall results of the study in the districts are not very different from the findings on the DHS Report 2011, we can observe a contrast in the analysis by district. In the present study, the districts with the lowest proportions of coverage of TT are Nampula City and Angoche, with 46% and 50% respectively, both belonging to the province of Nampula, whose coverage was the highest in the National Assessment, with around 68%. On the other hand, the provinces of Tete and Gaza, with 47% and 42% coverage in the National Assessment (INE & MOH, 2013), show that these districts represent the highest coverage in this study (see Figure 2, above).

## 4.2 MATERNAL AND NEONATAL CARE

In this section, we show the results regarding the health services that mother and child pursue during pregnancy, childbirth and postpartum. These services are considered key to the success of strategies to reduce maternal and neonatal mortality and integrate the package Safe Motherhood, defined by the World Health Organization (WHO).

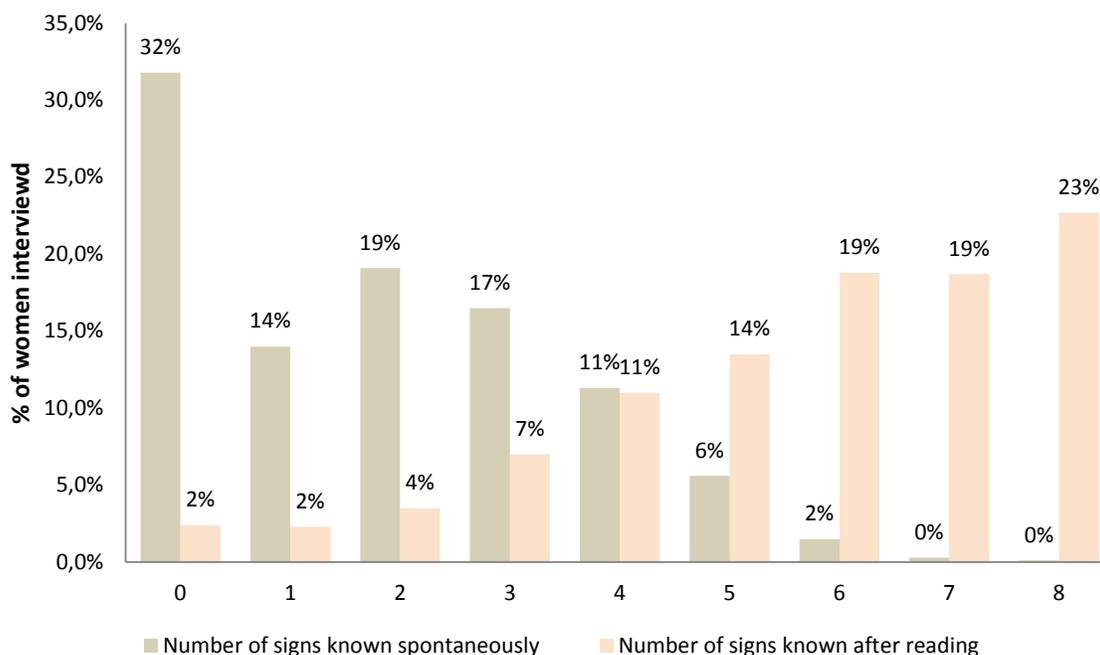
### 4.2.1 *Danger signs during pregnancy*

To help women identify the suitable moment to seek medical care, a list of eight alarm signs during pregnancy was created and it includes: bleeding, frequent vomiting, burning when urinating, fever or

headache, abnormal swelling on legs and arms, baby that does not move for more than 12 hours, fluid loss, severe pain and cramping.

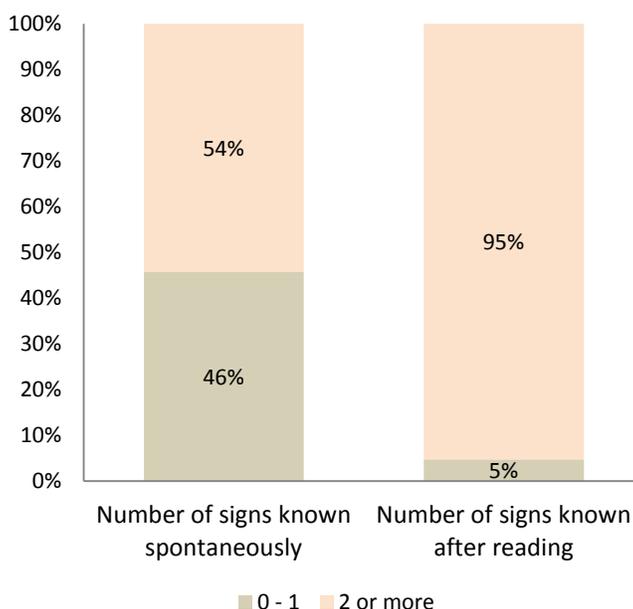
During the medical care offered to monitor the pregnancy, all pregnant women should be informed of these signs and how to proceed in case they identify one of them.

Thus, the list was used to estimate if the interviewees could recognize these signs of danger. We used two approaches, one in which women were asked to enumerate spontaneously the signs they knew and the second, in which the signals were read to the same women who had responded spontaneously. It was found that about 32% of women failed to list a single sign and 33% could list spontaneously a maximum of two signs. On the other hand, when reading the list, only 2% still did not recognize any sign of danger and about 85% recognized between 4 and 8 all signs, as shown in Figure below.



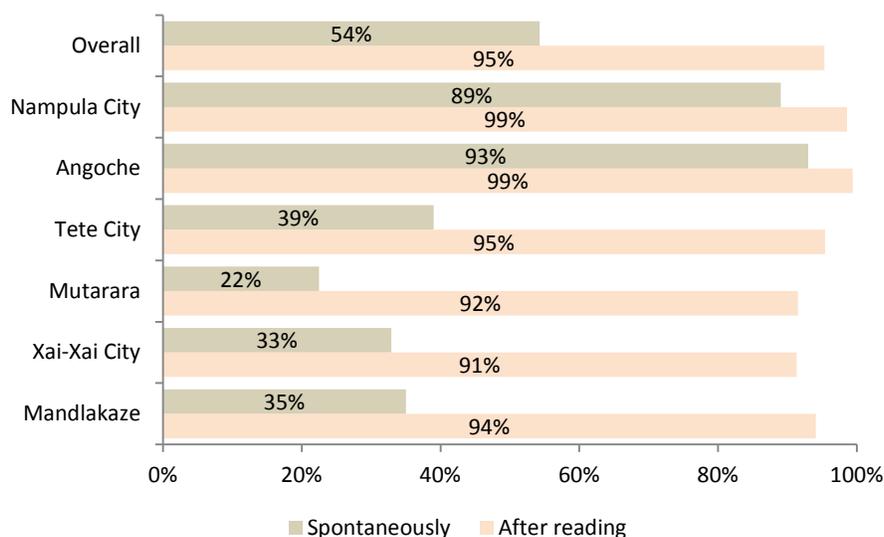
**Figure 3. Percentage of women who know the danger signs spontaneously or after reading a number of recognized signs**

It was found that 54% of women surveyed knew *at least two* danger signs when asked to spontaneously list them and this percentage rose to 95% after some reading, as shown in Figure below.



**Figure 4. Percentage of women who know at least two danger signs during pregnancy**

In the data analysis, when it comes to knowledge of danger signs by district, it was found that only the districts of Tete province showed remarkable differences regarding to the proportion of women who know at least two danger signs during pregnancy, especially when responding spontaneously (39% for Tete and 22% for Mutarara). It is also observed that there is a big difference between the proportion of women who know the danger signs in Nampula province (about 90%) and the remaining two provinces (30% in Tete and 34% in Gaza), as illustrated in Figure 5 below. Note that the high proportion of women who responded spontaneously in the districts of Nampula province may have been influenced by the fact that data collection at these sites coincided with the National Health Week.



