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DEPARTMENT OF PUBLIC HEALTH

A STUDY ON FACTORS INFLUENCING UTILIZATION OF INTERMITTENT PRESUMPTIVE TREATMENT OF MALARIA (IPTp) SERVICES BY PREGNANT WOMEN IN SESHEKE DISTRICT OF ZAMBIA

CHAZYA SIKAMBALE

A DISSERTATION SUBMITTED TO THE UNIVERSITY OF ZAMBIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE DEGREE OF MASTERS OF SCIENCE IN PUBLIC HEALTH

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BY

CHAZYA SIKAMBALE

BScHB, MBcHB (UNZA), Higher Diploma in Health Management (NIPA)

A Dissertation submitted to the University of Zambia in partial fulfillment of the requirements of the degree of Masters of Science in Public Health (Health Policy Economics & Management)

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DEDICATION

This piece of work is dedicated to my dear wife Ngao Sichone Sikambale and my lovely kids, Ndanji, Suwilanji and Chipanta for their understanding and support during the time I was conducting this research.

STATEMENT

I hereby state that this dissertation is entirely the result of my own personal effort. The various sources to which I am indebted have been clearly indicated in the bibliography and acknowledgement.

Signed:………………………………………………………………………………………..

Chazya Sikambale

DECLARATION

I declare that this dissertation herein presented for the Degree of Master of Science in Public Health (Health Policy, Management and Economics) has not been previously submitted either wholly or in part for any other Degree at this or any other University nor is it being currently submitted for any other Degree.

Signed:………………………………………………………………………………………….

Chazya Sikambale

Approved by:

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Prof. K.S Baboo (supervisor)

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Dr H. Halwindi (co-supervisor)

APPROVAL CERTIFICATION

The University of Zambia approves this dissertation of Chazya Sikambale as fulfilling part of the requirements for the Award of the Masters of Science Degree in Public Health (Health Policy, Management and Economics).

Signatures

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ABSTRACT

Intermittent presumptive treatment of malaria in pregnancy (IPTp) is one of the recommended interventions by World Health Organization to mitigate the impact of malaria in pregnancy in malaria stable transmission zones such as Sub Saharan regions so as to ensure the best outcome for both the mother and her unborn child. In line with the Zambian policy on malaria control, Sesheke district started implementing IPTp in the year 2003 as one of the methods to combat malaria in pregnancy. Despite the availability of IPTp services in all the health facilities in Sesheke district, the uptake of IPTp is still very low especially for the second and third IPTp doses (fansidar).

The main purpose of the study was to identify the factors influencing utilization of IPTp services by pregnant women in Sesheke District.

The study was a cross sectional, non-intervention descriptive type conducted in Sesheke district in Western province of Zambia. Information was collected from 403 women and 16 health center in charges using two different semi structured interview schedules. Two focus group discussions were also conducted in two different areas. Stock control cards were also checked in order to determine the availability of fansidar in the eight selected health centers during the year 2012. In order to ensure that the findings were valid, statistical significant was set at $p<0.05$

The study found that only a total of 121 out of 403 women (30%) interviewed took all the three recommended doses of IPTp. 287 (71.2%) took at least the first dose, while 228(56.6%) took at least the second dose and 116 (28.8%) of them did not take any.

Factors influencing IPTp utilization included; educational status of a woman ($p = 0.032$), knowledge level of a woman about IPTp services (p value 0.021), timing of first ANC ($p = 0.014$), number of times a woman attends ANC ($p = 0.001$).

Fourty eight point nine percent of the women had good knowledge level about IPTp services, 18.9% of the women had fair knowledge and 32.2% had poor knowledge. The Odds ratio for good knowledge level was 2.952. This shows that women who had good knowledge level were 2.952 times more likely to complete the recommended IPTp doses.

Stock levels of fansidar were 100% in six out of eight health centers. The reason for the stock out was due to malaria outbreak which led to the consumption of fansidar reserved for IPTp service.

The most common challenge health providers faced while providing IPTp services was found to be lack of transport to enable them reach women in far and hard to reach areas and inability to conduct adequate outreach activities as planned due to lack of resources in form of allowances.

Majority of the women (81.8%) perceived use of fansidar in pregnancy as being safe and only a few women (4.2%) thought it was not safe while 14.1% of women did not know whether it was safe or not. FGD also revealed that there were some misconceptions about use of fansidar in pregnancy by some women. However most of them were still willing to take fansidar despite side effects associated with it. This was attributed to the perceived benefits of taking fansidar during pregnancy.

In conclusion, effective IPTp service utilization in the district is very low with only 30% of the women completing the three recommended doses of fansidar during pregnancy. Seventy one percent take at least first dose while 28.8% do not take any doses of fansidar during pregnancy.

Less than half of the women have good knowledge level about IPTp services while majority of them perceive use of fansidar in pregnancy as being safe. The most important factors influencing IPTp service utilization are educational status of a pregnant woman, knowledge level about IPTp services, timing of first starts ANC, number of ANC and misconceptions by some women about use of fansidar in pregnancy. Health providers also face some challenges while providing IPTp services of which the commonest is lack of transport to enable them reach women in far and hard to reach areas.

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LIST OF TABLES

Abbreviations

AIDS	Acquired immune deficiency syndrome
ANC	Antenatal Care
CHA	Community Health Assistant
CHW	Community Health Worker
DHS	Demographic and health survey
DCMO	District Community Medical Office
DOTS	Direct observed treatment short course
FANC	Focused Antenatal Care
FGD	Focus group discussions
HAC	Health Advisory Committee
HAHC	Hospital Affiliated Health Center
HC	Health Center
HIV	Human immune virus
HMIS	Health management and information system
IEC	Information, education and communication
IPTp	Intermittent presumptive treatment of malaria in pregnancy
MCDMCH	Ministry of Community Development Mother and Child Health
MDGs	Millennium Development Goals
MIS	Malaria Indicator Survey
MOE	Ministry of Education
MOH	Ministry of Health
MPH	Masters of Public Health
NMCC	National Malaria Control Centre

PMTCT	Prevention of Mother To Child Transmission
SP	Sulfadoxine- pyrimethamine (Fansidar)
TBAs	Traditional Birth Attendants
UN	United Nations
UNZA	University of Zambia
WHO	World Health Organization

Operational definitions

Intermittent presumptive treatment of malaria (IPT): A service provided during the antenatal period in order to protect (treat) pregnant women from malaria so as to ensure the best outcome for both the mother and her unborn baby. According to the Zambian policy, every pregnant woman should take at least three doses of fansidar during pregnancy. However the policy in other countries like Ghana or Nigeria is different as it recommends that a woman should take at least two doses of fansidar during pregnancy.

Effective service utilization: In this study effective services utilization implies completing all the three doses of fansidar by a pregnant woman during pregnancy as recommended by Ministry of Health (MOH)

Coverage is the proportion of the target population who can receive or have received the service.

Utilization is the proportion of people in need of a service who actually receive it in a given period.

Focused Antenatal Care: A minimum of four scheduled antenatal care visits during pregnancy according to the need of each individual pregnant woman.

Not so hard to reach implies Health centers that are less than 10 KM from the main roads.

Hard to reach implies Health centers that are more than 10 KM from main roads.

Sesheke District in this study includes the combination of the newly introduced districts i.e. Mulobezi and Mwandi districts.

Sesheke District has a total of 17 health centers and 6 health posts. All health posts function as health centers. Therefore the term health center in this study refers to both health centers and health posts found in the district.

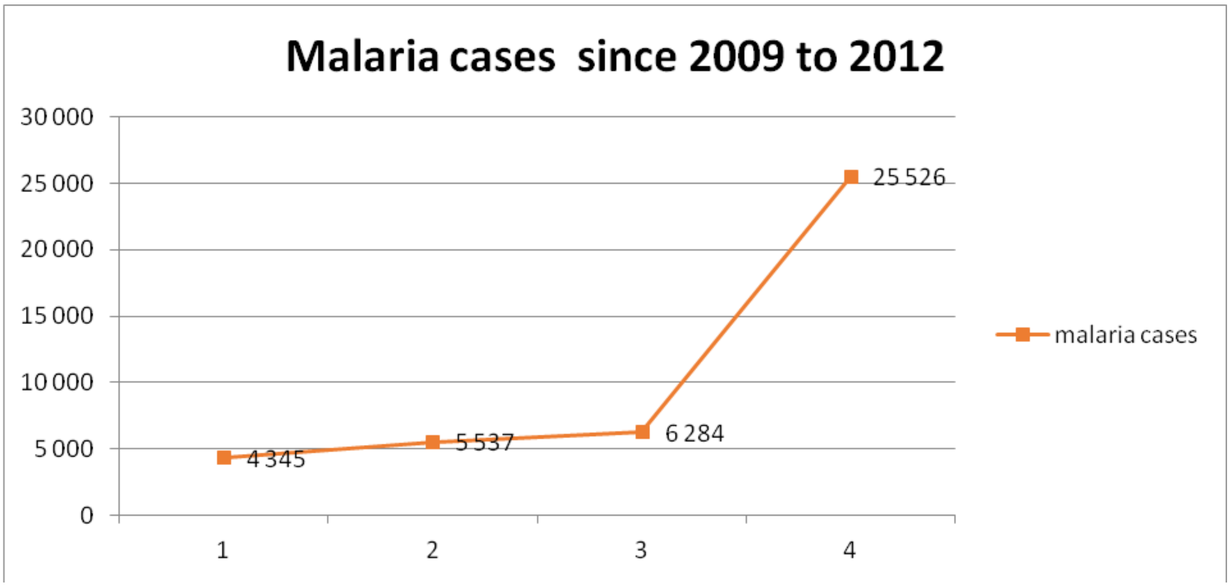
1.0. INTRODUCTION

1.1. Background information

Malaria is a public health problem throughout the world. In Zambia, it is one of the top ten causes of morbidity and mortality especially in pregnant women and children. Under five-year-old children and pregnant women are the most vulnerable, especially those in more remote and impoverished areas, with 35-50 percent of under-five mortality and 20 percent of maternal mortality attributable to malaria (GRZ/UNICEF Country Program 2011-215). Estimated 45% health facility visit in Zambia is due to malaria (MIS, 2010).

Malaria during pregnancy is dangerous because it can lead to severe form of malaria and eventually death. It also causes abortions, premature deliveries; underweight infants and still births to mention but a few. Pregnant women are particularly vulnerable to the adverse consequences of malaria. In Sesheke District, malaria is among the top ten causes of morbidity. The district is located in one of the highest malaria endemic regions of central Africa. Therefore malaria is one of the major causes of morbidity in the district especially among pregnant women and children. In the past, Sesheke District was classified as a low transmission zone. However, since 2010, malaria incidence continued rising hence posing serious risk especially on pregnant women and their unborn babies.

The graph below shows malaria incidence recorded from 2009 to 2012 per 1,000 population.



Source: Sesheke HMIS (2012).

The Zambian Government has adopted IPTp from World Health Organization (WHO) to treat pregnant women from malaria. Intermittent presumptive treatment (IPTp) of Malaria during pregnancy is based on the assumption that every pregnant woman living in an area with high Malaria transmission has Malaria parasites. The parasites live in her blood or placenta, whether or not she has symptoms and signs of Malaria. This intervention involves the administration of three doses of Fansidar as DOTS to pregnant women during the second and third trimester. This has been done to augment other key traditional interventions such as use of insecticide treated mosquito nets, indoor residual spraying, early diagnosis and treatment of malaria.

1.2. Statement of the problem

Malaria is among the ten top killer diseases in Zambia with an incidence rate of 412/1000 (MOH, 2004). It accounts for 45% of all outpatient attendances and 50% of admissions among children under- five years (MOH, 2004). It also contributes to about 20% of maternal mortality and 40% of infant and under- five child mortality (NMCC, 2005).

The Ministry of Health through NMCC has embarked on four major programs aimed at eliminating malaria to near zero by 2015 of which IPTp is one of them.

IPTp services in Zambia involve taking three doses of sulphadoxine pyrimethamine (SP) as presumptive treatment of malaria during pregnancy. This service is usually routinely provided together with other antenatal care services but can also be provided during outreach activities.
However, despite availability of IPTp services in all the health facilities, the district has continued recording low IPTp coverage.

Health management information data (HMIS) indicates that majority of pregnant women in the district do not complete the three recommended IPTp doses. For example in 2011, the coverage for first dose was 76%, second dose was 54% and only 35.5% of pregnant women completed the recommended three IPTp doses during the course of their pregnancy (Sesheke, HMIS, 2011). This is far below the recommended national target of 90% coverage for the third dose of IPTp during pregnancy. This is alarming as lack of treatment of malaria especially during pregnancy can contribute to increased maternal morbidity and mortality. Untreated pregnant women are at risk of developing severe and complicated form of malaria. They are also at high risk of high abortions, could lead to still birth, low birth weight infants, premature deliveries, intrauterine growth retardation and anemia. Anemia subsequently increases risk of maternal death and malaria related anemia is estimated to cause as many as 10,000 maternal deaths each year in Africa (Guyatt et al, 2001).

