# UTILIZATION OF HEALTH SERVICES BY MOTHERS OF INFANTS DURING THEIR POST PARTUM PERIOD IN TEMEKE MUNICIPAL, DAR ES SALAAM, TANZANIA.

BY

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A DISSERTATION SUBMITTED FOR PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PUBLIC HEALTH IN THE UNIVERSITY OF DAR ES SALAAM

SEPTEMBER, 2003

## CERTIFICATION

The under signed certifies that she has read and hereby recommends for acceptance by the University of Dar es Salaam a dissertation entitled: **Utilization of Health Services by Mothers of infants during their post partum period in Temeke municipal, Dar es salaam, Tanzania;** in partial fulfillment of the requirements for the degree of Master of Public Health.

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**DATE**.....13th Oct. 2003

## DECLARATION

I declare that this dissertation is my original work and it has not been submitted for a similar degree in any other University.

CANDIDATE'S SIGNATURE..... date.....13th Oct, 2023

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## DEDICATION

This work is dedicated to:

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## ABSTRACT

A cross sectional study was conducted in Temeke Municipality in Dar Es Salaam during June to July 2003. The main objective of the study was to assess the utilization of health services by post partum mothers.

A total of 290 mothers of infants and 42 MCH service providers were interviewed. Multi stage cluster sampling technique was used to select the streets to be included in the study while purposeful sampling was used for the MCH service providers' interview.

The results from the study revealed that, almost all mothers attended antenatal clinic but only 23% attended post partum clinic.

About 73.1% of the mothers were informed to return to the clinic after delivery but the majorities (70.2%) were asked to come for their babies' service.

Only 13% of the HSPs delivered the information on post partum care to their clients at the right time that is during antenatal visits while only 6% of the mothers acknowledged receiving such message at the right time.

About half of the mothers attended the clinic in the 1st week while 12.3% attended after 42 days and majority (70%) of the mothers attended the clinic once.

Majority of MCH service providers have knowledge on the need for postpartum care but there were some deficiencies on timing for the visits and provision of the services.

The most common reason for mothers not to attend post partum follow up visits is lack of information on the need for postpartum care. For the mothers who were aware of post partum care, the most common reason reported by 70% of the mothers

was that "mothers felt that they have no problems after delivery and so no need to return to the clinic".

Health education on post partum care, upgrading, refresher training to MCH service providers and to improve health system infrastructure are among the recommendations suggested to improve post partum care in Tanzania.

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## ABREVIATIONS

**AMO:** Assistant Medical Officer

**FCI:** Family care international

**HDIP:** Health Development Information and policy Inst.

**HMIS**: Health Management Information System

**HSPs:** Heath Service Providers

**IAG:** Inter Agency Group

**MCH**: maternal and Child Health

**MCHA**: Maternal and Child Heath Aider

**MNPI** : Maternal and Neonatal Program Index

**MMOH:** Municipal Medical Officer of Health

**MoH:** Ministry of Health

**Nm:** Nurse Midwife

**NO:** Nursing Officer

**PHN**: Public Health Nurse

**PPC:** Post Partum Care

**TBAs:** Traditional Birth attendants

**TDHS**: Tanzania Demographic Health Survey

**TMCCHP**: Temeke Municipal Comprehensive Council Health Plan

**TRCHS**: Tanzania Reproductive and Child Health Survey

**UNICEF**: United Nations Children's Fund

**WHD:** World Health Day

**WHO**: World Health Organization

**ZSMP**: Zanzibar Safe Motherhood Program

## DEFINITION OF TERMS USED IN THIS STUDY:

**Postpartum period**: Is the period between delivery of a baby up to six weeks.

**Maternal mortality**: Is any death of a woman while pregnant or within forty-two days after termination of pregnancy, irrespective of the duration of the pregnancy, from any cause related to or aggravated by pregnancy but not from accidental causes (WHO definition).