**Figure 5. Percentage of women who know at least two danger signs during pregnancy, by district**

#### 4.2.2 Elements of a birth plan

One of the indicators that this study aimed at detecting to what extent women in reproductive age are preparing a birth plan. A birth plan consists in seven elements:

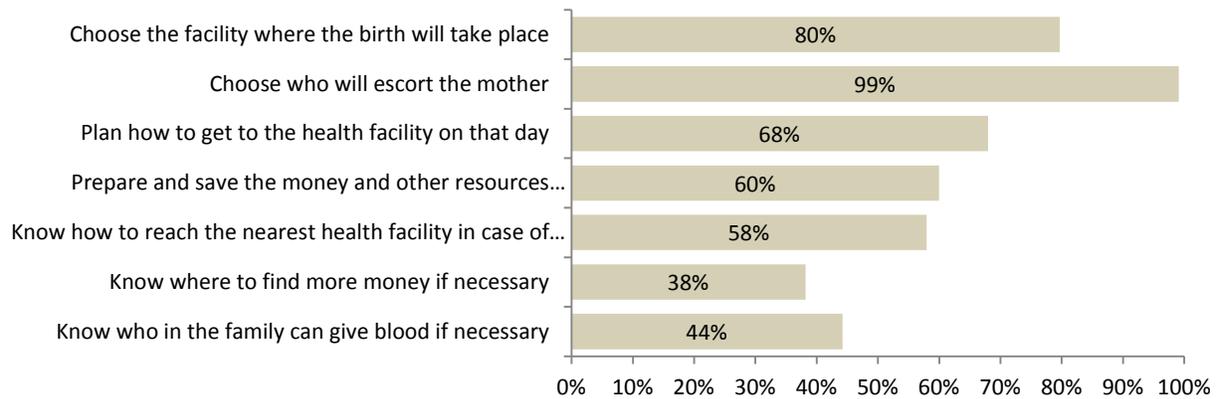
- 1) Choose the facility where the birth will take place,
- 2) Choose who will escort the mother,
- 3) Plan how to get to the health facility on the birth day,
- 4) Prepare and save the money and other resources necessary,
- 5) Know how to reach the nearest health facility in case of an emergency,
- 6) Know where to find more money if necessary and,
- 7) Know who in the family can give blood if necessary.

The women were asked if they had prepared any of these elements during their last pregnancy (previous or current) in the 24 months preceding the survey. It was found that 97% of women between 18 and 49 years of age with children up to 24 months old claimed to have prepared at least two elements of the birth plan in their last or current pregnancy, as the following Table.

**Table 8. Number of birth plan elements**

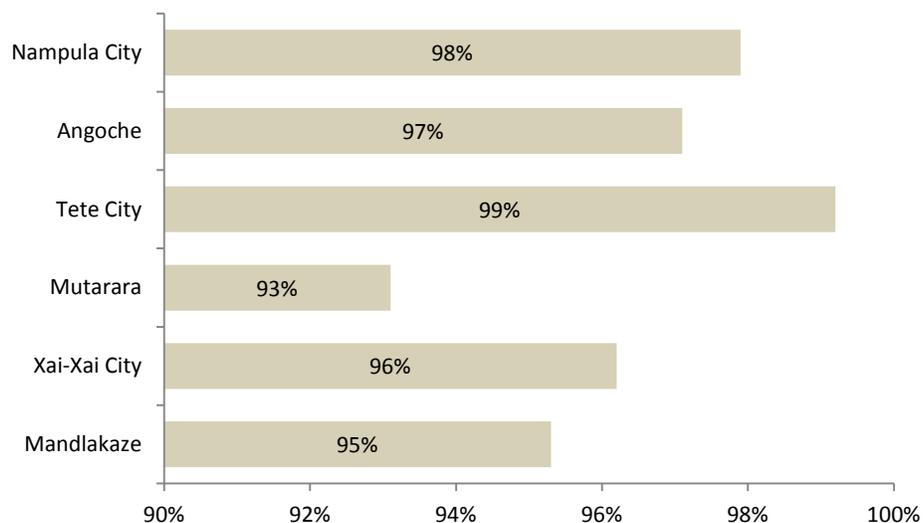
Number of birth plan elements	Answers		Cumulative percentage
	Frequency	Percentage	
0	3	0,3	0,3
1	27	3,1	3,4
2	77	8,8	12,2
3	128	14,6	26,8
4	200	22,8	49,6
5	194	22,1	71,7
6	127	14,5	86,2
7	121	13,8	100,0
Total	877	100,0	

As is shown in the Figure below, to choose the facility where the birth will take place and who will escort the mother to the Health Facility are the most nominated elements, with 80% and 99% respectively.



**Figure 6. Birth Plan Elements**

By analyzing the preparation of the birth plan by district (Annex 9) it was found that in all districts, over 90% of women prepared at least two elements of it. Compared to other districts, Tete City and Mutarara have the highest and lowest proportions of women who prepare at least two elements of the birth plan with 99% and 93% respectively. See Figure 7.



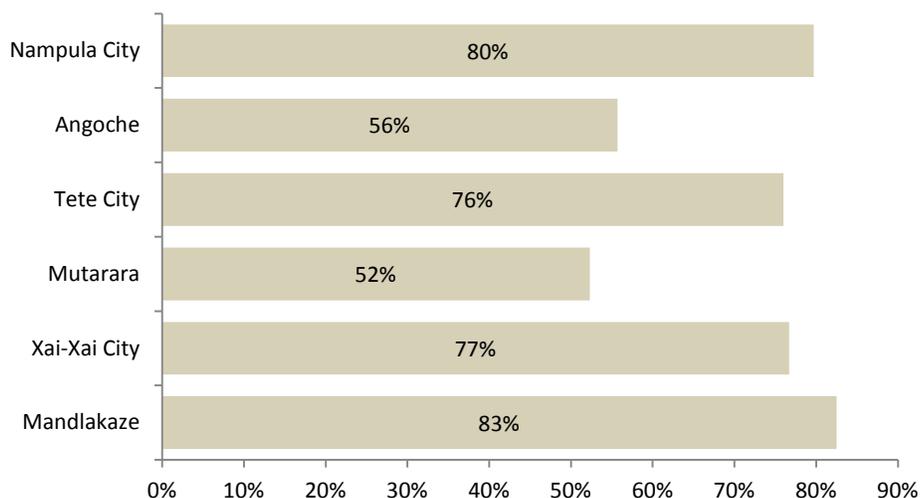
**Figure 7. Percentage of mothers with children up to 24 months who prepared at least two elements of the birth plan by district**

The same women were asked whether they have involved their partners in preparing their birth plans (in the sense of having prepared at least two elements). It was found that 63% reported having engaged partners and 23% did not involve, as shown in the following table. If, however, the calculations exclude the 61 women who say they have no partner (7% of 877 women), the percentage of those who claim to have the partner involved in the preparation of (at least two elements) a birth plan rises to 67%.

**Table 9. Percentage of women with children up to 24 months who have prepared their birth plans with the involvement of their partners**

Prepared birth plan with husband / partner	Answers	
	Frequency	Percentage
Did not prepare a birth plan	30	3,4
Prepared the birth plan with the partner	550	62,7
Did not involve the partner	200	22,8
Does not have a partner	61	7,0
Without information	36	4,1
Total	877	100,0

The proportion of women with children up to 24 months involving the partner in the preparation of the birth plan varies greatly from one district to another, but in every district is over 50%. The districts of Angoche and Mutarara have significantly lower results than the others, as shown in the following figure (these figures exclude women who reported not having a partner).



**Figure 8. Percentage of women with children up to 24 months who prepared their birth plans with the involvement of their partners, by district**

#### 4.2.3 Antenatal Care (ANC)

Antenatal Care seeks to ensure a follow-up of women during their pregnancy in order to prevent the occurrence of complications with consequent reduction of maternal and neonatal morbidity and mortality. Considering the data described earlier in this report, in the six districts visited, 1381 women aged between 18 and 49 years reported being currently pregnant or have been pregnant. They were asked if they ever had

the opportunity to have at least one antenatal care consultation with a health professional<sup>6</sup> and 98% responded affirmatively. The Ministry of Health recommends that pregnant women have at least four antenatal care consultation to be considered fully observed (INE & MOH, 2013).