Furthermore the health of women during pregnancy is further affected by HIV. HIV infection increases the risk of malaria infection in pregnant women as it impairs anti-malarial immunity, especially responses to placental type. The impairment is greatest in the most immunosuppressed women and increased susceptibility to malaria is more in pregnant women with HIV infection. (Adele et al, 2004). Also there is a strong association between HIV and increased risk and severity of malaria (Korenromp et al, 2005). This further poses another serious risk on women in Sesheke District in which the HIV prevalence rate in pregnancy is high. HIV prevalence in pregnancy is about 21% (HMIS, 2012). Therefore it is important to improve on IPTp coverage so that majority of pregnant women especially HIV positive women can be fully protected from malaria.

1.3. Study justification

IPTp service utilization in the district is too low. The table below shows IPTp coverage for the district for the past three years.

Table 1: IPTp service utilization in the past three years

YEAR	FIRST DOSE	SECOND DOSE	THIRD DOSE
2009	81%	56%	33%
2010	75%	50%	32%
2011	76%	54%	35.5%

Source: (Sesheke HMIS, 2011).

This picture agrees with reports from sentinel survey from the districts in Zambia which indicate good uptake of IPTp at least for the first dose, but a drop off for the subsequent doses, with only fewer women receiving the three recommended doses against the national target of 90% for the 3rd dose of fansidar in pregnancy (MOH, 2005).

The table above also shows that there has been low IPTp service utilization especially for the second and third doses since 2009 in the district. It shows that only 35.5% of pregnant women had fully utilized the IPTp services in 2011. This is against the desired national target of 90% coverage for the third dose of IPTp. For IPTp intervention to be highly effective, MOH recommends that pregnant women need to take at least three doses of fansidar. Therefore if this problem of low utilization of IPTp services is not addressed in Sesheke District and in Zambia as a whole, the fight against malaria in pregnancy will be a futile exercise. This will have serious multiple health consequences on both the health of the women and their unborn children. If this trend is allowed to continue, good maternal and child health will be difficult to realize. This will eventually lead to failure of the country to realize its dream of eliminating malaria to near zero by 2015 and also in achieving the Millennium Development Goals (MDGS) 4, 5 & 6 by 2015. The MDGs as regards malaria is to reduce the incidence of malaria to less than 255 per 1000 population and to reduce the malaria fatality rate to 11per 1000 population (UNDP/ MDGs progress report in Zambia, 2011).

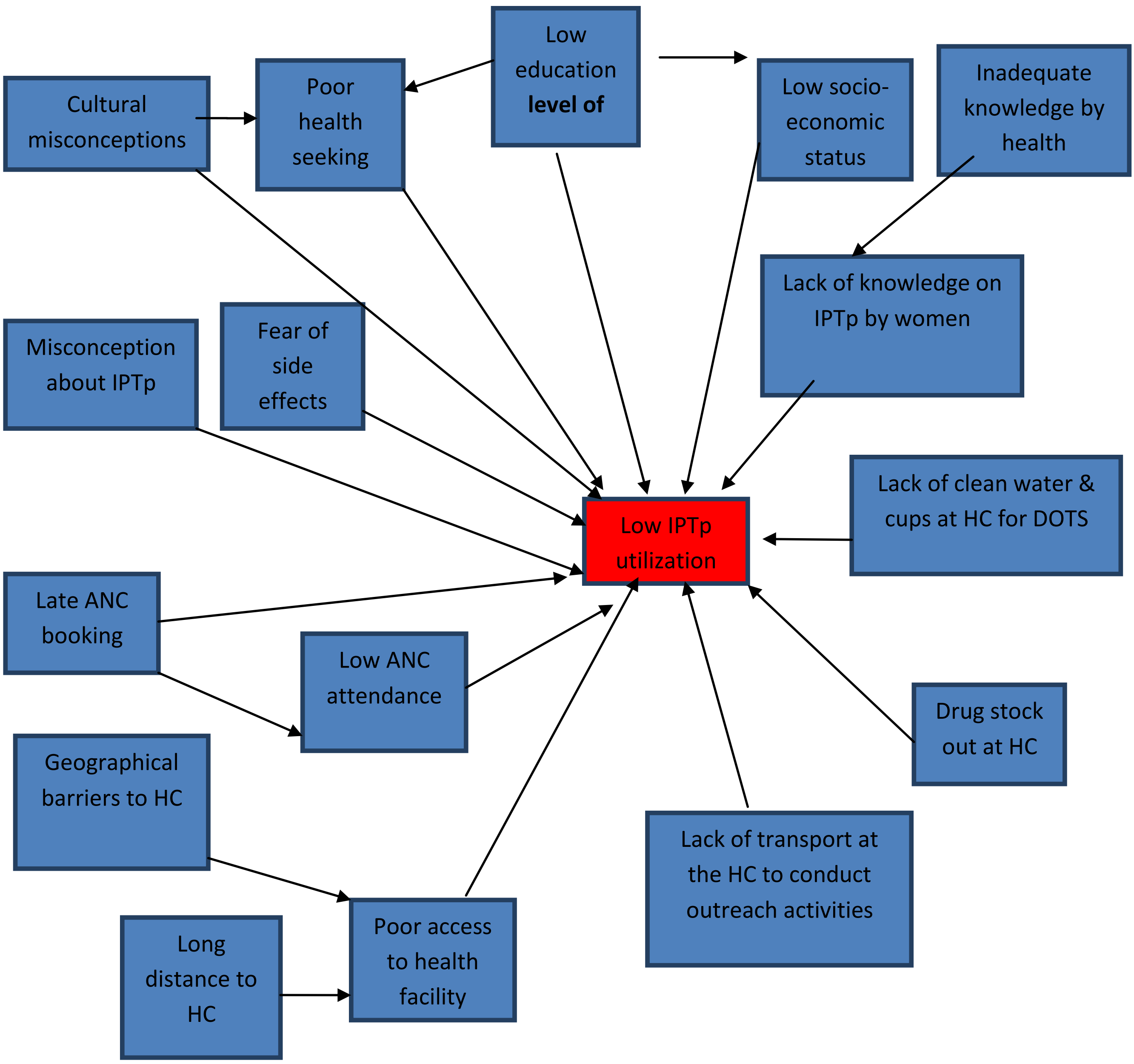
In the quest to improve IPTp service utilization in the district, the Sesheke DCMO had embarked on activities aimed at improving IPTp utilization. These include IEC activities and outreach activities. However despite conducting these activities to enable women in hard to reach areas to access this important service, there has been no improvement on the coverage.

Also since the introduction of IPTp services for pregnant women in 2003 to mitigate the effects of malaria in pregnancy, not many studies have been conducted in Zambia to determine factors influencing IPT services utilization and hence the need to carry out this important study.

The findings from this study will help the Ministry of Health and all institutions involved in malaria elimination to come up with suitable strategies that will encourage utilization of IPTp services by pregnant women. This will not only help contribute towards control of malaria but also overall improvement of general maternal child health.

1.4. A Theoretical Problem Analysis Framework

Figure 1: shows some of the possible factors that are deemed to influencing IPTp service utilization by pregnant women



There are assumptions on factors that are deemed to influence utilization of IPTp services by pregnant women.

Knowledge levels by Health providers about IPTp

Health providers with adequate knowledge about a certain health intervention are more likely to pass knowledge easily to the community through IEC than unknowledgeable ones.

Knowledge on importance of IPT services in pregnancy

Women who get educated on the importance of IPTp services in pregnancy are more likely to take the three recommended doses than those who are not given information.

Drug stock outs in health facilities

Women attending antenatal care at health facilities where fansidar stocks run out are less likely to complete the three doses than those attending antenatal care at health facilities where fansidar stocks do not run out.

Availability of clean water and cups at HC

Health centers with readily available clean water and cups are less likely to face resistance by women from taking SP at the centers as compared to those that do not have clean water and cups.

Availability of transport at HC

HCs without transport challenges are more likely to conduct outreach activities to enable women access IPT than those that have transport challenges.

Side effects of fansidar at first IPT service utilization

Women who experience severe side effects of fansidar with the first IPTp dose are less likely to take the subsequent two doses due to fear of side effects than those women who do not experience any side effects. Common side effects reported are nausea and vomiting which can worsen the common complication most women experience during pregnancy referred to as hyperamesis gravidarum.

Fear of side effects

Women who experience bad side effects after taking Fansidar are less likely to complete the three doses compared.

Long distance and geographical barriers to the Health facility

Women staying far away from the Health facilities providing IPTp services are less likely to take the three recommended IPTp doses compared to those who stay near to health facilities.

Late antenatal booking

Women who book for antenatal care late are less likely to complete the three doses of fansidar that are given a month apart than those who book early.

Low antenatal attendance

Women who do not complete the four recommended antenatal visits are less likely to take all the recommended three doses of fansidar compared to those who completed the four visits.

Perception of IPTp services

Women who have negative misconceptions about fansidar are less likely to complete the three doses of fansidar than those who do not have any misconceptions.

1.5. Research question

1. Why are women not completing the three recommended doses of IPTp during pregnancy?

1.6. General objective

To determine the factors influencing utilization of IPTp services by pregnant women in Sesheke District.

1.7. Specific objectives

1. To determine the proportion of women who complete the three recommended doses of fansidar during pregnancy.

2. To assess the knowledge level of women with regards to basic guidelines used in IPTp service provision.

3. To verify whether fansidar is always available in health facilities providing IPTp services.

4. To determine whether health providers face challenges while providing IPTp services that could lead to non-completion of three recommended IPTp doses by pregnant women.

5. To explore the women's perceptions about IPTp services during pregnancy.

2.0. LITERATURE REVIEW

The literature review in this study generally looks at the burden of malaria and some factors influencing utilization of intermittent presumptive treatment of malaria services. The literature presented and discussed is from various works of scholars from all over the world.

2.1 Global perspective

Malaria is a major global public health problem. More than 50% of the world's population is exposed to the disease. The disease is estimated to cause 300 to 500 million episodes of acute illness and 1.1 to 2.7 million deaths occur worldwide every year (UN, 2005).

2.2 Regional perspective

Malaria contributes significantly to morbidity and mortality in Africa. Africa bears 90% of the world's burden of malaria. Despite this, pregnant woman in malaria endemic areas do not always receive the necessary prevention and treatment they need and this contributes to extreme high numbers of maternal and infant deaths. Malaria infection in pregnant women in areas of greatest burden is usually asymptomatic and this requires a preventive approach. Women die as a direct result of malaria or as an indirect result of malaria related anemia (Guyatt and Snow, 2001).

WHO currently recommend a three prong approach for pregnant women in areas of stable transmission which include; intermittent presumptive treatment of malaria (IPTp), promotion and use of insecticide treated mosquito nets and lastly, early appropriate case management.

Most of the countries in Africa have come up with policy on how to protect pregnant women from malaria. For example in the study carried by Van Eijk et al, (2011) to determine the coverage of malaria protection in pregnant women in sub-Saharan Africa, it was found that 45 (96%) of 47 countries surveyed had a policy for distribution of insecticide-treated nets for pregnant women. A total of 39 (83%) of 47 countries surveyed had an intermittent preventive treatment policy. The policy on number of recommended IPTp doses (fansidar) in pregnancy differ from country to country. For example, in Zambia, the number of recommended doses of fansidar for effective protection of women from malaria during pregnancy is at least three whereas in countries like Nigeria, Benin and others recommend taking of at least two doses of fansidar in pregnancy.

Many countries in Africa are still struggling to reach their IPTp service coverage. For example, a retrospective longitudinal study which was conducted in eight maternity hospitals in two geographical areas in Benin (in the south and north) by D'Almeida et al,(2011) where the health policy recommends two doses of fansidar in pregnancy, revealed evolvement of the rate of IPTp-SP coverage from 3.7% in 2005 to 87.8% in 2009 for women who had received at least one dose and from 2.7% to 68.4% from 2005 to 2009 for those who had received complete IPTp (two doses).It revealed that in total, application of IPTp-SP 2-doses had rapidly evolved since 2005, but the objective of 80% IPTp coverage had not yet been achieved throughout the country. Also health staff reported that problems of drug shortage kept on recurring in the field.

Also in another study conducted by Onoka et al, (2010) in Enugu State, south-east Nigeria, It was found that 96.1% of households surveyed attended ANC, with most having five or more visits. However, overall IPTp coverage for the first and second doses was only 13.7% and 7.3% respectively. The coverage was higher in the urban areas compared to rural areas and only 14.1% and 14.3%. The study found that amongst ANC attendees offered first and second doses, 98.9% and 96.9% respectively took the medicine, however only 13.6% and 21.5% of these clients reported taking the drug under direct observation. In this study, it was also revealed that women did not have many concerns about side effects, and always took the drugs provided by providers to them because they believed such drugs were safe. The study also revealed low coverage of IPTp and high levels of missed opportunities supporting findings and that high ANC attendance does not guarantee high IPT coverage. Also demand side factors such as ANC attendance, appropriate timing of attendance, and perceptions about side effects were not constraining factors to increased coverage, hence raising the need to examine supply side factors.

The number of antenatal attendance is not always associated with IPTp utilization. Laura et al, (2010) found that the number of antenatal visits was not associated with good compliance. In this study in titled determinants of use of intermittent presumptive treatment of malaria in pregnancy, it was found that use of IPTp in Uganda was far below target levels. The results suggested that women would take SP for IPTp if it was offered during an ANC visit. However not all eligible women who attended ANC were offered IPTp hence revealing missed opportunities to administer IPTp-SP during ANC. The study therefore concluded that the gap in IPTp service provision was at the provider level.