**Provider:** MCH worker at the selected clinic

**Infant**: A child of age one year and below.

**Household**: An individual or group of people who eat together and share the same cooking pot.

**Health facility**: Any institution for health care activities, e.g. dispensary, health center, clinic or hospital.

**MCH clinic:** A health care facility, which takes care and monitors health of mothers under reproductive age as well as children under five years old.

**Maternal mortality ratio:** The number of maternal deaths per 100,000 live births.

**Ten cell leader**: A person who acts as administrator of a ten household unit, and reports to the authority any decisions or events under of the ten houses under him/her.

**Ward:** Sub division of a district, usually administered by a ward secretary who is an employee of the government.

# CHAPTER 1

## 1.0 INTRODUCTION

## 1.1 BACKGROUND

### Maternal deaths and complications

It is estimated that every minute a woman dies of causes related to pregnancy and childbirth. (WHO, 1998). Between 500,000 to 600,000 women die each year from pregnancy related complications (EU/UNFPA; Wetzstein C, 2002; WHO & UNICEF, 1996). For many years, there has been no decline in maternal mortality rates in developing countries as is the case in developed countries. Ninety nine percent of maternal deaths continue to occur in developing countries (Population council, 2002; AbuoZahr. C & Royston E, 1991; Nguyen, 1998). Therefore there is a vast difference in mortality rates between the developing and developed world.

Women in every country and every population are equally at risk of developing complications. In the 20$^{th}$ century, maternal mortality rates in developed countries were noted to be as high as they are today in developing countries. There was a steeper decline in these developed countries. Since 1980s the US maternal mortality rates has been as low as 10 deaths per 100,000 live births, and the aim is to reduce it further to 3.3 by the year 2010 (Wetstein, 2002).

There have been several efforts in developing countries to reduce such unacceptable high levels of maternal mortality rates. The Safe Motherhood conference held in Nairobi in 1987 called for a reduction of maternal mortality rates by half by the year 2000. Also there have been many efforts on part of the government, professional associations non-governmental organizations, technical assistance organizations and

donor agencies. Despite of all the strategies put forward maternal mortality rates are still high in many parts of the world (WHO, 1998). There has not been any indication of significant decline in maternal mortality rates in developing countries as compared to developed countries. Each time a woman becomes pregnant, she carries the risk of death and disability, which is higher in developing countries.

The question is "why maternal mortality is still high in developing countries? Several reasons have been identified to be contributory to this major and challenging problem: Women in developing countries are more likely to have higher fertility rates thus expose them to maternal complications and at the same time they are less likely to get prompt adequate treatment due to poor obstetric care system. There are increased hazards of reproduction in these countries thus increasing the maternal deaths. Moreover, there is lack of skilled attendants at birth and timely appropriate management when complications occur. In developed countries the medical facilities are well developed and maternal care is so advanced thus keeping the number of deaths to the lowest possible rates. There is therefore high quality and accessible health care (WHO, 1997).

There is also a big discrepancy in terms of facility use in developed countries. Studies have shown that in developed countries 97% of the mothers make at least one antenatal visit, 99% deliver with skilled personnel and 90% make at least one postpartum care visit. This can be compared with lower rates found in their counter parts whereby, 65% make at least one antenatal visit; 53% give birth with skilled attendant and only 30% do receive postpartum care (WHO, 1997).

**The situation in Tanzania**

According to overall global comparisons in terms of maternal and neonatal health services, the rating shows that Tanzania lag behind the global average, whereby it ranked 37th among the 49 countries in delivering services and 9th among the 13 developing countries studied in Sub Saharan Africa. Its maternal mortality figures are very controversial and vary widely by source. However, it is estimated that roughly between 7,500 and 15,000 women in Tanzania, die each year due to pregnancy complications (MNPI, 2001).