Of the 877 women aged between 18 and 49 years with children up to 24 months of age, 68% (n = 598) had at least four antenatal care consultations with a health professional during their last pregnancy. The table below indicates the percentage of this group of women who had antenatal care consultations with a health professional and the respective number of visits during their last pregnancy.

**Table 10. Percentage of women that had at least 4 antenatal care consultations with a health professional during their last pregnancy**

Number of antenatal care consultations	Answers	
	Frequency	Percentage
Did not do any antenatal care	4	0,3
Did one	23	2,6
Did two	66	7,5
Did three	186	21,2
Did 4 or more	598	68,2
Total	877	100,0

Comparatively to the national average stated at the DHS 2011, this proportion represents an increase of about 17 percentage points from 51% reported (INE & MOH, 2013). This difference should be interpreted cautiously because we do not have the breakdown of the DHS data by district, which can lead to dubious conclusions.

Similarly, we do not have enough information to accurately discriminate the category of the professional who took care of the interviewees at the Health Facility, since it does not have a clear mechanism to identify the different categories of professionals.

#### **4.2.3.1 Number of ANC accompanied by the partner and decision about going**

In order to enable a better management of gestational period between the couple, including a follow-up of medical recommendations and readiness to respond to questions in case of a complication, it is recommended that the partner also participates in the antenatal care appointments. The presence of the partner is also important because it represents an opportunity to make HIV testing to the couple. Moreover, it is an opportunity to promote the joint development of the childbirth by the couple. As a result, it was found that 37% of women reported having been accompanied to an antenatal care consultation at least once by their partners. Most of these, approximately 62% were never accompanied by their partner, as shown in the Table below.

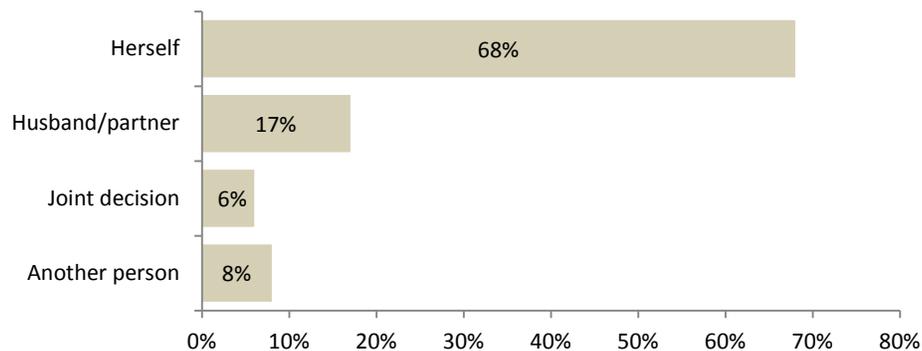
<sup>6</sup> For the purposes of this survey, health professional are doctors, health technicians and nurses.

**Table 11. Percentage of women that were accompanied by their partner-husband, at least once, during their last pregnancy**

Number of times that a women went to an ANC with her partner	Answers	
	Frequency	Percentage
Did not do an antenatal care consultation	4	0,5
Not once	543	61,9
One time	197	22,5
More than one time	130	14,8
Without information	3	0,3
Total	877	100,0

Another issue was raised about who makes the decision of going to an antenatal care appointment. The results show that 68% of the times, the decision is made by the woman herself. About 17% of women said that the decision is made by the partner and a smaller proportion (6%) indicated to have been taken together. These data are shown in Figure below.

These results show that the person responsible of managing this period is the pregnant woman even when she is in a situation that requires special care and attention.



**Figure 9. Percentage of women attending antenatal care consultation by decision maker**

#### 4.2.4 Assistance in childbirth

One of the objectives of the follow-up of pregnant women during the antenatal care period is to give them information about the care to be taken during the entire gestational period as a way to have a healthy pregnancy and free of risks as well as inform them about the benefits of giving birth in a Health Facility. Among the different advantages of giving birth in a HF, such as being assisted by a qualified professional, there is also a higher probability of receiving a quick response in case of an emergency through the obstetric care. Such care involves actions that can only be offered by an institution, such as administering intravenous drugs with rapid response, among others. Thus, there is a significant probability of fewer occurrences of maternal and neonatal deaths (INE & MOH, 2013, MOH, 2008, MOH, 2009)

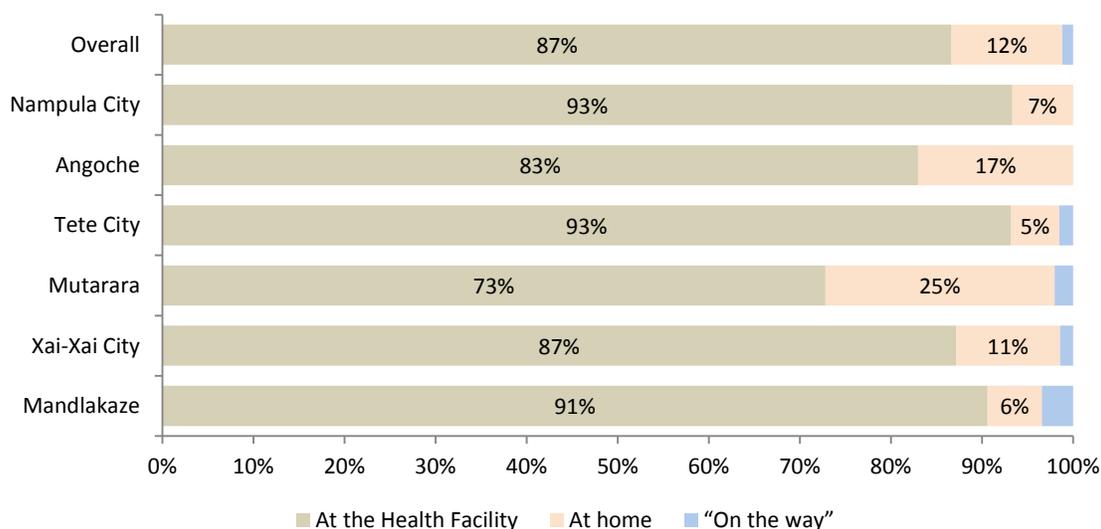
This subsection shows where the women inquired had their last labor and who assisted them. Of the total surveyed, about 87% said that they labor took place in a health facility, 12% at home and the other gave birth "on the way to the facility" as shown in the Table below.

**Table 12. Percentage of women who had their last labor at the Health Facility**

Where did the last labor take place	Answers	
	Frequency	Percentage
Health Facility	760	86,7
At home	106	12,1
“On the way”	10	1,1
Without information	1	0,1
Total	877	100,0

These results are very encouraging and, although they are far above the results of the DHS 2011, in which only 55% of the women said that they had gave birth in a Health Facility (INE & MOH, 2013), they are consistent with the 90% of pregnant women who reported that went to at least one antenatal care consultation, as indicated previously. It is important to underline that the goal of the Government of Mozambique for Coverage Rate of Labors in a Health Facility (indicator 18.1), stated in the Strategic Indicator Matrix of the Action Plan for Poverty Reduction 2011-2014 is 66% for the year 2014.

According to Figure 10, the cities of Tete and Nampula have the highest proportions of deliveries at a health facility. Immediately afterwards, with a very close percentage, comes the district of Mandlakaze, despite its much more rural characteristics. No major differences were observed in terms of proportion of institutional deliveries among the provinces. Nampula and Gaza showed about 88% of institutional deliveries compared with about 84% observed in Tete.