Some scholars have argued that timing of antenatal attendance plays a vital role in IPTp coverage. However this was disapproved by the study carried out by Gross et al, (2011), in which it was revealed that the health facility and policy factors are greater barriers to IPTp coverage than women's timing of ANC attendance.

IPTp service utilization is said to be more among knowledgeable women than those that are not knowledgeable about IPTp services. This was proved by a study that was conducted in Nigeria by Akinleye (2007). The study used a cross-sectional approach type of study to determine Knowledge and utilization of intermittent preventive treatment for malaria among pregnant women attending antenatal clinics in primary health care centers in rural southwest, Nigeria. It was found that one hundred and nine of 209 pregnant women (52.2%) respondents had heard about IPTp but only 26 (23.9%) were able to define it. Fifty seven (27.3%) reported to have received at least one dose of IPTp during the index pregnancy and all were among those who had heard of IPTp (52.3%). The study further revealed strong association between correct definition of IPTp and utilization.

Another study entitled adherence to IPTp in pregnancy was conducted by Hasahya et al, (2008) highlighted several factors among which were knowledge of IPTp by pregnant women. This was a descriptive cross-sectional study conducted in the year 2008 which involved 222 pregnant women and 15 health workers in Kampala City Council (KCC) health centre IV (Kawempe, Naguru and

Kiruddu). In this study it was found that malaria during pregnancy was a serious health risk for pregnant women and that it was associated with maternal and infant morbidity and mortality. It also revealed that In Uganda, intermittent preventive treatment (IPTp) for prevention of Malaria in pregnancy, coverage one and two were low standing at 61%, 38% respectively. The study also identified client-related, health worker-related and health-related factors affecting adherence to IPTp. Some reasons affecting adherence were linked to the following factors:

(a) Only 21% of pregnant women were told about the use of drugs to prevent malaria during pregnancy.

(b) Only 31.5% of pregnant women knew the recommended drug used in prevention of malaria in pregnancy.

(c) Only 4.5% of the pregnant women knew the number of recommended doses of fansidar to taken.

(d) Over 95% of pregnant women reported that no health education was given to them concerning IPTp.

Also it was revealed that only 34.4% took fansidar under observation by a health worker and that guidelines on malaria in pregnancy were also not referred to. Also it was generally found that all the three heath units lacked cups, kettles and posters on prevention of malaria in pregnancy and IPTp. Awareness and use of IPTp among pregnant women in Kampala City Council health units was also very low. However health workers knew the importance of IPTp but practice of directly observed therapy was poor. The study recommended that there was need for Kampala City Council to strengthen campaigns for IPTp, support training and supervision of health workers.

It is also speculated that health providers might be facing some challenges while providing IPTp services. For example, the level of access to intermittent preventive treatment for malaria in pregnancy (IPTp) in Nigeria is still low despite relatively high antenatal care coverage. This led Onoka et al, (2012) to conduct a study on provider factors that affect the delivery of IPTp in Nigeria. The approach included data collection from heads of maternal health units of 28 public and six private health facilities offering antenatal care (ANC) services in two districts in Enugu State, south-east Nigeria. Assessment of Provider knowledge of guidelines for IPTp with regard to four components: the drug used for IPTp, time of first dose administration, of second dose administration, and the strategy for sulphadoxine-pyrimethamine (SP) administration (directly observed treatment, DOT). Provider practices regarding IPTp and facility-related factors that may explain observations such as availability of SP and water were also examined. The findings were that only five (14.7%) of all 34 providers had correct knowledge of all four recommendations for provision of IPTp. DOT strategy was practiced in only one and six private and public providers respectively. Overall, 22 providers supplied women with SP in the facility and women were allowed to take it at home. Two private providers did not think it was necessary to use the DOT strategy because they assumed that women would take their drugs at home. Availability of SP and water in the facility, and concerns about side effects were not considered impediments to delivery of IPTp. The study concluded that there was low level of knowledge of the guidelines for implementation of IPTp by all providers, especially those in the private sector. This had negative effects such as non-practice of DOT strategy by most of the providers, which can lead to low levels of adherence to IPTp and ineffectiveness of IPTp. It was then further recommended that capacity development and regular supportive supervisory visits by programme managers could help improve the provision of IPTp.

Side effects of fansidar could be one of the factors influencing utilization of fansidar in pregnancy. This was however disproved by (Tutu et al, 2011). In this study entitled effectiveness and perception of use of fansidar in intermittent treatment of malaria in pregnancy program in Offuso district of Ashanti region in Ghana, it was found that 37% of women experienced adverse effects. However despite experience of side effects, there was no significant difference observed with regards to fansidar intake.

In-depth investigations are important in understanding factors influencing health service utilization as it assists determines community perception of the service being provided. Typical in-depth studies done in the past include a qualitative study type approach entitled Ethnographic study of factors influencing compliance to intermittent presumptive treatment of malaria during pregnancy among Yao women in rural Malawi conducted by Launiala and Honkasalo (2007).This study looked at strategies to reduce malaria infection during pregnancy through the promotion of IPTp. The study investigated and describes the factors affecting compliance to IPTp from the perspective of pregnant women in rural Malawi. In this study women were examined on knowledge and perceptions about the use of medication in pregnancy and the timing and motivation concerning use of antenatal clinic (ANC) services. It also looked at the circumstances, interaction at the ANC and the IPTp implementation process. This study discovered several factors affecting compliance included: unclear messages about IPTp with sulfadoxine-pyrimethamine (fansidar) from nurses; timing of first dose of fansidar; periodic shortages of SP; women's limited understanding of IPTp-SP; tendency for late enrolment; and nurses' underperformance.

Pell et al, (2011) also conducted a study in titled Social and Cultural Factors Affecting Uptake of Interventions for Malaria in Pregnancy in Africa: A Systematic Review of the Qualitative Research. The findings in this research indicated that local discourses and health workers' ideas and comments influence concerns about malaria in pregnancy interventions. Understandings of ANC, health worker-client interactions, household decision-making, gender relations, cost and distance to health facilities affect pregnant women's access to interventions and lack of healthcare infrastructure limits provision of interventions.

2.3 Local perspective

Malaria remains a major public health problem in Zambia accounting for nearly 40% of all outpatient attendances and 50% cases among fewer than five children. The National Malaria

Control Centre (NMCC) estimates that malaria is responsible for nearly 4 million clinical cases and 50,000 deaths per year including 20% maternal mortality.

It is further noted that malaria is a critical public health concern that forms an important part of performance targets within the context of millennium development goals (MDGs). In view of the above, the National Malaria Strategic plan (NMSP) came up with “malaria free Zambia”. Therefore in 2003, Zambia introduced IPTp for pregnant women in order to mitigate the effects of malaria in pregnancy. Currently IPTp consist of 3 doses of fansidar which are taken one month apart in second and third trimesters as a standard preventive treatment for pregnant women. The current target is to have at least 90% of all pregnant women taking the recommended three doses.

In Zambia, the current drug policy regarding IPTp for pregnant women involves the use of fansidar. IPTp is offered as a package through focused antenatal care (FANC). The package includes a course of fansidar, an ITN, and iron supplementation. The 2007 ZDHS results showed consistent high use of ANC by pregnant women in Zambia (CSO, 2003). Therefore ANC has been used as a conduit for malaria prevention in pregnant women. Women in geographical access barriers receive IPTp through traditional birth attendants or during health centre outreach activities.

Studies have been done to determine the burden of malaria in pregnancy in Zambia. The latest study was a study conducted in Kaoma District to determine the prevalence of malaria in pregnancy by Choonga (2010). In this study it was found that the prevalence of malaria in pregnancy in the district was 13%. The study also found strong association between the number of doses of IPTp and presence of malaria infection in pregnant women as only 3% of the women that took all the three recommended doses had malaria compared to 68% of women who only took only one dose. This finding agrees with the Kenya study in which it was clearly demonstrated that a three dose intermittent presumptive therapy (IPTp) regimen was more effective than a two dose regimen in pregnant women (Alilio et al, 2004). It also agrees with the study conducted by Tutu et al, (2011) in which it was found that there was a strong association between the doses of fansidar a woman took in pregnancy and protection from malaria.

In Zambia, very little is known about factors influencing IPTp utilization. So far only one study has been conducted to determine factors influencing IPTp utilization in Zambia. This study was conducted in the year 2010 by Moono (2010) to determine accessibility of IPT for malaria prevention among adolescent mothers in Mazabuka District. In this study, it was found that there was low utilization of IPTp services among adolescents with only 49.9% accessing three doses of IPTp in urban areas and only 45.3% in rural areas. Main determining factors included distance to health facilities, fear of taking fansidar during pregnancy and threats from members of the community on fansidar intake in pregnancy. The study also revealed that most participants feared that fansidar might cause sickness or induce abortion.

3.0. METHODOLOGY

3.1. Variables, Indicators and scale of measure

Table 2: Shows how data was collected using variables, Indicator and scale of measurement.

Type of variable	variable	indicator	source	Scale of measurement
Dependant	IPTp service utilization	% of women completing three doses of fansidar	Community questionnaire	# of women who completed 3 doses
				Total # of women interviewed
Independent	Level of knowledge of women about IPTp	% of correct answers among pregnant women	Community questionnaire	>80%-Good <80>60 Fair <60-Poor
	Availability of fansidar at HC	# months with SP/12 months in 2012	Health facility stock control cards	<12/12-Poor 12/12-Good
	Challenges Health providers face while providing IPTp services		Health providers questionnaire	
	Perception of IPTp services by women		Focus group discussions & community questionnaire	

NOTE that the independent variables were information that was captured under the specific objectives.

3.2. Study setting

The study was conducted in Sesheke District. Sesheke District had been selected because it is one of the districts with the highest malaria burden in Zambia. The district is located in the south west of western province. It has a surface area of 29,272Km^{2}with a population of 98,644 in 2010 giving a population density of 3.2 persons per square kilometer (Sesheke HMIS, 2011). The district is located in one of the highest malaria endemic regions of central Africa.

The district expected annual pregnancies are 3748; expected deliveries are 3551 and expected live births being 3354. Sesheke (HMIS, 2011).

3.3. Study population

The study units were women who delivered at full term in Sesheke District between January 2012 and March 2013 regardless of whether they had attended antenatal care or not. Health center staffs and community health workers providing IPTp services were also included in the study.

3.4. Study design

This study was a cross sectional non intervention descriptive study type. The purpose of the study was to identify factors affecting utilization of IPTp services by pregnant women in Sesheke district.

3.5. Inclusion criteria

- The respondents were women whose pregnancies had reached full term and delivered between January 2012 and March 2013 in Sesheke District regardless of whether they had attended ANC or not.
- Health center in charges and community health assistants/community health workers

3.6. Exclusion criteria

- Was based on women that had premature deliveries,
- Women that attended ANC from other districts and just came to deliver in Sesheke District
- Women who were allergic to fansidar and
- Women who were accessing PMTCT as these are not given fansidar but septrine in order to protect them from both malaria and other opportunistic infections

3.7. Sampling methods

Multi-stage and purposeful sampling methods were used for quantitative and qualitative sampling as below;

Quantitative part used multi-stage sampling as follows:

Stage one

This stage involved stratification of Health Centers into hard to reach and not so hard to reach. In this study, hard to reach Health Centers were those that are more than 10km from the main roads whereas not so hard to reach were those that are less than 10 Km from the main roads. Therefore using the above stratification method, the district had 12 hard to reach Health Centers and 11 not so hard to reach Health Centers.

Then a total of eight centers were selected to be included in the study using simple random method. Four came from hard to reach Health Centers and another four from not so hard to reach Health Centers. A raffle technique was used to select the first four centers from each category. The first four Health Centers selected from the strata of hard to reach Health Centers were included in the study. Then another first four Health Centers selected from not so hard to reach category (strata) were also be included in the study. The names of Health centers from hard to reach were: Mukusi, Bwina, Mulauli and Mushukula rural Health centers. Whereas centers from not so hard to reach included: Mulimambango, Neongelo, Kalobolelwa and Masese.

Stage two

Stage two involved selection of eligible individual women from the selected health centers that were included in the study. Eligible women from the community were mobilized by the local leadership (i.e. NHC, Headmen, teachers, church leaders etc) to come for interviews at the nearest health facility. Also all eligible mothers in child bearing age (14 to 49 years) bringing children for the under-five clinic, postnatal mothers and mothers accessing other health services in government clinics were targeted. After identifying a sampling frame of eligible women, a simple random sampling method was used to select individual women to be included in the study. The sampling method was done by asking mothers to pick cards from the bag, bearing card numbers 1 or 2. Those that had picked cards bearing number 2 were included in the study. The women were then interviewed right there at selected Health Centres using a one to one interview method. Those that refused to participate were replaced by other participants from the remaining sampling frame using simple random sampling method.

(b)Qualitative part (Focus Group Discussions)

This part involved a purposeful selection of two Health Centers from which focus group discussion (FGD) were conducted. Permission to conduct a FGD in each selected Health Center and its community was sought from the headman or the chairperson of Health Centre Advisory Committee (HAC) in that particular community. One focus group discussion was conducted in hard to reach area (Mukusi) and another one from not so hard to reach (Mulimambango). Both FGDs consisted of 10 participants that were purposefully selected and the total sample size for FGD was 20. These participants were identified and selected during the administration of a one to one interview schedules. Participants were informed at least a week in advance about the place, date and time of the discussion. A suitable quiet and comfortable place at selected HCs was used as a site for FGDs and all the participants were assigned numbers in order to ensure confidentiality.