**Postpartum care**

Every woman should have access to basic level of care after childbirth regardless that the birth took place in the health facility or at home (WHO, 1986). Most of maternal deaths occur during postpartum period (Li et al, 1996 & Finger, 1997) and many mothers experience serious health problems requiring professional care during the postpartum period, however they are unaware of the serious nature of their illness (Nitai et al, 2002). Therefore any strategy to reduce maternal mortality rate is incomplete until it includes provision of timely postpartum care. The care provides an opportunity to check the general health of the mother and baby, to diagnose and treat complications. It also includes referral to the specialist when there is a need, counseling for family planning, nutrition and breast-feeding of the baby.

In Tanzania, the policy guideline through National Package of Reproductive and Child Health interventions emphasizes that the woman and her newborn should have continuous attention for the first 24 hours after birth. After discharge, the postpartum care visits schedule should be at 7th, 28th and 42nd days (MoH(a), 2000). Also the

Tanzanian Ministry of health through its Reproductive Health Section has designed a curriculum on Life Saving Skills, which contains some guidelines on postpartum care. The guideline focuses on the same number of review phases (MoH, 2002).

Traditionally, it had been stated that the mother and the baby should visit the clinic for follow up for at least six weeks and the period thereafter is no longer of much danger of maternal deaths (Finger, 1997). The first few days after delivery are the most important and that is when most care is needed. The practice concerning time of observation in the facility after delivery varies from place to place. In Tanzania, theoretically it is recommended that after delivery the mother should be observed in the facility for at least 24 hours before she is discharged home. However, due to overcrowding in the health facilities sometimes the patients are discharged even before six hours. During an exit interview in Lindi 41% of the mothers responded that they were discharged home on the same day, 54% on the following day and only 5% stayed in the facility for more than one day (Simbakalia et al, 1998). In other places the same trend was noted; Dr Judith Fortney states "It used to be that a public health nurse would visit the mother several days after delivery. But this does not happen any more, in developing countries. Women are dismissed from the health centres or hospitals often six hours after delivery. A lot of things can go wrong in the first few days" (Finger, 1997).

On the other hand, WHO recommends that the mother and the baby should be discharged home as early as possible to avoid nosocomial infections, at the same time early postpartum care should be done. It further recommends that home visiting should be done to provide equivalent care to that given at the health facility (WHO, 1986). In a randomized trial of a program of early postpartum discharge in Canada,

it was concluded that early postpartum discharge coupled with prenatal, postnatal, and home visits lead to no apparent disadvantages and may yield advantages for the mothers and their infants (Gagnon et al, 1997).

It is important that there must be collaborative efforts between parents, families, care givers, traditional birth attendants, Health care administrators or other related sectors, community groups, policy makers and politicians. All these need accurate information on what constitutes best care in the postpartum period.

## 1.2 Statement of the problem

### 1.2.1 Problem definition:

Poor or lack of postpartum care is one of the most neglected problems among the causes of maternal morbidities and mortality. Lack of postpartum care is considered the greatest contributing factor to the high maternal mortality rate. A number of serious complications and the majority of maternal deaths occur in the postpartum period especially in the developing countries. Therefore the period is of critical importance in the context of maternal mortality control strategies. However, despite such contribution towards mortality, in many developing countries, reproductive health services do not actively include postpartum care. It is important to note that until relatively recently, Public Health specialists and Gynecologists have given little consideration to the problem and most of the strategies to reduce mortality rate have been pre occupied with antenatal and child delivery while postpartum has been left unattended. Antenatal attendance in Tanzania is reported to be about 98% but postnatal check up is as low as 15% (Simbakalia et al, 1998). Thus it would appear that postpartum women do not value or see the importance of accessing postpartum services. The health workers tend to spend only a fraction of their time to visiting postnatal mothers compared with antenatal mother. This deficit in services and postpartum women's lack of value for the services available leaves many women trapped in a harmful cycle of postpartum complications, disabilities and finally deaths.