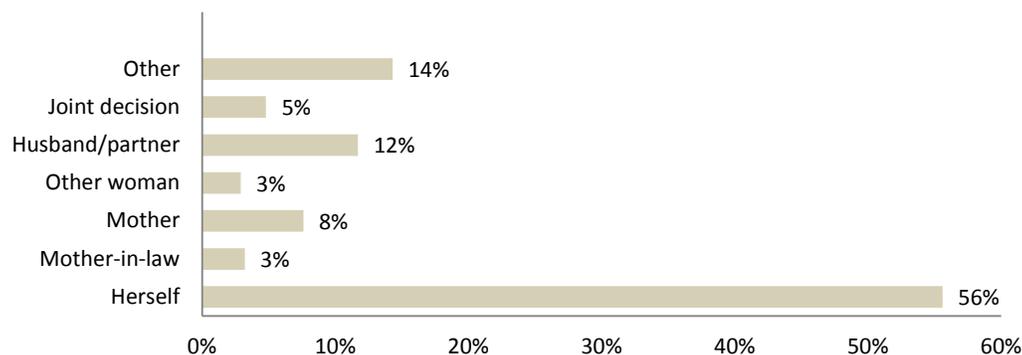
**Figure 10. Percentage of women who had their last labor in a Health Facility, by district**

From the women with children up to 24 months old who gave birth at a Health Facility, 98% reported having been treated by a health professional (nurse in most cases, physician or caregiver). On the other hand, in the group of women who gave birth at home, 4 women claimed to have been assisted by a health professional as shown in Table below. We do not have an explanation behind the reason to have childbirths attended by a health professional at home. However, in one case the respondent stated that the health professional was a family member, but she did not specify the conditions that dictated an assist at home.

**Table 13. Percentage of women with children under 24 months of age who had their last birth assisted by a health professional**

Who assisted the labor	Place of last labor							
	Health Facility		At home		“On the way”		Total	
	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Doctor/Physician	42	5,5%	2	1,9%	0	0,0%	44	5,0%
Nurse	700	92,2%	2	1,9%	0	0,0%	702	80,5%
Midwife	5	0,7%	13	12,5%	0	0,0%	18	2,1%
No one	5	0,7%	20	19,2%	1	11,1%	26	3,0%
Servant/Intern	5	0,7%	0	0,0%	0	0,0%	5	0,6%
Mother	0	0,0%	27	26,0%	2	22,2%	29	3,3%
Mother-in-law	0	0,0%	16	15,4%	4	44,4%	20	2,3%
Another woman	2	0,3%	24	23,1%	2	22,2%	28	3,2%
Total	759	100%	104	100%	9	100%	872	100%

When asked who had decided about the place, 56% of the women interviewed (with children up to 24 months old) reported that they decided themselves; 12% said that it was the partner and approximately 5% reported that it was a joint decision between them and the partner, as illustrated in Figure below.



**Figure 11. Birth Place decision maker**

#### 4.2.5 Newborn Care

According to MOH data, about 40% of deaths occurring in children under 5 years are attributed to neonatal deaths and most of these occur during the first seven days of life (MOH, 2006). According to the same source, the main causes of neonatal deaths are prematurity / low birth weight, asphyxia, neonatal sepsis, pneumonia, HIV / AIDS, malaria, among others. (Ministry of Health, 2008, MOH, 2006).

According to the National Policy for Neonatal Care and Child Health, an integrated strategy in relation to pregnancy and childbirth, a neonate should be observed on four occasions during the first 28 days of life, called **neonatal period**. These four occasions include: immediately after birth, during the first 72 hours, after 7 days and the last one at the 28<sup>th</sup> day. The purpose of these observations is to evaluate the occurrence of any of the situation described above and monitor the growth and development of newborns in order to prevent neonatal morbidity and mortality.(MOH, 2006).

The information described in this Subsection refers to the monitoring done to the newborn during the neonatal period. The data to fulfill this Subsection came from a total of 287 children under 6 months old (at the time the survey was conducted).

It was questioned when was the first time that these children were assisted by a health professional during the first 28 days of life. We found that 41% (n = 119) of children were assisted for the first time by a professional before the third day of life; equal proportion was attended between the 4<sup>th</sup> and the 7<sup>th</sup> day of life; and only 5% (n = 13) was assisted by a health professional between the 8<sup>th</sup> and the 28<sup>th</sup> day of life. Just under 10% (n = 26) of children under six months had no opportunity to be assisted by a health professional during the first 28 days of life, according to the Table below.

**Table 14. Percentage of children seen by a health professional after birth**

When the newborn was first observed	Answers	
	Frequency	Percentage
Was not observed	26	9,1
Before the 3 <sup>rd</sup> day	119	41,5
Between the 4 <sup>th</sup> and 7 <sup>th</sup> day	118	41,1
Between the 8 <sup>th</sup> and 28 <sup>th</sup> day	13	4,5
After the 28 <sup>th</sup> day	6	2,1
Without information	5	1,7
Total	287	100,0

Subsequently, the interviewees (people responsible for the selected children) were asked about the number of appointments that the child had during their first month of life. The responses were as follows: 32% (n = 93) didn't have any appointment; 41% (n = 117) had one; 15% (n = 44) had two; and 9% (n = 27) had three consultations during the neonatal period. About 2% did not answer.

### 4.3 BREASTFEEDING

This section discusses the data on breastfeeding practices among women selected for the survey. It includes information related to the first time babies were fed and the breastfeeding period.

The body of knowledge on breastfeeding recommends that all children under six months must be exclusively breastfed as a way to ensure proper nutrition and protect the child from infections as well as benefits the mother. Breast milk contains all the necessary nutrients for the adequate child development and additionally provides antibodies capable of protecting the child from the occurrence of infectious diseases. Breastfeeding also stimulates the child's psychomotor development and prevents hemorrhage; it stimulates the milk production and extends the period of infertility in the mother (INE & MOH, 2013). After six months of age, different foods should be added gradually, maintaining the breastfeeding period up to 24 months of age.

#### 4.3.1 First breastfeed

The newborn should be first breastfed within the first hour of life, preferably immediately after birth, for the benefits mentioned above.

Women aged between 18 and 49 years and who had children up to 24 months of age were asked about the first time they breastfed their babies after birth. Of the total women surveyed (n = 877) about 57% (n = 503) reported that babies had their first breastfeed within the first hour after birth and the remaining were breastfed for the first time after the first hour or days after birth, as shown in Table below.

**Table 15. Gap between birth and first breastfeed**

Elapsed time from birth until the first breastfeed	Answers	
	Frequency	Percentage
Did not breastfeed	5	0,6
Less than an hour	503	57,4
More than an hour	295	33,6
Days after birth	74	8,4
Total	877	100,0

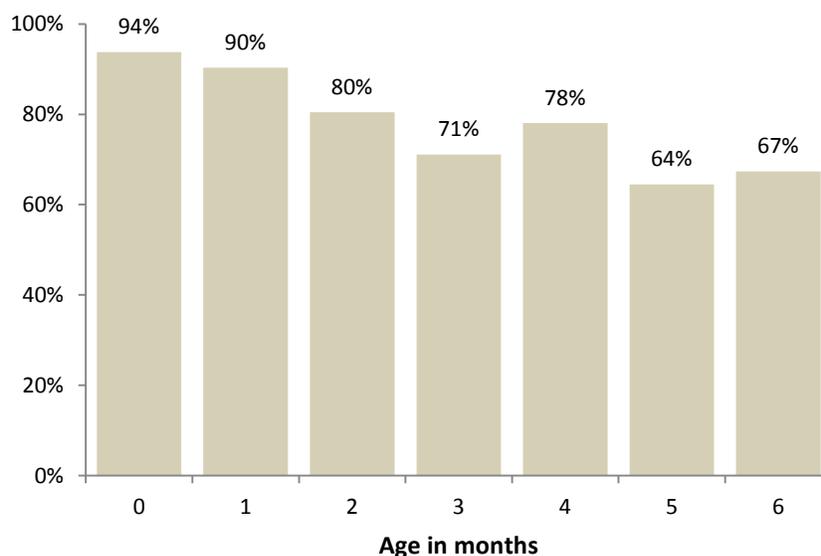
We can also observe that more than 90% started breastfeeding during the newborn's first day of life and very close to 100% of infants received breast milk.