(c) Selection of Health providers

The health providers to be included in the study were purposefully selected. These included eight health center in-charges and nine community health workers/Assistants from eight selected health centers under study.

3.8. Sample size

The study was designed to allow an absolute sampling error of up to 5%, with the power of study at 95%

Therefore the formula for sample size calculation was:

$N=Z^2P\ (100\%-P)/d^2$

Where: Z=1.96, factor from normal distribution

P= Expected point prevalence of IPT coverage=35.5%

d= Absolute sampling error

n=sample size

Therefore: $n= 1.96^2 * 35.5(100-35.5)/5^2$

=358

Then 10% was considered for handling possible questionnaire loses and this translated into 393.

Therefore Total sample size required was 400 respondents.

3.9. Data collection techniques

The study used the triangulation approach method to collect both quantitative and qualitative data as below:

- One semi structured interview schedule was administered to 403 eligible women who had delivered in 2012 up to first quarter 2013 in communities of selected centers under study.
- One separate structured questionnaire was administered to both the Health Center in-charge and to the community health worker/assistant providing IPT services in the catchment area under study.
- Stock control cards were checked in order to determine the availability of fansidar at the health facility during the year 2012.

- Two focus group discussions were conducted from two categories. One FGD was conducted from a hard to reach Health Center (Mucus) and another one from not so hard to reach Health Center (Mulimambango).

3.9.1. Structured interview schedule

This research instrument was used to collect quantitative data. The interview schedule captured information on demographic features, knowledge on IPTp services and perception of use of fansidar in pregnancy.

The information on the interview schedule was communicated in the language best understood by a particular participant by translating the interview schedule to suite each participant. The languages used were English and Lozi.

The interview schedule had both closed and open ended questions. The closed ended questions helped capture certain specific and guided responses. The open ended questions permitted the participants to provide responses in their own words and to express themselves

4.9.2. Focus Group Discussions

Two focus group discussions were conducted. Both comprised a total of 10 women. The proceedings were guided by the researcher and research assistants using the guide. The proceedings of the discussion were recorded using a tape recorder. The participants were invited two weeks before the discussion and a favorable quiet place was used as a venue for FGD.

The researcher, research assistant and recorder introduced themselves. The research team allowed the participants to introduce themselves. The purpose of the focus group discussion was explained in the local language (Lozi).

The researcher led the discussions using the Focus group discussion guide. Each participant was given an opportunity and time to express their views. The focus group discussion lasted about half an hour each.

3.10. Data quality control

The researcher trained the research assistants (health workers in selected health facilities) on how to collect the required data. The instruments were pre-tested before they were used in the field. Data collected was cleaned and edited as soon as possible in order to determine completeness, consistency and uniformity. This was achieved by going through all the questionnaires immediately after the field with each research assistant.

3.11. Data reliability

A pilot (pretest) study was conducted in order to determine the reliability of instruments prior to commencement of the actual study. The pilot study was conducted at Yeta HAHC and involved administration of the questionnaires to 10 women and to five health providers. This was done in order to ensure that the questions were clear, concise and consistent.

3.12. Data processing and analysis

The closed ended responses were coded to ensure easy entry and analysis of data when using a computer. The open ended responses were assigned codes to bring related issues together under themes. The quantitative data were entered in EpiData and analysis was done using SPSS 21.0 for windows after all variables were coded.

Chi-square test was used to determine the association between independent and dependent variables. The confidence interval was set at 95%. A result yielding a P value of less than 5% was considered to be statistically significant while P value equal to 5% or more was considered non significant.

Qualitative data was analyzed using content analysis method.

A report of the proceedings of the FGDs was prepared in which some participants own words were recorded and reflected the key statements, ideas and the attitudes expressed by the participants.

The results and findings were interpreted and the most useful quotations that emerged from the discussion to illustrate the main ideas were selected. The data summary was then done with the use of narratives.

Since the approach had used triangulation method, data from questionnaires, FGD and documents were analyzed simultaneously in relation to the objectives and literature review.

3.13. Dissemination of results

A report was compiled after data analysis. Compiled report was disseminated to, Eres Converge Ethics Committee, University of Zambia, Sesheke District Health Management team, Ministry of Community Development Mother and Child Health, National Malaria Control Centre, other stakeholders and organizations dealing with malaria prevention intervention programs.

3.14. Ethical considerations

Consent to conduct the study was sought from Eres Ethics Committee and from Sesheke District Community Medical Office (DCMO).

Written permission was obtained from participants and from the District Community Medical Office (DCMO), and in-charges from selected health centers. The purpose and nature of the study was explained to the study participants. Those who agreed to take part in the study were requested to sign a consent form. Those who participated were not remunerated in any way. Those who had refused to participate were assured that no privilege would be taken away from them. Study participants were assured of anonymity and confidentiality by interviewing them individually and in privacy.

3.15: Study limitations

The study had some limitation because all the eligible respondents that were mobilized from the community as well as eligible women found at the health centers were enrolled and interviewed right at health facilities because of conduciveness and easy access. The eligible women that managed to come to the health facilities and those already found at health facilities were more likely to have utilized IPTp in the past. Therefore, there was a possibility of selection bias. However the researcher was limited due to inadequate resources to enable him follow and interview women from their households.

Also since the questionnaire was translated into local language (Lozi) and then reinterpreted into English after each response, there could be the possibility of misinterpretation.

4.0: PRESENTATION OF RESULTS AND DATA ANALYSIS

4.1: Introduction

Data coding, checking, and cleaning were done before entry into EpiData file. Data analysis was done with SPSS 21.0.The P value of 0.05 was used to determine significance of findings. The data and findings presented were obtained from 403 women participants in 8 health facilities in Sesheke district. Data was collected over a period of one month (April 2013 to May 2013)

4.2: Socio-demographic characteristics of participants

The socio-demographic features that were evaluated were age, marital status, education status, distance to the health center and religion.

Table 3 shows the distribution of the respondents by demographic characteristics. Of the 403 respondents 193 (47.9%) were the majority and aged between 15-24 years. Most of the respondents were married (68.2%) followed by those that were single. Majority of them had gone up to primary level (61.0%) whereas only 1.0% had gone up to tertiary level. Most of them were SDAs (27.3%) followed by Catholics (20.6%).

Most respondents covered less than 5KM (53.1%) to reach the health centers whereas 46.9% covered a distance of more than 5KM.

Table 3: Demographic characteristics of the respondents

characteristics	**Frequency**	**percentage**
Age group		
15-24	193	47.9
25-34	154	38.2
35-44	5	13.9
Marital status		
Single	100	24.8
Married	275	68.2
Divorced	7	1.7
Widowed	2	0.5
Separated	5	1.2
Co-habiting	14	3.5

Education attained		
Never been to school	25	6.2
Primary	246	61.0
Secondary	128	31.8
Tertiary	4	1.0
Denomination		
Catholic	83	20.6
SDA	110	27.3
Pentecostal	44	10.9
UCZ	53	13.2
New Apostolic	75	18.6
Jehovahs witness	23	5.7
Others	15	3.7

4.3: Category of health providers.

Table 4 shows that the largest number among health providers were Community health workers/ Assistants (52.9%) followed by nurses (41.1%) and only one respondent was a clinical officer.

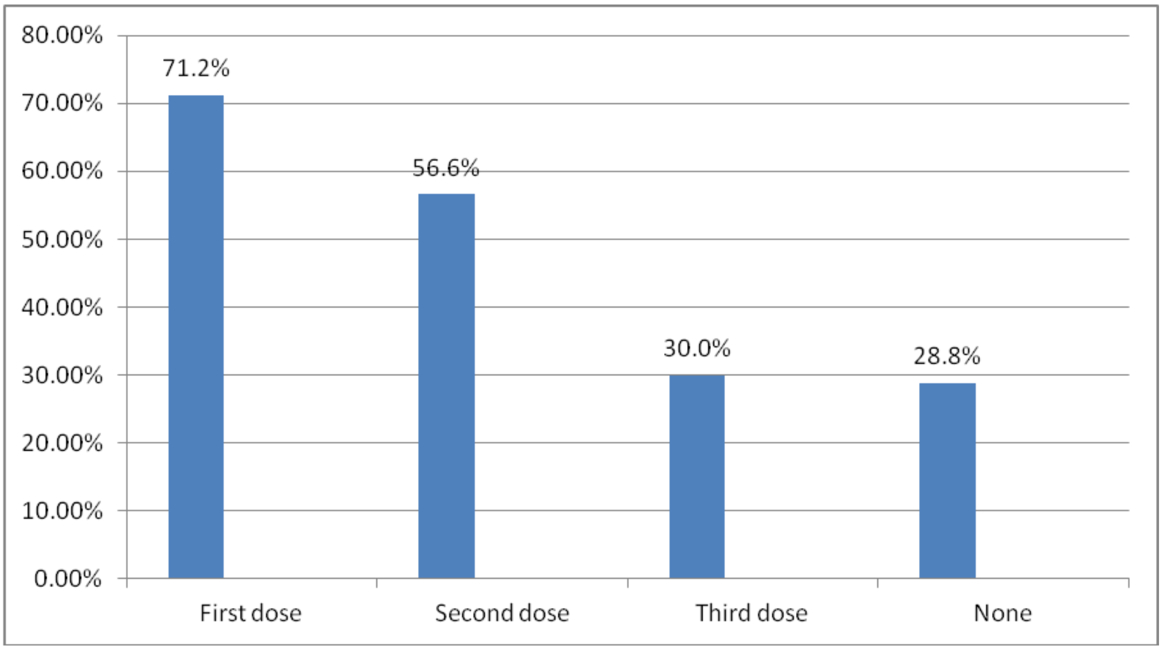
Table 4: Health providers by category

characteristics	**Frequency**	**percentage**
Health providers by category		
Clinical officers	1	5.9
Nurses	7	41.1
CHW/CHA	9	52.9

4.4: Proportion of IPTp utilization by women

Graph 1 shows that only a total of 121 out of 403 women interviewed took all the three recommended doses of IPTp representing 30% of women completing the recommended IPTp doses. 287 (71.2%) took at least the first dose, while 228(56.6%) took at least the second dose and 116 out of 403 (28.8%) of them did not take any doses of IPTp during their last pregnancy.

Graph 1: IPTp doses taken by women in their last pregnancy



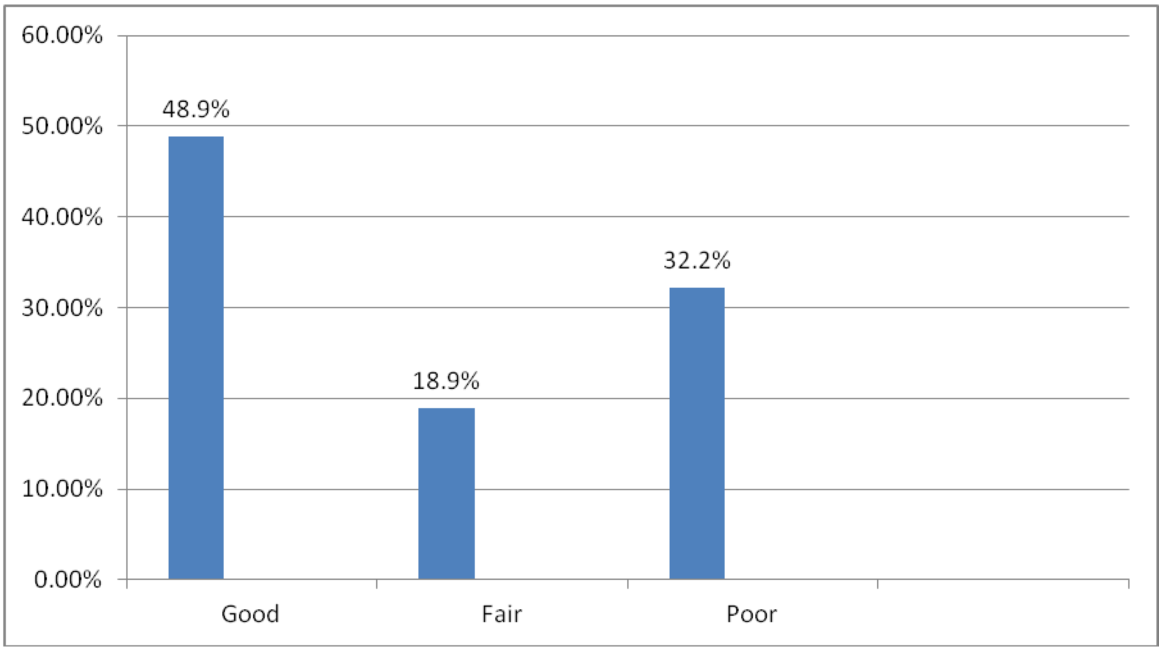
4.5: Availability of fansidar in health centers providing IPTp services

Stock levels of fansidar in most of the health centers under study during the year 2012 was 100% except for two centers namely Neongelo and Masese HCs that had stock outs of fansidar for average months of 2months. The reason for stock out was outbreak of malaria in the district which led to the consumption of even fansidar reserved for IPTp services.