Normally during antenatal attendances the mother should be well informed of the post delivery care; anticipated complications and visit schedules for postpartum and postnatal reviews. They are supposed to visit the clinic three times per week; at $7^{th}$,

28th, and at 42nd week. In Tanzania, mothers rarely visit the clinic for postpartum check up for reasons, which are not adequately explored. In most cases mothers would come back when they face complications. In cases where the mother turns up for the clinic the health worker is likely to concentrate on the baby's check up and vaccination. The general state of the MCH clinics to provide welcoming environment for the mothers to attend routinely postpartum clinic is also questionable. Poor infrastructure, shortage of drugs, supplies and qualified staff together with unfriendly attitudes of the health workers are among the barriers noted affecting the utilization of the service.

There is also problem of documentation in the whole process of postpartum care; one can hardly find the records concerning postpartum attendances and outcome in the MCH clinics, even the HMIS most commonly used in Tanzania does not include postpartum records. Therefore there is a problem of scarcity of data and the little which is available is hospital based which do not reflect the real picture of morbidities and mortality. For example some of the incidences could have happened at home before they reach the hospital.

After delivery, while the mother is being discharged she is supposed to be scheduled or given an appointment to come back after one week for routine review regardless of whether she has problems or not. Also she is requested to report any time whenever she suspects complications. The effectiveness of the communication between health provider and client regarding postpartum services needs to be evaluated.

### 1.2.2 Research questions:

What proportion of mothers attends post partum clinics?

Do mothers have information that they should attend postpartum clinic for checkup?

What are the reasons, which prevent them from utilizing the care?

For those who attend the clinic what type of care is provided to them?

Do health service providers' have knowledge on the importance of postpartum review?

## 1.3 Rationale

Postpartum complications contribute the largest proportion towards maternal deaths, whereby about 60% of deaths occur during this period (Finger, 1997 & Li et al, 1996). Postpartum care as compared to antenatal and childbirth is least utilized in Tanzania. Only scanty research data are available on the utilization and extent of care during postpartum period. It is not well known why mothers do not attend postpartum review clinics.

It is necessary that such study to be undertaken as the information obtained may be useful to design interventions to improve utilization of postpartum care and hopefully contribute significantly towards maternal mortality reduction.

## 1.4 Study objectives

### 1.4.1 Broad

To assess the utilization of health care services by mothers of infants during their post partum period.

### 1.4.2 Specific

1. To assess the proportion of mothers who were informed to attend postpartum care services.
2. To assess the proportion of mothers who attended health facilities for postpartum review
3. To assess the type of service received by those who attended health facilities for postpartum review.
4. To explore the reasons for not attending postpartum care clinics.
5. To assess the Health service providers' knowledge on the need and timing for postpartum review.
6. To assess Health service providers' perception on the reasons for the low postpartum attendances.

# CHAPTER 2

## 2.0 LITERATURE REVIEW

Worldwide, most maternal complications and deaths occur either during or shortly after delivery, yet many women do not receive adequate care required during this period (WHO, 1998). Some study results do exist which show consistency on the proportion of maternal deaths, which occur during postpartum period. It has been estimated that about two thirds of the maternal deaths occur during postpartum period (Finger, 1997). The study with the same aim done in Tanzania on a community basis revealed almost the same results. From the study, verbal autopsy revealed that 56% of maternal deaths had occurred during postpartum period (Urassa, 2002).

It has been studied that early postpartum care is very essential as most of the deaths which were observed during postpartum period occurred in the first week after delivery. In the study done to explore the proportion of maternal deaths in relation to time lapse after delivery revealed that about 45-50% of the deaths occur in the first day while about 65-70% occurred in the first week and 80% in the second week (AbouZah, 1997 & Li et al, 1996).