When comparing these findings to those in the DHS 2011, we find that although the percentage of children born in the two years prior to the survey year and who were breastfed for the first time during the first year of life, about 91%, is similar the proportion of infants who were breastfed for the first time in the first hour, 57%, is lower than the approximately 77% as reported in the DHS 2011.

### 4.3.2 Type of breastfeeding during the first months of life

From 201 children aged between 0 and 3 months, 85% (n = 170) took only breast milk. Among children 0-6 months of age (n = 333) the percentage of those who were exclusively breastfeeding drops to 79% (n = 262).

The following graph shows how the proportion of infants exclusively breastfed decreases as they grow older, as expected. However, we must remember that these percentages refer to a small number of children (ranging from 29 children aged 5 months to 56 children aged 1 month).



**Figure 12. Percentage of children exclusively breastfed, by age**

### 4.3.3 Average age at which children up to 24 months no longer breastfeed

The result of this indicator is 16 months. However, this result should be analyzed with caution. It is explained below how it was calculated and the required caution when reading the information.

How it was calculated: the information collected refers to the age at which the children (between 0 to 24 months) have stopped breastfeeding, regardless of the reason. From the 977 eligible children (not including five children who were never breastfed), we got 171 (18%) responses. The arithmetic average was then calculated: as mentioned above, the result was 16 months.<sup>7</sup>

Caution on reading: this indicator and its result should not be confused with "at what age children stop being breastfed." This is because a large portion of children surveyed (82%) continued to be breastfed at the time of the interview. Therefore, future research to obtain information about "at what age children stop being breastfed" should include older children.

<sup>7</sup> The average excluding those that were never breastfed 15.95; including those who were never breastfed is 15.50

## 4.4 MALARIA

Malaria is a serious public health problem and a major threat to pregnant women and children’s health. According to the National Malaria Indicator Survey, about 34% of pregnant women caught the parasite and malaria is still highly associated with anemia during pregnancy. Malaria in pregnancy, among other diseases, increases the probability of premature labour associated with an increase of chances of death to the neonate (INE et al., 2009). On the other hand, malaria is the leading cause of children’s hospital admissions, (contributing to 57% of admission cases) and the leading cause of mortality in children under five years, contributing to one third of deaths (Ministry of Health -PNCM, 2009, INE et al., 2009).

For these reasons there are several interventions carried out for malaria prevention when it concerns to mother and child health.

This section contains information regarding actions for malaria prevention taken to avoid the disease during pregnancy and in children under 24 months of age.

### 4.4.1 Malaria prevention during pregnancy

It is recommended that all pregnant women sleep under a Long-lasting Insecticidal Net (LLIN) and that they take preventive treatment with antimalarial drugs (TIP) at the antenatal care consultation to prevent the occurrence of this disease in the mothers of our country. (INE et al., 2009, Ministry of Health-PNCM, 2009).

All the pregnant women interviewed were asked if they had slept under a treated mosquito net in the night before the survey. For the purpose of this study, we will consider only treated nets (ITN) as questions posed are not sufficiently conclusive regarding the type of insecticide used.

From the total of 138 pregnant women interviewed, it was possible to obtain answers from 105. From these, 85 (62%) said that they slept under a mosquito net treated with insecticide on the night before the survey and 20 (14%) reported not having slept under a mosquito net, according to the Table below.

**Table 16. Percentage of women that slept under an insecticide-treated mosquito net in the night before the survey**

Slept under a treated mosquito net	Answers	
	Frequency	Percentage
Yes	85	61,6
No	20	14,5
Without information	33	23,9
Total	138	100,0

This number is nearly double of the one reported in the DHS 2011, which was 34% (INE & MOH, 2013).

Subsequently, all women with children under 24 months of age were asked if they had taken Fansidar (antimalarial) as prophylaxis against malaria during their last pregnancy. Around 87% reported having taken Fansidar, as shown in the following Table.

**Table 17. Percentage of women that took Fansidar during their last pregnancy**

Took Fansidar	Answers	
	Frequency	Percentage
Yes	767	87,5
No	110	12,5
Total	877	100,0

Once again, this indicator was compared to what was reported nationwide. The DHS 2011 reported that 40% of women took an antimalarial during their last pregnancy (INE & MOH, 2013), which corresponds to less than half the percentage obtained in the study.

On the analysis of malaria prevention during pregnancy, it can be observed that the districts of Nampula City and Mutarara have the highest proportion (94%) of pregnant women who took Fansidar to prevent malaria. On the other hand, Angoche has the lowest proportion (79%) compared to other districts. When compared between provinces, this indicator shows small differences - Gaza 85%, Tete with 90% and Nampula with 87%. See Annex 9.

In the group of women who received a visit from a community agent, 86% claimed to have taken Fansidar during last pregnancy while this percentage drops to 82% for women who were not visited by an agent. These results indicate that a visit from a community worker does not seem to have been a key factor for women taking Fansidar or not during the last pregnancy. See Annex 14.

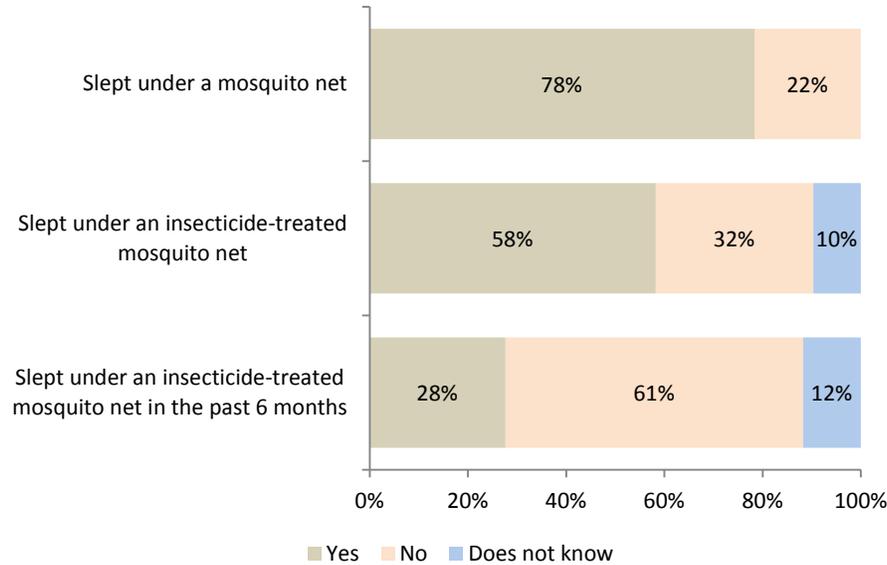
The scenario described in the previous paragraph is repeated when the information was cross-tabulated with women's participation in health education sessions with focus on Fansidar (information about medication during pregnancy) as shown in Annex 15. It is observed again a positive difference between the women who participate in these health education sessions; however, we cannot conclude that the participation in education sessions was a key factor.

#### **4.4.2 Prevention of Malaria in Children**

Similarly, all children should sleep under LLIN as a primary preventive measure and all children with fever should be treated as malaria in countries where malaria is endemic, as ours (INE et al., 2009).

In this subsection we present information about the number of children up to 24 months who slept under a mosquito net the night before the survey and information on the conditions of such nets. The figure below shows that 78% of children slept under a mosquito net in the night before the survey. When the same question is asked whether the net was insecticide-treated or not, the percentage lowers to 58% and only 28% of cases it is reported that the child slept under an insecticide-treated net in the last six months.