4.6.0: Knowledge levels of women on IPTp services

Graph 2 shows that majority (48.9%) of the women had good knowledge, 18.9% had fair knowledge whereas 32.2% had poor knowledge level.

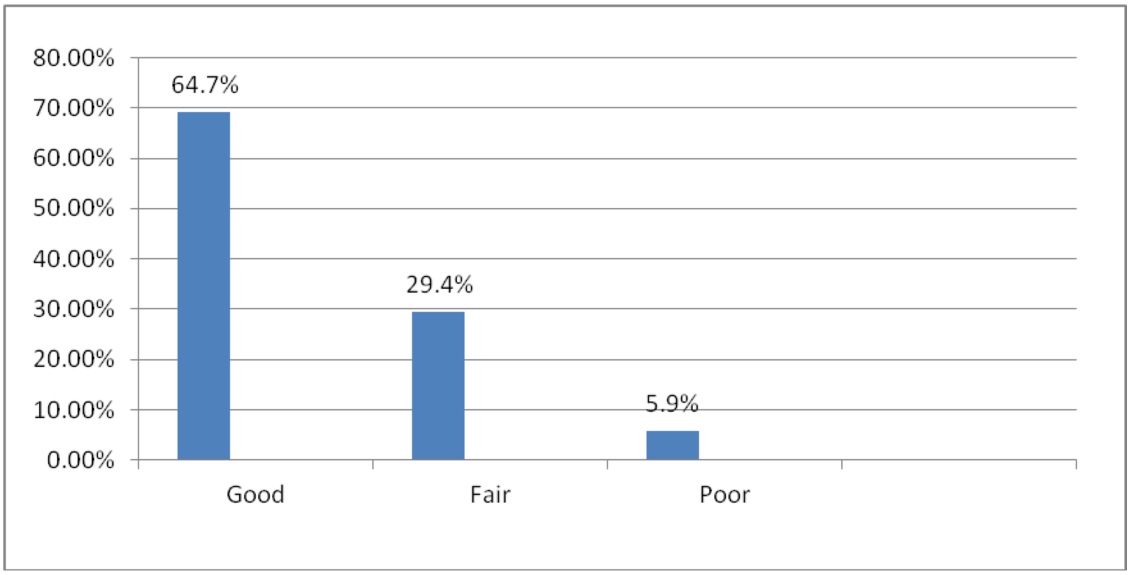
Graph 2: Knowledge levels of women participants about IPTp services



4.6.1: Knowledge levels of health providers about IPTp services

Graph 3 shows that the majority of the health providers (64.7%) had good knowledge, 29.4% had fair knowledge and only 5.9% had poor knowledge levels about IPTp services.

Graph 3: Knowledge levels of health providers about IPTp services



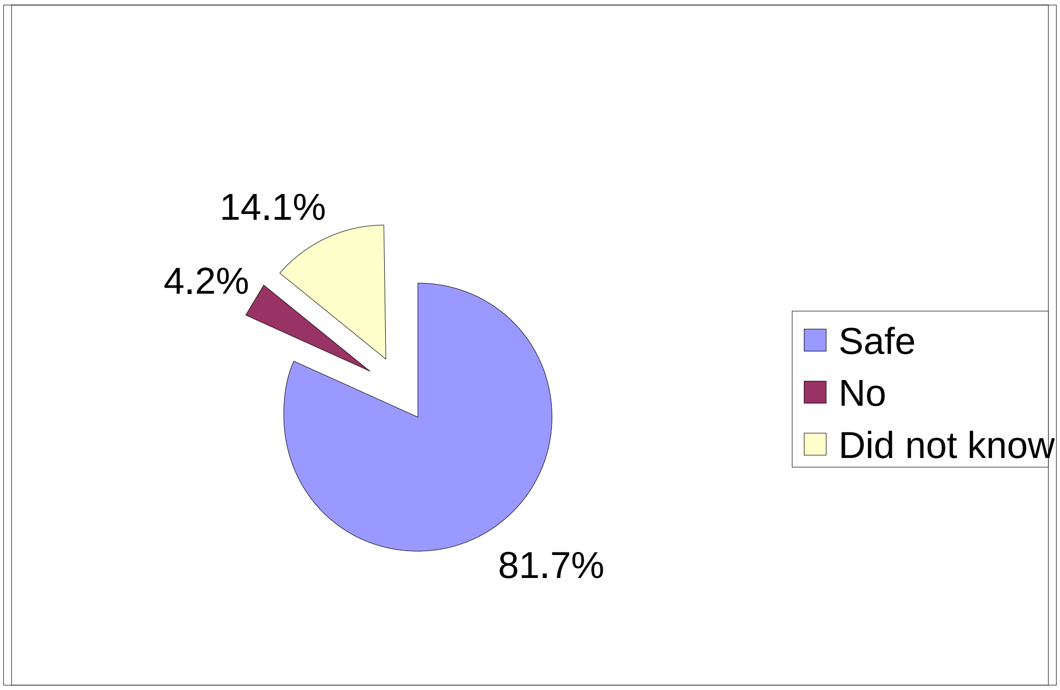
4.7: Challenges faced by health providers when providing IPTp services

The commonest challenges i.e. 6 out of 17 providers interviewed, faced while providing IPTp services was lack of transport to enable them reach those that live very far from health centers, followed by lack of adequate resources to conduct outreach activities, then late starting of ANC by women all of which scored a score of 4 out of 17. Other minor challenges but of note was cultural misconception by some communities about use of fansidar in pregnancy which scored a score 1 out of 17.

4.8.0: Perception of IPTp services

The pie chart shows that the majority of women interviewed (81.7%) perceive use of fansidar in pregnancy as safe, 4.2% of women said it was not safe while 14.1% did not know whether it was safe or not.

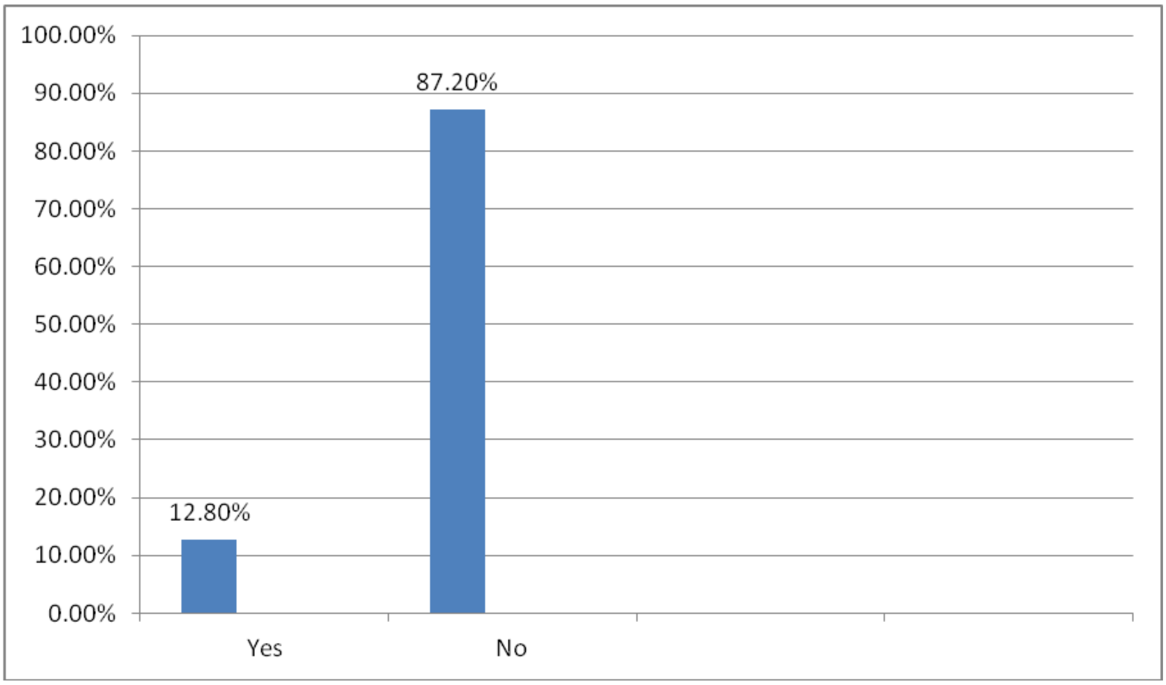
Figure 1: Pie chart showing perception of use of fansidar in pregnancy



4.8.1: Proportion of women who had problems (side effects) with fansidar

The graph 4 shows that only 12.8 % of the women that took fansidar during the last pregnancy had experienced problems (side effects of fansidar). Commonest side effects experienced included nausea and vomiting, dizziness and headache.

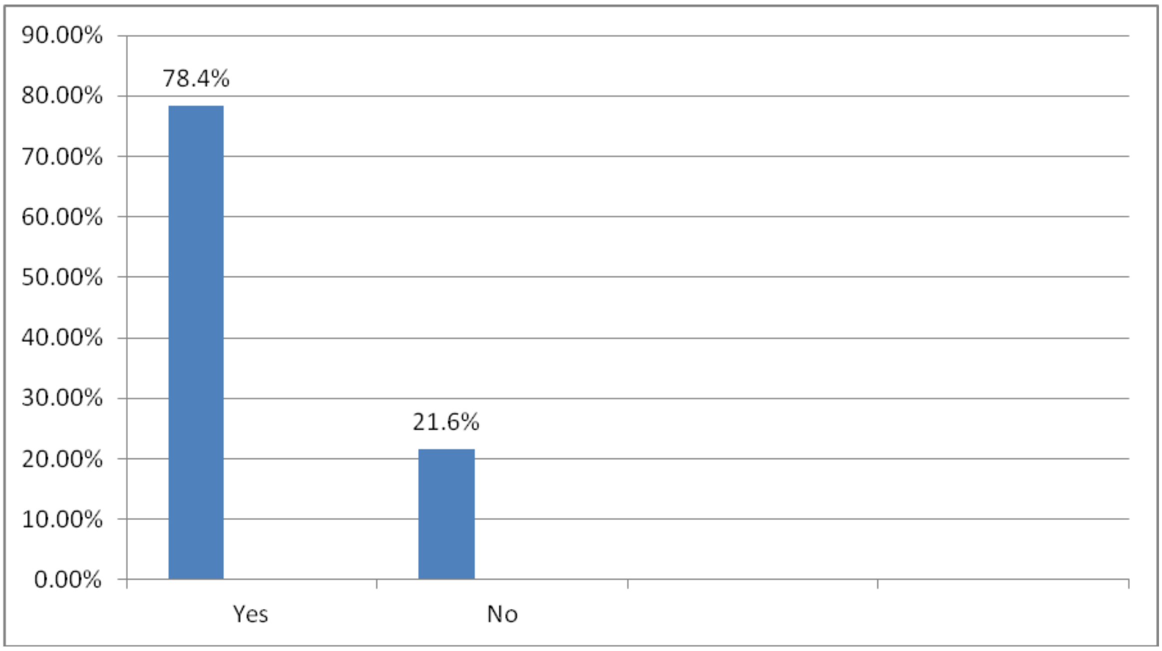
Graph 4: Proportion of women that experienced side effects of fansidar during their last pregnancy



4.8.1: Intake of IPTp dose despite experience of problems with fansidar

Graph 5 shows that the majority of women (78.4%) took subsequent doses of fansidar despite experiencing problems (side effects) with it while only 21.6% did not take.

Graph 5: Proportion of women who took fansidar despite experiencing side effects



4.9: BIVARIATE ANALYSIS

The independent variables namely educational status, age of pregnancy at first ANC, number of ANC visits made, being educated about IPTp by providers, Knowledge level of a woman about IPTp services and community cultural misconception about use of fansidar in pregnancy had their p values less than 0.05. Therefore these observations were statistically significant and could not have occurred by chance. Therefore, there was a significant association between the above independent variables and completion of IPTp doses. Other independent variables such as age of the woman, distance to the HC, area of residence marital status, denomination, where a woman accessed ANC, and experience of side effects of fansidar by a woman had p values greater than 0.005. This shows that these observations were not statistically significant and could have occurred by chance. Therefore there was no association between these variables and completion of IPTp. Refer to table 5.