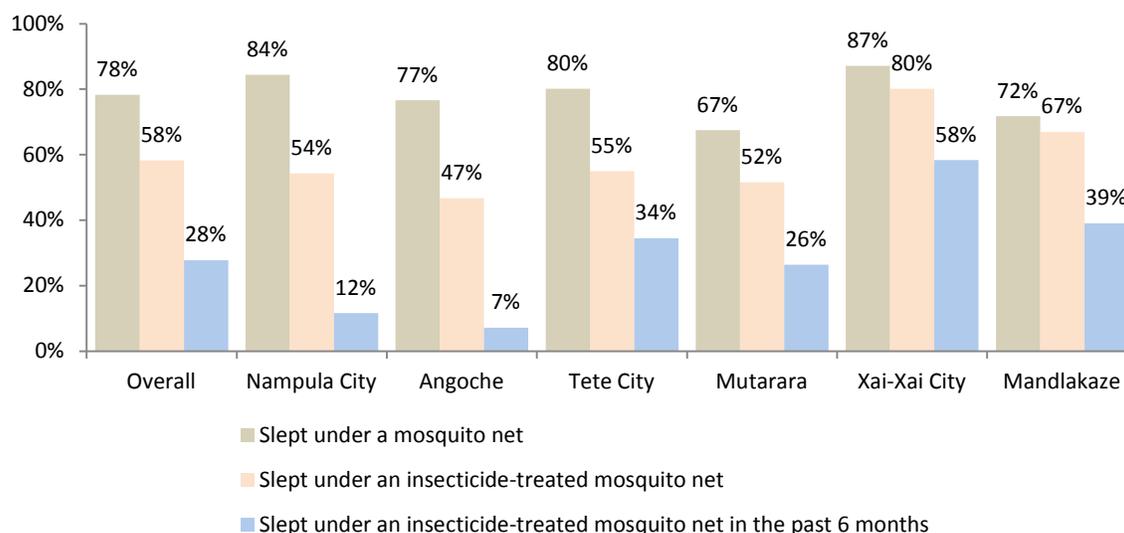
The interpretation of this indicator should be made with caution because according to the latest standards, all mosquito nets distributed countrywide are treated with long lasting insecticides. Thus, there is a probability that the scope of respondents with no knowledge is higher than that reported here.



**Figure 13. Comparison of the proportion of children under 24 months who slept under a net the previous night by type of net**

These results contrast with the findings of the DHS 2011. Again, the numbers in this study, either for children who slept under a mosquito net – 78% in this study against 39% on the HDS Report, or for children who slept under a MTI – 58% in this study and 35% on the DHS Report are almost double the values reported on the DHS Report of 2011. We must underline that this study evaluates children up to 2 years, unlike DHS 2011, which assesses children less than five years of age. This may be the origin of such differences.

The use of mosquito nets is less observed in the districts of Mutarara, Mandlakaze and Angoche, and more in Xai-Xai, Nampula and Tete. The province of Gaza showed less difference between the proportions of children sleeping under nets and those who sleep in insecticide treated comparatively to the remaining provinces. See Figure 14.



**Figure 14. Percentage of children that slept under an insecticide-treated mosquito net, by district**

## 4.5 FAMILY PLANNING AND CONTRACEPTION

Family Planning (FP) is one of the strategies to improve mother and child health. Basically, the use of contraceptive methods aims at preventing early and unwanted pregnancies, ensure the spacing between births and limit the number of children (INE et al., 2009). Achieving these objectives decreases the probability of maternal deaths and increases the chance of children survival as well as ensures a better development and growth due to decreased risk of morbidity during the first years of life.

As described below, there are modern and traditional methods when it comes to Family Planning. According to the DHS 2011, most programs promote the modern methods of contraceptives. Thus, knowing at least one modern method is an indicator of knowing methods. (INE & MOH, 2013)

In this section we address aspects concerning the availability and use of contraception methods, decision-makers about their usage, as well as information available to guide women on their usage.

### 4.5.1 Use of Birth Control Methods

The women inquired, between 18 and 49 years old, were asked about their current and past (in the last 12 months prior to the survey) contraceptive method. As a result, 30% (n = 436) of women indicated that they are currently using a contraceptive method and 43% (n = 617) reported having used a contraceptive method during the 12 months preceding the survey. Altogether, 629 women (44%) are or were in the last 12 months using some method of family planning.

The proportion of women who reported using a contraceptive method at the time of the survey (30%) is more than twice the national average (12%) reported in the DHS 2011. The DHS analysis did not mention the period of 12 months prior to the survey.

A set of methods were mentioned by the surveyed women, including contraceptive injections, pills, intrauterine device (IUD), male and female condoms, female sterilization, implant, periodic abstinence and withdrawal. Of these, the most prominent were the contraceptive pill and injections, which are used by

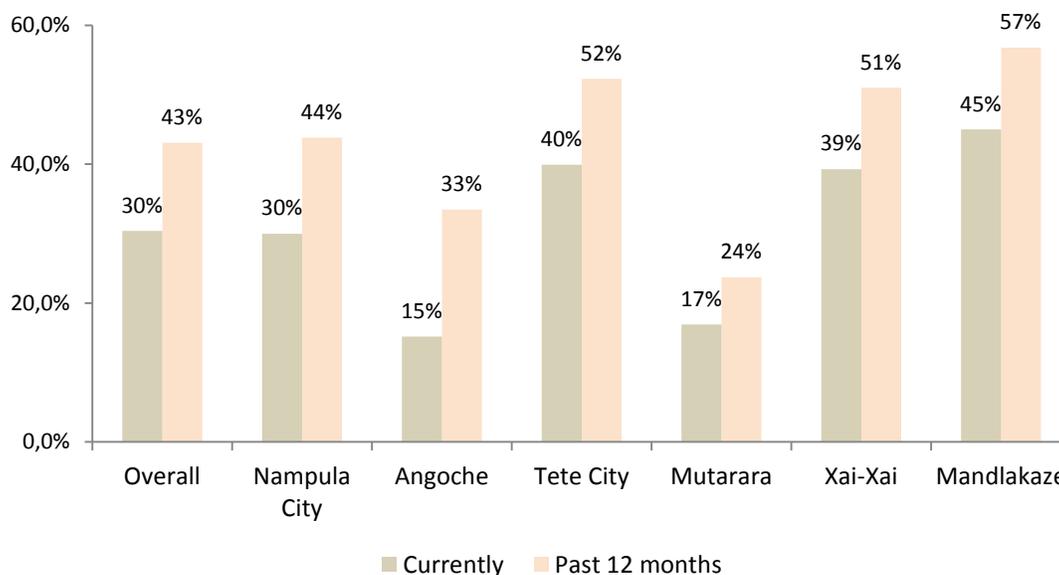
around 85% of women using a contraceptive method, as shown in the following Table. None of the interviewed woman mentioned male sterilization as a contraceptive method.

The methods most commonly used by the interviewees in this study coincide with the most commonly reported methods of the DHS 2011, including the injection method, pills and male condoms.

**Table 18. Percentage of women that use contraceptive methods**

Contraceptive methods used	Currently	In the past 12 months
Contraceptive Injections	51,2%	47,4%
Pill	34,5%	39,1%
Male condom	5,4%	5,3%
Intrauterine device	5,2%	5,5%
Implant	1,8%	1,3%
Periodic abstinence	0,9%	0,6%
Withdrawal	0,5%	0,4%
Female sterilization	0,2%	0,1%
Female condom	0,2%	0,1%

When comparing contraceptive methods by district, it is observed that Mandlakaze in Gaza is the one with the highest rate of use, either current or in the past 12 months. Mutarara district in Tete has the lowest percentage. Angoche registers far lower percentages than Nampula and Tete. The Figure 15 below shows summarizes this information.



**Figure 15. Percentage of women that use or used in the past 12 months any contraceptive method**

The following question to all the women who were not using contraception method (currently or in the past 12 months) was about the reasons for not using them. Many women said they wanted to get pregnant, other said that they had no partner, others were pregnant or simply because "it was never necessary." The answers

given by those women, who were not using any method, even wanting to avoid pregnancy, are presented in Table below.

**Table 19. Reasons to stop using contraceptive method, even wanting to avoid pregnancy**

Reason	Frequency	Percentage
Husband/partner did not allow	61	28,0
Myths/beliefs	39	17,9
Doesn't know how to use	36	16,5
Amenorrhea for nursing	35	16,1
Abstinence	20	9,2
Was advised against	10	4,6
Religion does not allow	8	3,7
Collateral effects	7	3,2
Unaware of access site	2	0,9
Total	218	100,0

It is important to observe these numbers with a certain caution because the number of women (who use no method, but want to avoid pregnancy) is small – 218 (15% of the total of women interviewed). The most mentioned reason is the lack of consent of the husband or partner. "Myths and beliefs" are not just traditional beliefs but also some more "modern" myths, such as the fear of becoming sterile or getting fat. By amenorrhea for nursing refers to women who say they do not need to be prevented because they are still breastfeeding and have not started menstruating. There are several cases of women who say they are not menstruating for a year or even two years after birth, and in these cases it is difficult to avoid thinking whether this is not one more belief.

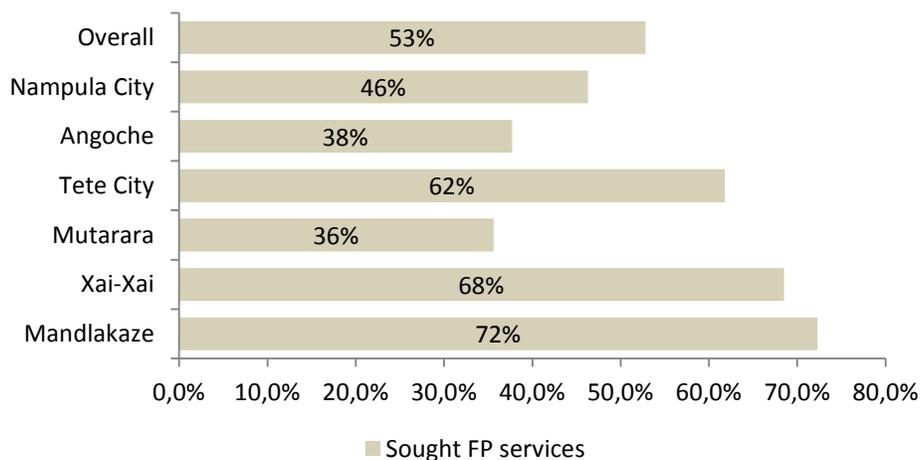
#### 4.5.2 Seeking family planning services

Among the surveyed women, 53% (n = 754) said they sought family planning services. This group was asked about who made the decision to seek such services. According to the results presented in the table below, approximately 53% of women reported having sought services on their own initiative, 28% claimed to have sought the services by decision of their partner and 17% reported having been a joint decision with their partner. Only 3% mentioned that were others to make the decision (mostly mothers and health professionals).

**Table 20. Proportion of people that made de decision to seek for family planning services**

Who made the decision	Answers	
	Frequency	Percentage
Woman	398	52,8
Husband/partner	207	27,4
Joint decision	126	16,7
Other person	22	2,9
Total	754	100,0

As shown in Figure 16 below, the percentage of women who say they have already searched family planning services varies widely among the districts of this study. The districts of Gaza province are those with higher percentages rather than the districts of Tete and Nampula. The district of Mutarara and Angoche have the lowest proportion of women who have sought the services of family planning.



**Figure 16. Percentage of women that sought FP services, by district**

When cross-tabulating information on the level of demand for family planning services with a visit from a community worker, it can be observed that the proportion of women who received a visit from a community worker and has sought the services of family planning (60%) is higher than the proportion of women who did not receive a visit from a community worker and has sought the services of family planning (50%). Although it is evident the difference in the demand for family planning among women who were visited by an agent and who did not receive the visit, this service does not necessarily imply a causal relationship. See Annex 16.

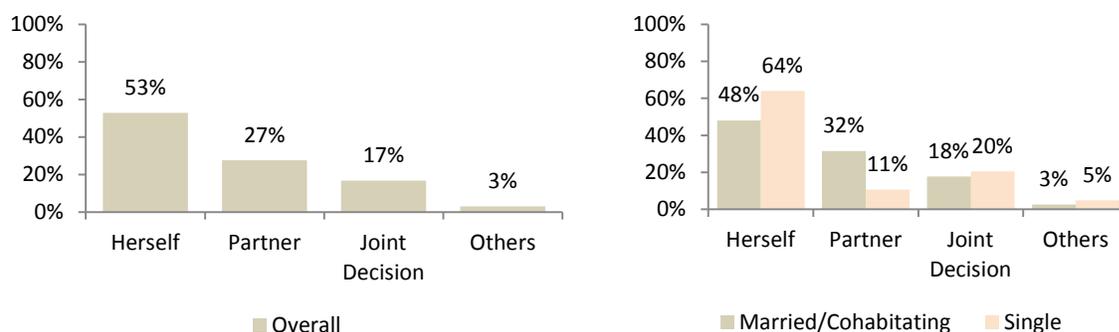
When cross-tabulating information on education sessions for health with information on the demand for family planning services (see Annex 17) we could find a difference of 11 percentage points between the proportion of women who participated or not in health education sessions and sought the family planning services. Similarl to the previous cross-tabulation results, it cannot be concluded that the participation in education sessions for maternal and child health causes more women to seek family planning services.

Among married or cohabitating women (n = 1058) the percentage of those who claim to have sought the services of family planning is 54% (n = 565), while this percentage among single women (n = 259) is 47 % (n = 122)<sup>8</sup>.

The study also looked at who made the decision to seek family planning services separately - for married and unmarried women. Of the 565 married or cohabitating women who have sought the family planning services, 48% said it was their own initiative, 32% it was decided by the partner, 18% for joint decision while only 3% mentioned other people, especially their mothers. Of the 122 single women who have sought

<sup>8</sup> In this analysis, widows and divorced women were not included.

the family planning services, 64% made the decision alone, 20% said it was a joint decision, 11% made the decision because of the partner and 5% by other people, especially health professionals. The results are illustrated in Figure below.



**Figure 17. Percentage of decision makers to seek for FP services, by marital status**

It should be recalled here that the indicators about the decision makers to seek for family planning services were defined in terms of marital status of the respondent (either married/cohabiting or single) and not in terms of having or not a steady partner. In the latter case, the results could have been different.

The women surveyed were asked if they knew where to go if they needed a family planning service - about 98% responded positively.

The same women were asked if in the three months prior to the survey they had received any information about the importance of contraceptive methods and from what source. To this question, 9% reported not having access to this information in the indicated period. Of the remaining, about half heard this information through hospitals or health centers, just over 30% heard through the radio and television, 11% received the information through community structures and a smaller proportion heard from other people (activists or friends at school). The table below shows the results. Because respondents could give more than one answer to this question, the sum of percentages exceeds 100%.

**Table 21. Source of Information for FP services**

Source	Frequency	Percentage
Does not have information	134	9,4%
Hospital	700	48,8%
Health Centers	558	38,9%
Radio/TV	459	32,0%
Pamphlets, flyers and posters	58	4,0%
Newspaper or magazine	14	1,0%
Community Structures	163	11,4%
Other	121	8,4%

According to the table in Annex 9, in Nampula City and Angoche, almost 100% of women had access to information on family planning while in the remaining districts this proportion ranges from 82% to about

89%. The high percentages recorded in Nampula province may have been influenced by the National Health Week, promoted by MOH, which happened in the same week as the fieldwork.

#### 4.5.3 Information about contraceptive methods

The group of women who said that is currently using or have used in the past 12 months a contraceptive method (n = 629) was asked whether they had received information about the possible side effects of the contraceptive and whether they knew how to proceed in case of appearance of this effect. Of this group, 66% of women claimed to have received information about the side effects of the method they chose and 91% claimed to know what to do if such effect was manifested.

As the table below shows, the percentage of women who say they have received information about the side effects does not vary much according to the contraceptive method used. More details can be found in Annex 25.

**Table 22. Was informed about the side effects**

Method	Percentage
Contraceptive Injections	69%
Pill	69%
IUD	76%
Male condom	50%
Implant	60%

From the women who claimed to know what to do in case of appearance of side effects, the vast majority knew in fact that they should go immediately to the Health Centre (89%) or stop using such method (9%).