Table 5: Association between selected independent variables and completion of IPTp doses

Variable	Totals	n	(%)	x^2, p
Age (years)	**297**			0.37, 0.854
15-24	145	59	(50.4)	
25-34	121	47	(40.2)	
35-44	31	11	(9.4)	
Distance (Km)	**297**			1.85, 0.174
Less than 5km	144	51	(43.6)	
5km or more	153	66	(56.4)	
Area of residence	**297**			0.147, 0.701
Hard to reach	164	63	(53.8)	
Not so hard to reach	133	54	(46.2)	
Marital status	**297**			4.19 ,0.522
Single	74	28	(23.9)	
Married	202	81	(69.2)	
Divorced	6	1	(0.9)	
Widow	1	0	(0.0)	
Separated	4	1	(0.9)	
Co-habiting	10	6	(5.1)	

Table 5 continues

Educational status	**297**			8.84 ,0.032
Never been to school	16	6	(5.0)	
Primary	174	63	(52.1)	
Secondary	103	48	(39.7)	
Tertiary	4	4	(3.3)	
Denomination	**297**			2.35 ,0.884
Catholic	58	21	(17.9)	
SDA	89	35	(29.9)	
Pentecostal	27	13	(11.1)	
UCZ	40	16	(13.7)	
New Apostolic	55	19	(16.2)	
Jehovah's witness	16	7	(6.0)	
Others	12	6	(5.1)	
Where accesses ANC	**297**			3.71 ,0.57
At HC	276	110	(95.7)	
From TBA	10	2	(1.7)	
From CHW/CHA	4	3	(2.6)	
Age of pregnancy	**297**			15.30 , 0.009
Four or less	124	64	(54.7)	

Five	85	29	(24.8)	
Six	57	20	(17.1)	
Seven	17	4	(3.4)	
Eight	5	O	(0.0)	
Nine	2	0	(0.0)	
Number of ANC	**297**			35.58 ,<0.001
Two	12	0	(0.0)	
Three	47	4	(3.4)	
Four	106	46	(39.9)	
Five	127	66	(56.9)	
Educated about IPTp				
By providers	**297**			3.84 ,0.049
Yes	223	95	(81.2)	
No	74	22	(18.8)	
Knowledge level				
Good	**297**	81	(69.2)	
Fair	117	21	(17.9)	7.76 , 0.021
Poor	65	15	(12.8)	
	55			
Experienced Side				
Effects	**297**			
Yes	37	13	(11.7)	0.24,0.63
No	249	98	(88.3)	

4.10: MULTIVARIATE ANALYSIS

4.10.1: Factors independently associated with completion of IPTp doses

Table 6 below shows factors that were independently associated with completion of three doses of fansidar.

The Odds ratio for attended ANC twice was 0.069. This implies that women that had two ANC were0.069 times more likely to complete the IPTp doses.

Women who had good knowledge level about IPTp services were 2.952 times more likely to complete recommended IPTp doses.

Table 6: Factors independently associated with completion of IPTp doses

Factor	**category**	**P value**	**Odds ratio**	**95% confidence interval**
Number of times attended ANC	Once Twice Thrice	0.999 <0.001 0.082	0.000 0.069 0.602	0.000 0.022,0.211 0.341, 1.066
Knowledge level	Good Fair	0.004 0.453	2.952 1.411	1.402,6.217 0.574,3.469
Education Attained	None Primary Secondary & Higher	0.999 0.999 0.999	0.000 0.000 0.000	0.000 0.000 0.000
Gestation age started antenatal care	≤ 4 months Five months Six months Seven months	0.999 0.999 0.999 0.999	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000

4.11: QUALITATIVE DATA FINDINGS (FGD)

Summary of the focus group discussions with a total of 20 women

In order to support quantitative findings, two focus group discussions (FGD) were held at Mukusi Rural Health Center on 29 April 2013 and at Mulimambango RHC on 30 April 2013. Each focus group discussion consisted of ten women. The aim of the focus group discussions was to collect in-depth information about IPTp services. The issues addressed during FGDs included knowledge levels of women about IPTp services, reasons why some women do not complete three recommended doses of fansidar, whether women have fears about intake of fansidar during pregnancy, whether there are cultural beliefs regarding intake of drugs like fansidar during pregnancy and what women thought could improve IPT service utilization by pregnant women in their communities.

During a FGD it was noted that majority of the women had fair knowledge about IPT services. Most of them defined IPTp as a service provided during ANC which involved giving of fansidar to pregnant women by health providers in order to protect them from malaria. However a few thought it involved sleeping under a mosquito net and putting on warm clothes to protect a woman from mosquitoes and cold. Most of them also knew the benefits of effective IPTp utilization. Some of the benefits mentioned included, protecting the baby from getting malaria, to prevent the mother from getting malaria, to protect from miscarriages and to protect from delivering an underweight baby. Some of the actual words used by the women were: "*it protects the baby and the mother from getting malaria"* said one respondent from Mukusi FGD. "*It protects from having miscarriages a woman does not get sick from malaria and it also protects from delivering an underweight baby",* said one of the respondents from Mulimambango FGD.

Reasons for not completing the recommended IPTp doses

FGD revealed that the most important reason why pregnant women do not complete the three recommended doses of fansidar was due to late ANC bookings. The reasons as to why most women delay ANC included:

1. Unwanted or unplanned pregnancy especially if the pregnancy is out of wedlock.
2. Clinics demand that when a woman is pregnant, she should attend ANC with the partner and because of this, most pregnant women find it difficult to convince their partners to seek ANC/IPT services early at health centers as males fear that they will be subjected to HIV test if they accompanied their female partners.
3. Some women who are impregnated by married men delay in starting ANC because men refuse to escort them to the clinic for fear that their wives will get the news.
4. Women who are pregnant for the first time do not know when they are supposed to start ANC and hence they delay in starting ANC.

Some of the above reasons are reflected in the following women's responses: "*most women who are impregnated by married men and those still at school delay in going for antenatal because of shame and hence fail to take the three recommended doses of fansidar"* said one respondent from the Mukusi FGD. Another one from the Mulimabango FGD said "*it is because of their partners who do not want to accompany them for antenatal which is a requirement nowadays; therefore they opt not to go for antenatal".*

It was also revealed most women are fond of defaulting in sticking to scheduled meeting appointment dates at health centers hence making it difficult for them to complete all the three recommended IPTp doses. The reason for defaulting was due to poor attitude towards ANC by most pregnant women. A few women complained that health staff demanded that pregnant women be putting on maternity dresses when attending ANC and this made those that cannot afford to be shunning the clinics hence not completing the recommended doses. One woman from Mulimambango FGD complained that outreach activities were inadequate and inconsistent hence making it difficult for women that stay very far from the clinics to access IPTp services when the pregnancy advances as they have difficulties walking long distances.

Perception of use of fansidar in pregnancy

Most women expressed fears about intake of fansidar during pregnancy. They thought it might cause a miscarriage since the pills were too many. Most of them said that fansidar was a very strong drug and hence made a pregnant woman get sick after taking it. Most of the women agreed that fansidar made them feel sick. Some of the actual words used by women include: "*fansidar could cause mis-courage since the pills were too many"* said a woman from Mukusi. Another one from Mulimambango said *"it makes me feel very dizzy and I vomit a lot when I take it, as a result I do not take it, I resort to traditional medicine which does not give me problems".*

Respondent's suggestions for improving IPT uptake

Despite most of the women admitting to the fact that they had experienced undesirable side effects after taking fansidar in the past, most of them showed willingness to take fansidar in future pregnancies because of its benefits. Most of the participants agreed that in order to ensure that all women took the three recommended doses of fansidar, pregnant women should be encouraged to start ANC early and to be consistent with ANC schedules. They also suggested that women should be encouraged to be delivering in health facilities where they can get a lot of health services. Also it was suggested that women should be encouraged to be eating before coming for ANC so that they do not get sick and vomit after taking fansidar. Most women also appealed to the health staff to be attending to them even if they are not accompanied by male partners so that they can adequately utilize services like IPTp services. They also appealed to health staff to intensify outreach activities so that those women that stay far from the health centers can also easily access IPT services. A respondent from Mulimabango suggested, *"the district health staff should improve on outreach* *programs so as to cater for those who stay very far from the health centers so that they can also be able to complete the three doses of fansidar".*

5.0: DISCUSSION OF RESEARCH FINDINGS

The study aimed at finding out factors influencing utilization of IPTp services by pregnant women in Sesheke District of Western Province in Zambia. This chapter therefore presents a discussion of the main findings from the study and factors influencing utilization of IPTp. The discussion has been structured in line with the objectives of the study.

5.1: Proportion of women utilizing IPTp services

In this study it was found that the uptake of IPTp doses was very low with only 30% of pregnant women completing the recommended doses. 71.2% took at least the first IPTp dose while 56.6% took at least the second dose and 28.8% did not take any doses of IPTp. The findings are in line with Sesheke (HMIS Data 2011) which showed that only 33.5% of pregnant women completed the three recommended doses of IPTp during pregnancy during the year 2011. However these findings are much lower than Zambia malaria indicator survey (MIS 2010) data, where it was found that 86% took the first dose and 70% took at least two doses.

5.2: Association between age and completion of three doses of IPTp

According to this study, maternal age did not influence whether a pregnant woman fully utilized IPTp services or not (p = 0.854).Therefore age of the woman during pregnancy did not determine whether a woman will fully utilized IPTp services or not.

5.3: Association between distance to HC and completion of IPTp doses

A lot of scholars have argued that distance to the health center makes a woman not complete the recommended doses of IPTp because they find it difficult to walk long distances as the pregnancy advances. In this study a good proportion of the women lived very far from the HCs (46.9%). However distance to the health center was not found to influence IPTp services utilization (p = 0.174). This could be as a result of IPTp service provision within the communities by community health assistants/ workers or TBAs. It could also be due to IPTp service provision during outreach activities in areas far from the HCs.

5.4: Association between area of residence and completion of IPTp doses

There was no significant association between women who live in hard to reach and those that live in not so hard to reach (p = 0.701). Fifty four out of two hundred and seven women (26.1%) from not so hard to reach areas completed the recommended IPTp doses as compared to sixty three out of one ninety six respondents (32%) from hard to reach.

5.5: Association between marital status and completion of IPTp doses

In this study, marital status of a woman was not found to be a factor influencing utilization of IPTp services ($p = 0.522$). This finding contradicts the focus group finding in which most women agreed that a woman might not complete the recommended IPTp doses because of delay in accessing ANC especially if the pregnancy is out of wedlock. This according to most women was because women are asked by health staff to start ANC together with their partners so that both could be tested for HIV. This requirement according to FGD makes most women not to complete all the three recommended doses during pregnancy as men are usually hesitant to escort them to access ANC in good time hence making them delay in also accessing IPTp services.

5.6: Association between education level attained and completion of IPTp doses

Education level of a woman was found to be a factor influencing completion of three recommended doses of IPTp by a pregnant woman ($p = 0.032$). Therefore this demographic factor does determine whether a woman will comply with IPTp doses or not. This might be due to the fact that when a woman is educated, she is also in one way or another empowered with knowledge that assists her make informed decisions and choices that impact positively on her health.

5.7: Association between denomination and completion of IPTp doses

The findings in this study show that it does not matter which church a woman goes to for them to fully utilize IPTp services ($p = 0.884$).

5.8: Association between where a woman accessed ANC and completion of IPTp doses

It did not matter where a woman accessed ANC, whether it was from the qualified health provider at the health center, from a community health assistant/worker or from TBAs (The $p = 0.157$). This finding supports the use of non qualified health personnel such as TBAs, CHA and CHW in providing health services so as to cushion staff shortages as well as to supplement government efforts by the community.

5.9: Association between gestational age of pregnancy at first ANC attendance and completion of IPTp doses

In this study it was found that age of the pregnancy at which a woman first accesses ANC was associated with completion of IPTp doses ($p = 0.014$). This could be because fansidar is given one month apart starting from the fourth month of pregnancy and hence those that start ANC in good time or early are more likely to complete all the three recommended doses than those that start late. Therefore if women are to fully utilize IPTp services so that they are fully protected from malaria, they should be encouraged to start ANC early. This finding is in line with the FGD in which most women agreed that there was a deliberate attitude by most women to delay starting ANC despite them knowing that they were pregnant.

5.10: Association between number of times attended ANC and completion of IPTp doses

In this study it was found that the number of times a woman attends ANC did influence whether a woman was going to complete the three recommended doses of IPTp or not ($p = 0.001$). This means that the more antenatal visits a women makes the more likely she is able to complete the recommended IPTp doses. The finding contradicts Onaka et al (2010) and Laura et al, (2010) who found that high ANC **a**ttendance did not guarantee high IPTp coverage.

5.11: Association between being educated on IPTp services and completion of IPTp doses

Women who received health education were more likely to complete the doses of fansidar than those that did not receive health education ($p = 0.049$).The finding shows that for IPTp coverage to improve, a lot of women needed to be sensitized about the importance of this service. This is because when more women are educated about the importance of IPTp services, they will be empowered with knowledge and will be able to make informed decisions that impact positively on their lives.

5.12: Association between knowledge level of a woman about IPTp services and completion of IPTp doses

In this study knowledge level of a woman about IPTp services was found to strongly influence IPTp utilization ($p = 0.021$). This finding is in line with Akinleye (2007) who found that utilization of IPTp services was more among knowledgeable women than those that were not knowledgeable about IPTp services. The knowledge level for the majority (48.9%), of the women was found to be good while 18.9% of women had fair knowledge and 32.2% had poor knowledge. The Odds ratio for good knowledge was 2.952 which show that those with good knowledge were 2.9 times more likely to complete the IPTp doses.

This implies that if the community is adequately sensitized and also more IEC is provided to the women, IPTp coverage would improve as a lot of them will be able to utilize IPTp services.

The knowledge level of health providers was found to be equally encouraging with 64.7% having good knowledge, 29.4% had fair knowledge and only 5.9% had poor knowledge. The findings differ from study conducted by Onaka et al, (2012) in Enugu state south-east of Nigeria in which it was found that only 14.7% of health providers interviewed had correct knowledge of recommendations for IPTp service provision. This implies that health providers in Sesheke district have adequate knowledge about IPTp and would easily pass it on to pregnant women accessing IPTp services in their health facilities.