#### 4.5.4 Change or Abandonment of Contraception Method

Of the 617 women who had used a contraceptive method in the past 12 months, 38% (n = 235) claimed to have stopped using the method or changed in the last 12 months. Regarding the reasons for this change, 44% (n = 104) stated that they intended to become pregnant, 27% (n = 63) said that the method was uncomfortable and 11% (n = 25) showed side effects such as bleeding, pain and disruption of the cycle.

**Table 23. Reasons for the change or abandonment of contraception by women**

Reason	Frequency	Percentage
Wish to become pregnant	104	44,3
Uncomfortable	63	26,8
Side effects	25	10,6
Difficult to access	3	1,3
Husband/partner does not allow	3	1,3
Was advised against	3	1,3
Other	25	10,6
Without information	9	3,8
Total	235	100,0

The DHS 2011 analysis also covered the main reasons for the discontinuation of contraceptive use by interviewees. Similarly to the findings of this study, the reason most often mentioned was the desire to get pregnant for about 28% of the interviewees. Contrary to the findings of this study that shows that the side effects occupy the third place with 11%, at the DHS they appear in second, with about 23%.

#### 4.6 HIV/AIDS

The epidemic of HIV / AIDS is a major concern in the health sector due to the increasing number of new infections. Pregnant women are vulnerable to contract the virus due to their low immunity, risking contaminating their children. As a way to tackle this problem, there are various services offered along the Mother-to-child Prevention Program (PMTCT). These services include HIV testing for any pregnant women that goes to a Health Facility, universal Antiretroviral Treatment (ART) in pregnant women with positive serology for HIV. These universal testing services are also offered to their partners and universal ART for serodiscordant couples. With these services, there is a reduction in a mother to child transmission in three stages, including pregnancy, childbirth and breastfeeding, due to a reduction in the mothers' viral load.

This section assesses whether women have information about HIV and its importance, if they were ever counseled and tested and if they have ever discussed the results with their partners.

About 98% of women surveyed reported receiving information related to HIV and the importance of getting tested. The main sources of such information were given from health professionals, mentioned by 87% of respondents, and the radio and TV, together mentioned by 54% of women. This information is consistent with the findings of the DHS 2011, according to which 98% of women reported having heard about HIV.

**Table 24. Information Sources about HIV/AIDS**

Source	Frequency	Percentage
Doesn't have information	25	1,7%
Health Professional	1240	86,5%
Radio	505	35,2%
Friend	295	20,6%
Family	278	19,4%
TV	270	18,8%

Husband/partner	124	8,7%
Newspaper	17	1,2%
Other source	210	7,1%

When asked whether they have ever been tested for HIV, 91% (n = 1297) responded positively; 58% claimed to have taken the test within 12 months prior to the survey. As the table below shows, 97% of women who took the test in the last 12 months received their results.

These findings contrast with those of DHS 2011, according to which only 45% of the women interviewed said they have done the HIV at least once, as opposed to 91% of women selected for this study; and of these 45% reported in DHS, 26% were tested in the 12 months preceding the survey. In other words, the national data indicate half (50%) of the coverage of testing reported in this study.

**Table 25. Percentage of women that were tested in the past 12 months and that received their last result**

Received the results	Frequency	Percentage
Didn't do the test in the past 12 months	600	41,9
Received the result	806	56,2
Didn't receive the result	22	1,5
Without information	5	0,3
Total	1433	100,0

From the women who took the test in the last 12 months and received the result, 73% said they had discussed the result with their partner, a figure which rises to 82% if we exclude women who say they have no partner.

Of the total women surveyed, 907 said they had given birth in the last 24 months. This group was asked if they had received counseling and testing during antenatal care consultations. 77% of them reported having received counseling before HIV testing, regardless of whether they did or did not do the test, while 91% said they had taken the test during antenatal care consultations. Apparently there are still many cases in which HIV testing is done without proper counseling.

As observed above, the data reported by the DHS 2011 point to cover counseling and testing during antenatal visits (42%) as almost half of what is reported in this study.

As illustrated in Annex 20, 64% of women who received a visit from a community worker took the test in the last 12 months, while among women who did not receive such visit but did the test is 56%. From the women who claim to have participated in some health education session, 60% had HIV testing (see Annex 21), while among those who did not participate in session, the percentage of those who took the test is 57%.

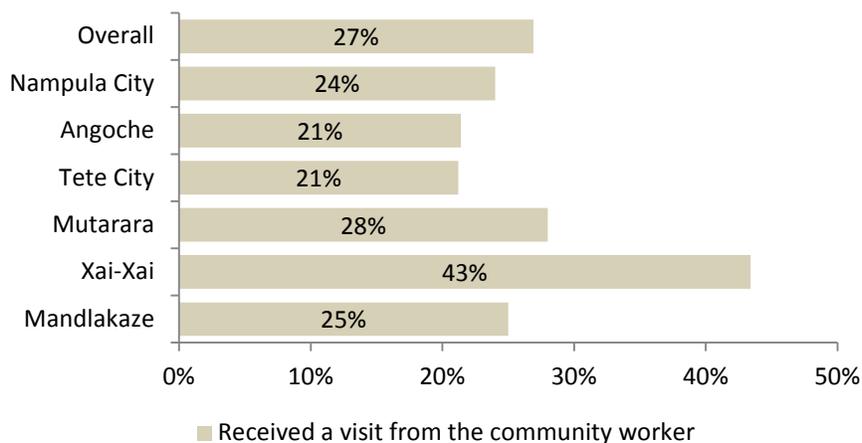
## 4.7 COMMUNITY WORK

Our goal for this Section was to understand the level of knowledge and participation of women in community activities promoted by the Health Committees and Co-Management working on improving access and quality of health services.

All women (aged between 18 and 49 years) were asked about whether they were aware of the existence of such committees and whether they had participated in any activity sponsored by such entities. Only 44% of women claimed to have knowledge of the existence of these committees in their community and 56% of them never participated in an activity of the Health Committee. When asked if they knew these structures, 30% reported having participated in an activity, 13% have participated as a member and only 1% participated sharing a concern.

Of the women surveyed, 27% have indicated that they received a visit from a community agent (in the past 12 months) promoting reproductive health and 21% reported having participated in a session of health education for women and children promoted by the community.

According to Figure 18 below, the district of Xai-Xai has the highest proportion of women who claims to have received a visit from a community worker (43%), while the percentage in other districts are around 25%. The percentages are generally lower in urban areas than in rural areas.



**Figure 18. Percentage of women who received a visit from a community worker in the last 12 months, by district**

## 5 FINAL CONSIDERATIONS

This study has collected a significant amount of information of which only a small part could be analyzed in this report. The database of the collected data is a rich resource for future studies and research.

Throughout this report it was possible to detect considerable differences between the findings of the DHS 2011 and the results of this study. These differences should be analyzed with caution, not only because they refer to different age groups, but also the periods in which the evaluations were made are different. Moreover, there are methodological differences between the two surveys.

The results obtained in the last dimension “Community Work” are a reminder of the importance of reviewing the role, effectiveness, efficiency and mechanisms of intervention and coordination of the Health Committee and Co-Management Committee in promoting access and consistent quality services in terms of health on the surveyed communities. This is particularly important because, as reported in section 4.7, few respondents said they had received a visit from a community health agent, or participated in education sessions for child and women's health.

It seems important to consider the inclusion of a gender approach in the MCHIP intervention actions to reduce cultural barriers that affect access and to adequate family planning and maternal and newborn care services.

Mechanisms to encourage a greater involvement of women in different activities of the community should be developed and promoted. Generally speaking we note that there is poor communication among women and community structures, which were created in order to bring together communities and the health sector.

We recommend that efforts are made to spread even more the importance of active participation of the partners during pregnancy as a way to increase access to health care and give them an active role in protecting the life of the mother and the neonate.

Lastly, we consider important to intensify the promotion of Kangaroo mother care, together with immediate breastfeeding after birth, in order to maximize the benefits of this first contact between mother and child.

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