5.13: Association between experience of problems (side effects) of fansidar and completion IPTp doses

Several scholars have argued that side effects of fansidar are the cause for non compliance with the recommended doses by most women. The common side effects of fansidar mentioned by women in this study include worsened nausea and vomiting, headaches as well as dizziness. However in this study experience of side effects of fansidar did not influence completion of the recommended IPTp doses (p = 0.623). This finding implies that despite some women experiencing some side effects of fansidar, they still went ahead and completed the remaining subsequent doses. This could be attributed to the perceived benefits and importance of taking fansidar during pregnancy. This finding supports the findings by Tutu et al, (2011) in which it was disproved that side effects of fansidar was one of the factors influencing IPTp service utilization. This finding is also in line with FGD findings in which most women expressed that they were willing to take fansidar despite the side effect associated with it.

5.14: Availability of fansidar

Six out of eight HCs had no stocks of fansidar during the year 2012. Two Health Centers namely Masese and Neongelo had periodic stock out for an average of two months. The stock out was attributed to an outbreak of malaria in the district which led to use of fansidar reserved for IPTp services to treat patients with malaria. This finding is similar to that of Onaka et al, (2012) in which it was found that availability of fansidar was not considered as an impediment to IPTp delivery in Nigeria. The findings are also in line with FGD in which no participant mentioned that they do not complete the recommended IPTp doses due to stock outs of fansidar at health centers.

5.15: Challenges faced by health providers

Most of the health providers expressed concern that they faced some challenges while providing IPT. The commonest challenge was lack of transport in health centers to enable health staff to reach women in very far and hard to reach areas so that even these women can access IPTp services. Other challenges of note included (1) inadequate resources in form of allowances to enable health staff to conduct outreach activities, (2) periodic stock out of fansidar and (3) misconceptions by some women that fansidar might cause abortion. The last finding that fansidar might cause abortion also agrees with FGD finding in which some women expressed concerns that fansidar might cause sickness and in some instances abortions.

5.16: Perception of use of fansidar during pregnancy.

Majority of the women (81.8%) perceived use of fansidar in pregnancy as being safe and only a few women (4.2%) thought it was not safe while 14.1% of women did not know whether it was safe or not. During focus group discussion most of the women expressed concern that fansidar tablets were too many and strong. Some said it made them feel sick and also feared that it could cause abortion. However most of the women were still willing to take fansidar despite side effects associated with it. This was attributed to the perceived benefits of taking fansidar during pregnancy. The finding during FGD that the tablets were too many and might cause abortion were in line with the study conducted by Moono (2010) in Mazabuka, Zambia in which it was found that one of the factors influencing IPTp utilization among adolescents in Mazabuka district were fears by women that fansidar might cause sickness and abortions.

6.0: CONCLUSION

Effective IPTp service utilization in Sesheke district is very low with only a few women completing the three recommended doses of fansidar during pregnancy. Less than half of the women in the district had good knowledge level about IPTp services while majority of them perceived use of fansidar in pregnancy as being safe.

The most important factors influencing IPTp service utilization were women's knowledge level about IPTp services, educational status of a woman, and timing of first starts ANC, number of ANC attendances and misconceptions by some women that fansidar might cause abortion. Health providers also faced some challenges while providing IPTp services of which the commonest was transport to enable them reach women in far and hard to reach areas.

6.1: RECOMMENDATIONS

- The District Community Medical Office (DCMO) should improve knowledge levels of the community on the importance of IPTp services through mass sensitization and information, education and counselling (IEC) to women during antenatal care services. This measure will help address most of the factors influencing IPTp service utilization in the district; and the message should include importance of early ANC attendance, adherence to focused ANC schedules and importance of completing the recommended doses of IPTp. It should also dispel misconceptions about use of fansidar during pregnancy.

- MCDMCH/MOH should always ensure that before any program or activity is implemented, the community should always be adequately sensitized so as to empower them with knowledge and information in order for them to make informed choices. Adequate sensitization will also assist dispel myths that might be associated with a program or activity by the community.

- MCDMCH/DCMO should address transport challenges and also improve on resource allocation to Health Centers for outreach activities in order to enable women in far and hard to reach areas to access IPTp services.

- MCDMCH and Ministry of Education should work hand in hand in order to promote girl child education. This is because when a woman is educated, she will be empowered with knowledge that would assist her make informed decisions and choices that impact positively on her health.

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7.0.Appendices

7.1.Information Sheet

Title of study: Factors influencing utilization of intermittent presumptive treatment of malaria (IPTp) services by pregnant women in Sesheke District.

To the participants,

This is to let you know that this study is being conducted by Chazya Sikambale a student at University of Zambia School of medicine, from Department of Public Health.

Sesheke District Medical office has been providing intermittent presumptive treatment of malaria services in all health facilities in the district since 2003. The study aims to identify factors that influence utilization of intermittent presumptive treatment of malaria services by pregnant women in the communities of Sesheke Districts.

There are no known risks associated with this study. Also there will not be any monetary gain to you by participating in this study. Nevertheless, the information you will honestly provide will help identify gaps on IPT service delivery and access by pregnant women in Sesheke District.

Be informed also that your participation in this study is purely voluntary and as such you are free to withdraw if you are not interested at anytime and your action will not disadvantage your acquisition of health services in the district.

Please feel free to seek clarification when in doubt and also note that the information you will provide will be strictly confidential. The study information will be disseminated to the relevant authorities who will have no direct link to you since anonymity will strictly be observed.

Informed Consent form

The purpose of the study has adequately been explained to me and I understand the aim, benefits, risks and confidentiality of the study. I further understand that; if I agree to take part in this study, I can withdraw at any time without having to give an explanation and taking part in this study is purely voluntary.

I--
(Names)

Consent to participate in this study

Signed; ---date :------------------------------(Participant)

Participants signature or thumb print

Signed; --date :------------------------------------(Witness)

Name of the interviewer: ---

Signed---date; ---

PERSONS TO CONTACT FOR PROBLEMS

1. Chazya Sikambale. University of Zambia, School of Medicine, Department of Public Health, P.O. Box 50110, Lusaka, Zambia. Cell: 0976577356

2. The Chairperson, Eres Converge, Research Ethics Committee, Joseph Mwila Road, Rhodes Park Lusaka, Zambia. Tel 0955155633; Email eresconverge@yahoo.com

COMMUNITY QUESTIONNARE FOR WOMEN PARTICIPANTS
PAMPILI YA LIPUZO ZA BASALI MWASICABA

THE UNIVERSITY OF ZAMBIA

SIKOLO SESIPAHAMI SA TUTO MWA ZAMBIA

SCHOOL OF MEDICINE

SIKOLO SA BALAFI

DEPARTMENT OF COMMUNITY MEDICINE

LILUKO LA LIKALAFO ZA MACABA

RESEARCH TOPIC

TOHO YA TABA YEBATISISWA

FACTORS INFLUENCING UTILIZATION OF INTERMITTENT PRESUMPIVE TREATMENT OF

MALARIA (IPT) SERVICES BY PREGNANT WOMEN IN SESHEKE DISTRICT

MIKWA YE SUSWEZA KUITUSISWA KWA MILYANI YE FIWA BAIMA KUBASILELEZA KWA BUTUKU BWA LITOMAPA (MALARIA) MWA SIKILITI SA SISHEKE

QUESTIONNARE NUMBER______________

NOMBOLO YA PAMPILI______________

DATE OF INTRVIEW____/____/____

LIZAZI LA LIPUZO____/____/____

PLACE/AREA____

SIBAKA____

NAME OF INTERVIEWER____

LIBIZO LA MUBUZI WA LIPUZO____

INSTRUCTION FOR THE INTERVIEWERS:

LITAELO ZA MUBUZI WA LIPUZO

1. Kindly introduce yourself to the respondents and explain the purpose of the interview.

1. Kalikute miutaluse ku bomubuza lipuzo ni kutalusa mulelo wa lipuzo.

2. Get written consent from the respondents before starting the interview.

2. Mufumane tumelelano ili yen'ozwi ka kuikambota ni bao muna nikubuza lipuzo musikala kale kubuza.

3. Tick and complete responses in the space provided.

3. Musaye niku tataleleza likalabo mwa sibaka sesifilwe.

4. Allow respondents to ask questions at the end of the interview.

4. Mulumeleze balabi kubuza lipuzo kwa mafelezo a lipuzo za mina.

5. Assure respondents that all the information provided will be kept strictly confidential.

5. Musepise balabi kuli litaba zeo bafile likaba likunutu mwahala mina ni bona.

SECTION A: DEMOGRAPHIC DETAILS

KALULO YA PILI: MINELO YA SICABA

Health facility name --

Libizo la sipatela --

Identity number--

Nombolo ya situpa---

1. How old were you at your last birthday--

1. Nemunani lilimo ze kai za kupepwa fa mukiti wamina wa kupepwa ----------------------------------

2. How far is the health centre from your home?

2. Sipatela sikwahule cwan'I ni sibaka samina?

Very far, greater than 5km---1 Ki kwa hule, kufitelela libima ze keta lizoho----1	Near, less than 5 km---2 Kifakaufi, akufileli libima ze keta lizoho---2

3. What is your marital status?

3. Maemo amina kiafi kuamana ni likalulo za manyalo?

Single---1 Likwasha--1	Married---2 Ninyezwi---2	Divorced---3 Nilelekilwe--3	Widow---4 Mbelwa--4	Separated--5 Lukauhani--5	Cohabiting--6 Mapoto---6

4. What is your education level?

4. Mukeni kufita kai mwa lituto zamina?

Never been to school---1 Nalikuba ni kene sikolo--1	Primary---2 Sitopa sa 1 kuisa 7--2	Secondary---3 Sitopa sa 8 kuisa 12	Tertiary---4 Nikeni sikolo sesipahami-4

5. What is your occupation?

5. Mueza musebezi man'i?

Unemployed---1 Hani beleki---1	Peasant farmer---2 Ni mulimi---2	House wife---3 Ni musali wafalapa-3	Others---4 Zenw'i---4

6. Which church do you belong to?

6. Mulapela kwa keleke ifi?

Catholic---1 Baroma---1	SDA---2 Basabata-2	Pentecostal-3 Mapente-3	UCZ--4 Bafura-4	New apostolic-5	Jehova's witness-5 Batora yakulibelel	Others specify Zenw'I likeleke-6

SECTION B: PROPORTION OF PREGNANT WOMEN UTILIZING IPTp SERVICES

KALULO YA BUBELI: KABELO YA BAIMA BAO BAITUSISA MULYANI WA SILELEZO YA LITOMAPA HABANZE BAITWEZI

7. Did you attend antenatal care services during your last pregnancy?

7. Kana mukile mwin'olisa kwa sipimo sa baima hane muitwezi?

Yes---1 Eni---1	No---2 Batili---2

If the answer to question 7 is yes, answer question 8 to 11. If the answer is no, skip question 8 to 11.

Hiaba nji kalabo yamina mwa puzo ya busupile ki Eni, amualabe puzo yabu 8 kuisa kuya bu 11.

8. Where did you go for your antenatal care during your last pregnancy?

8. Nemuezeza kai sipima sa baima famulwalo wamina wamafelelezo

At HC/HP---1 Kwa lipatele---1	To the TBA---2 Kwa bapepisi ba mwa hae---2	To the CHW/CHA-3 Kwa balafi bamwa hae-3

9. At how many weeks/months did you start antenatal care?

9. Nemukalile sipimo samina fa lisunda kappa likweli zekai zakuitwala?

Less than 4 months---1 Mwatasi alikweli zene---1	Four---2 Zene---2	Five---3 Zeketalizoho---3	Six---4 Zesilezi---4	Seven---5 Zesupile--5	Eight months---6 Likweli zeketa lizoho kezetalu--6	Nine months--7 Likweli zeketa lizoho kezene--7

10. How many times did you attend antenatal care services before delivery?

10. Muile hakai kwasipimo sabaima musikapuluha kale?

Zero---1 Noto---1	Once---2 Han'wi---2	Two times---3 Habeli---3	Three times---4 Halalu---4	More than three times---5 Kufitelela halalu---5

11. Were you given any drugs by the health staff during your last pregnancy?

11. Kana mukile mwa fiwa mulyani ki mwalafi fa mulwalo wa mafelelezo?

Yes---1 Eni---1	No---2 Batili---2

12. If the answer is yes, why was the drug given to you during your last pregnancy?

12. Haiba nji kalabo ki eni, hamufe libaka leo nemufezwi mulyani wo?

To treat malaria--1 Kualafa malaria--1	To treat worms--2 Kualafa linoha--2	To boost the blood-3 Kukenisa mali--3	To improve my nutrition status and immunity---4 Kumatafaza ni kuinula masole bamubili---4	Do not know –5 Hanizibi ---5

Give any other reason if not indicated in the table above

Amufe mabaka asikafiwa mwaponkisi yefahalimu

----

13. Have you ever heard about a drug called Fansidar?

13. Kana mukile mwautwa mulyani obizwa Fansidar?

Yes---1 Eni---1	No---2 Batili---2

14. Were you given any fansidar during your last pregnancy?

14. Kana mukile mwafiwa mulyani wa fansidar famulwalo wamina wamafelelezo.

Yes---1 Eni---1	No---2 Batili---2	Do not know---3 Hanizibi---3

15. If the answer to question 13 is no, select the reason.

15. Haiba nji kalabo kwa puzo ya bu 13 ki batili, hamukete libaka.

Health center is very far----1 Sipatela sikwahule luli---1	Did not attend ANC---2 Nenisikain'olisa sipimo---2	Feared side effects---3 Nenisabile butata bwa mulyani---3	No drugs at the health centre---4 Nekusina milyani kwa sipatela sa luna---4	Did not know that I was supposed to take fansidar---5 Nenisazibi kuli neniswanela kumwa mulyani wa fansidar---5	Feared that it will have effects on my baby---6 Neni sabile kuli ukatisa butata ku mbututu waka---6

Give any other reasons if not indicated in the table above

Amufe mabaka asikafiwa mwaponkisi yefahalimu

----

16. If the answer to question 13 is yes, who gave you the drug?

16. Haiba nji kalabo kwapuzo yubu 13 ki eni, nemufufilwe kiman'i mulyani wo?

Bought it---1 Neniulekile-1	Was given by the community health worker---2 Neniufilwekimwalafi wakapatela ka mwa hae--2	Was given at the health center---3 Neniufilwe kwa sipatela--3	was given when health center staff came to our area--4 Neniufilwe balafi hane batile kwa sibaka saluna-4

17. How many months were you during your last pregnancy when you first took the drug?

17. Neli falikweli zekai za bwima fonemunwezi mulyani wo fa mulwolo wamina wamafelelezo?

Less than 4 months-1 Mwatasi alikweli zene---1	Four---2 Zene---2	Five---3 Zeketalizoho-3	Six---4 Zesilezi---4	Seven---5 Zesupile---5	Eight---6 Zeketalizoho kazetalu---6	Nine-7 Zeketalizo ho kazene---7

18. How many times did you take this medicine (fansidar) during your last pregnancy?

18. Mulyani wo wa fansidar munwile hakai mwanako ya mulwalo wamina?

None ---1 Hakuna ---1	Once---2 Hanw'i---2	Two times---3 Habeli---3	Three times---4 Halalu---4	Zero---5 Noto---5

SECTION C: KNOWLEDGE ABOUT IPT SERVICES

KALULO YA BULALU: ZIBO YEAMANA NIKALAFO YAKUSILELEZA BAIMA KWA BUTUKU BWA LITOMAPA (MALARIA)

19. Did the health staff/TBA/CHW educate you about ways of protecting yourself from malaria in your last pregnancy?

19. Kana balafi nebamifile lituto kuamana mo mukonela kuisileleza kwa butuku bwa malaria ha muitwezi?

Yes---1 Eni---1	No---2 Batili---2

20. If the answer to question 19 is yes, how can a pregnant woman protect herself from malaria?

20. Haiba nji kalabo kwa puzo yabu 19 ki eni, muima ukona cwan'I kuisileleza kwa butuku bwa litomapa.

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21. Do you think a woman should be treated for malaria even if she is not feeling sick using a drug or medicine during pregnancy?

21. Kana kubutokwa kuli muima afiwe kalafo ya butuku bwa litomapa nihaike inge asaikutwi kukula nji?

Yes--------1 Eni--------1	No---------2 Batili------2	Do not know-----3 Hanizibi----------3

If the answer to question 21 is yes, please answer question 22 to 24.

Haiba nji kalabo kwa puzo yabu 21 ki eni, amualabe lipuzo 22 kuisa 24

22. Why do you think this is important?

22. Kikabaka lan'i amunga kuli nto ye ibutokwa?

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23. What is the name of the drug which is given to pregnant women in order to treat them from malaria even when women themselves do not think they have malaria?

23. Kilibizo man'i la mulyani ofiwa baima kamukwa wakualafa litomapa ni haike bona basali basa akalezi kuli mwendi ki bakuli?

Quinine---1	Fansidar---2	Chloroquine---3	Septrine---4	Do not know --5

24. How many times should a woman take this drug during pregnancy?

24. Kana mulyani wo ukona kunwiwa hakai mwanako yeo mwima aitwezi?

Once--------1 Hanw'i-----1	Two times---------2 Habeli-------------2	Three times-------4 Halalu-------------4	Do not know-------5 Hanizibi------------5

SECTION D: PERCEPTION ABOUT USE OF FANSIDAR DURING PREGNANCY

KALULO YA BUNE: TEMUHO YA BUTOKWA BWA KUITUSISA MULYANI WA FANCIDAR MWANAKO YA BUIMA

25. Is it safe for a pregnant woman to take drugs such as fansidar during pregnancy?

25. Kana kulukile kumuima kunwa milyani ye cwale ka Fancidar kanako ya buima?

Yes -------------1 Eni -----------1	No -------------2 Batili ---------- 2	Do not know-------3 Hanizibi --------- --3

26. If the answer to question 25 is yes, what are the benefits?

26. Haiba kalabo ya puzo ya bu 25 ki eni, cwale kanti bunde bwa ten'i ki bufi? ------------------------

27. If the answer to question 25 is no, why is it not safe?

27. Haiba kalabo ya puzo ya bu 25 ki batili, cwale kin'i hakusalukeli?

Questions 28 to 32 should only be answered by those women who took fansidar during their last pregnancy.

Puzo yabu 28 kuisa kuyabu 32 iswala kualabwa kibaima bao neba nwile mulyani wa fansidar mwa nako yabuima bwabona bwa mafelelezo.

28. Did you experience any problems the last time you took fansidar during your last pregnancy?

28. Kana mukile mwaba ni butata hanemunwile fansidar famulwalo wamina wamafelelezo?

Yes---1 Eni---1	No---2 Batili---2

29. If yes, what problems did you experience?

29. Haiba nji matata nabile ten'I, amuataluhanye.

----

30. Did you take the subsequent doses of fansidar despite having problems with the drug?

30. Kana nemuzwezipili kunwa milyani ya fansida yene tatama nihanemubile ni butata cwalo?

Yes------1 Eni------1	No---------2 Batili------2

31. Do you intend to take fansidar in future pregnancies?

31. Kana muna nimulelo wakunwa fansida hamukaitwala hape?

Yes------1 Eni------1	No---------2 Batili------2

32. If the answer to question 31 is no, give reasons

32. Haiba nji kalabo kwa puzo yabu 31, amufe mabaka

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33. Are there any cultural beliefs in your community concerning intake of drugs such as fansidar?

33. Kilifi litumelo za sizo mwa macaba zeamana ni kunwa milyani ye cwale ka fansidar musali inge aitwezi?

Yes------1 Eni------1	No---------2 Batili------2

34. If the answer to question 33 is yes, please mention them

34. Haiba nji Kalabo yamina kwa puzo yabu 33 ki eni, amutaluse.

I THANK YOU

NAITUMELA KUMINA

QUESTIONNARE FOR HEALTH PROVIDERS AND COMMUNITY HEALTH WORKERS

THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE

DEPARTMENT OF COMMUNITY MEDICINE

RESEARCH TOPIC:

FACTORS INFLUENCING IPT SERVICE UTILIZATION BY PREGNANT WOMEN IN SESHEKE DISTRICT

QUESTIONNARE NUMBER______________

DATE OF INTRVIEW____/____/____

NAME OF HEALTH CENTER____

NAME OF INTERVIEWER**____**

INSTRUCTION FOR THE INTERVIEWERS:

1. Kindly introduce yourself to the respondents and explain the purpose of the interview.

2. Get written consent from the respondents before starting the interview.

3. Tick and complete responses in the space provided.

4. Allow respondents to ask questions at the end of the interview.

5. Assure respondents that all the information provided will be kept strictly confidential

SECTION A: DEMOGRAPHIC DETAILS

Health facility name --

Identity number---

1. What is your occupation?

Clinical officer-1	Nurse-2	Midwife -3	Environmental Health Technologist-4	Community Health Worker/Assistants-5

2. How long have you been providing health services?

Less than one year---1	More than one year---2

SECTION B: KNOWLEDGE ON ABOUT IPT SERVICES

3. Can a pregnant woman be presumptively treated for malaria using a drug/medicine so as to ensure the best outcome for both the mother and her unborn?

Yes---1	No---2	Do not know---3

If the answer to question 3 is yes, answer question 4 to 13

4. What drugs is recommended to presumptively treat malaria in pregnant women in Zambia?

Quinine---1	Fansidar---2	Chloroquine---4	Septrine---5

5. At how many weeks or months should the first dose of this drug be administered?

After 12wks---1	Before 12wks---2	After 5 months---3	Do not know---4

6. How many times during pregnancy is the drug given (administered) as recommended by MOH?

Once---1	Two times---2	Three times ---4	Do not know---5

7. What is the interval for administration of this drug?

One week apart---1	One month apart---2	Five months apart---3	Do not know---4

8. How is the drug given (administered)?

As an injection---1	Orally---2	Smeared---3	Vaginally---4

9. Where is the drug supposed to be taken (administered) from?

Woman takes it home---1	As DOTS at HC or during outreach activities---2	The woman chooses where to take it from---3	Do not know---4

10. What are the most reported side effects of this drug?

diarrhea---1	Headache ---2	Nausea/vomiting---3	I don’t know---4

11. Is there scientific evidence to prove that this drug can induce abortion in pregnant women after second trimester?

Yes in second trimester---1	No proof ---2	Yes in Africans---3	I don't know---4

12. In which medical condition is the drug not supposed to be given?

HIV pregnant women---1	Patients sensitive to sulphur containing drugs e.g septrine ---2	In pregnant women with sexually transmitted diseases---3	I don't know---4

13. What are the advantages of correctly using this drug during pregnancy?

Reduced baby size during delivery---1	Healthy mother and healthy baby---2	Can also prevent of mother to child transmission of HIV--3	I don't know---4

SECTION C: CHALLENGES FACED BY HEALTH PROVIDERS WHEN PROVIDING IPT SERVICES

14. Do you face any challenges while providing IPT services that could lead to non completion of three recommended doses of IPT by pregnant women in your catchment area?

Yes ---1	No---2

15. If the answer to question 14 is yes, please list the challenges:

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…………………………

I THANK YOU

FANSIDAR RECORD TABLE IN SELECTED HEALTH FACILITIES

NAME OF HEALTH FACILITY--

DATE---

Objective

To verify whether fansidar is always available in health facilities providing IPTp services.

INSTRUCTIONS

Please put a tick to indicate availability or a cross to indicate non availability of fansidar in each of the month indicated in the table below, as reflected on the health facility control card

MONTH IN THE YEAR 2012	FANSIDAR	COMMENTS IF ANY
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

FOCUS GROUP DISCUSSION GUIDE

TOPIC: FACTORS INFUENCING IPT SERVICE UTILIZATION BY PREGNANT WOMEN IN SESHEKE DITRICT

Objective;

To explore women perception about IPT services in pregnancy.

1. Introduction- Researcher, recorder and participants.
2. Introduction of the topic.
3. What do you know about IPTp services?
4. What drug is given to presumptively treat malaria during pregnancy?
5. How many doses of fansidar should be given during pregnancy for presumptive treatment of malaria?
6. What are the benefits (if any) of taking fansidar during pregnancy for presumptive treatment of malaria?
7. What are some of the reasons why pregnant women are not completing the recommended three doses of fansidar during pregnancy?
8. What fears do women have about intake of fansidar during pregnancy?
9. Are there any cultural beliefs in your community concerning intake of drugs such as fansidar?
10. What do you think should be done in order to ensure that all women complete the three doses of IPT during pregnancy?
11. Thank you very much for your active participation.

RESEARCH BUDGET

No	ITEM/CATEGORY	QUANTITY	UNIT COST	TOTAL
1.	STATIONERY			
	- A4 reams of paper	10	35	350
	- Duplicating paper	10	35,	350,
	- Pens	20	1	10
	- Pencils	3	50	150
	- Flash discs	20	2	40
	- Folders			
	- Rubber			
	SUB TOTAL			**900**
2.	SECRETARIAL			
	(a) Proposal			
	- Typing	40 pages*3	2	240
	- Printing	40 pages*3	0.3	36
	- Photocopying	3	20	60
	- Binding			
	SUB TOTAL			**336**
3.	(b) Pilot study			
	- Typing questionnaire and consent form	10 pages	5	100
	- Printing			

	questionnaire and consent form - Photocopying questionnaire and consent form	10 pages 40 x 10 pages	2 0.2 per page	20 80
	SUB TOTAL			**820**
4.	DISSERTATION - Typing - Printing - Photocopying of questionnaire - Photocopying of document - Binding	 80 pages 80 pages*3 10 x 400 copies 6 copies	 5 2 0.2 per page 20 per copy	 200 300 800 120
	SUB TOTAL			**1420**
5.	PERSONAL SERVICES - Principal Investigator (fuel) - Research Assistants (motor bike fuel) Meal allowance	 80L*20 Facilities 5l x 20 Assistant 7days*20 Assist	 K8/L 8 per L 50	 1,500 800 7,000
	SUB TOTAL			**9,300**

	TOTAL 10% Contingency			12,776 1,277.60
	GRAND TOTAL			**14053.60**

WORK PLAN

ACTIVITY	Feb	Feb	Mar	April	May	May	June	June
Finalizing proposal								
Permission to conduct research								
Training of research assistants								
Data collection								
Data analysis								
Report Writing								
Submission of report								
Dissemination of information								