### 2.1 Utilization of health facilities

It has been reported that the immediate cause of deaths is the absence, inadequacy or underutilization of health care (WHO, 1994). In developing countries large numbers of women receive antenatal care services but very few return to the health facility for postpartum care as compared to the developed countries. Although maternal and child health services improve the survival and quality of life for mothers and

children they are often under-utilized by those who are in most need (Nitai et al, 2002)

While in developed countries the postpartum attendance in the health facilities was as high as 90%, in the developing countries the rate was between 5-30% (WHO, 1997). In West Bank and Gaza the situation in terms of postpartum care was more worse with a rate as low as 3.3% (HDIP, 2001)

The same discrepancy between antenatal and postpartum care was also observed in Tanzania; the antenatal coverage was estimated to be 98% (Urassa, 2002) and postpartum study in Lindi using client exit interview revealed postpartum check up among mothers was 15%. In Zanzibar lower rates; 10% were found (ZSMP,2000). The interview among the mothers who delivered in a health facility only revealed that in about 60% of the mothers neither the baby nor themselves had check up during postpartum period. The same study concluded that postpartum check up was obviously not part of routine services (Simbakalia et al, 1998).

Surprisingly, another study done outside Tanzania; in Birmingham using postal questionnaire on attendance and content of the postnatal examination presented highly contrasting results; that is about 91% of women attended postpartum examination (Bick & MacArthur, 1995). Such discrepancy may be contributed to by different data collection instruments, which are postal questionnaire versus exit interviews.

Generally in developing countries like Tanzania, there is scanty reliable statistics on postpartum care. Only limited information is available from previous research data. For example in the 1996 national Demographic and Heath Survey no information on post partum care was reported but only the pregnancy and childbirth survey is

included (TDHS, 1996). Also even the routine data collection method used in Tanzania, the HMIS does not consider the postpartum aspects. This gives an indication on how the issue of postpartum care in the country is of less priority in the health care system. In the 1999's survey the element of postpartum care was considered. It was found that 52% of the mothers who delivered in the health facilities receive postpartum care within forty two days period. The survey assumed that all the mothers were all examined within two days after delivery (TRCHS, 1999). These assumptions have some practical limitations, as the rate might be too high than the actual situation could be. Due to overcrowding in the health facilities the mothers hardly stay in the ward for more than 24 hrs unless she has some special problems. In his manual of diagnosis and therapy, Merck recommends that the mother can be discharged within 24 hours after delivery, but close follow up regime is necessary (The Merck Manual, 1982). There is a big discrepancy between the demographic survey results and the study done in Lindi.

**2.2 Reasons for postpartum attendance:**

Most of the mothers visit the clinic after delivery for the baby's immunization and not for their own care, which is usually scheduled at one month and a half. In West Bank and Gaza, when women were interviewed for the reasons for attending postpartum clinic some of the responses were; postpartum check up, seeking medical care for a health problem, seeking advise/counseling on family planning methods, or to receive family planning method. The study result revealed that only about 3% do visit the clinic for the purpose of postpartum check-up, 14% for Family Planning and 83% for antenatal care (HDIP, 2001).

## 2.3 Type of service received by the mothers

The Advanced life saving skills curriculum currently being introduced in Tanzania, contains details on how to conduct thorough postpartum routine follow up visits. There should be history taking whereby the mothers should be given chances to express her feelings. This should be followed by thorough examination including vital signs, breasts, uterus, lochia and perineum. Family planning services, distribution of iron folic acid and vitamin A and counseling on baby care should also be offered (MoH, 2002). The MCH-card NO.4 used in Tanzania also contains a section, which indicate visit schedules and type of service, which should be provided to the mothers. Results from some studies give impression that only minimum of postpartum procedures are done as required. In Lindi it was found that most of the services were directed to the baby care, whereby 70% of the postpartum services provided was on baby examination. Most of the procedures for mother's health were done to a level of less than 50% (Simbakalia et al, 1998). Nearly the same results were observed in Zanzibar whereby 82% received service for the baby only (ZSMP, 2000). In West Bank and Gaza the proportion of mothers who received care for the baby only was much lower than the figures in Tanzania. Among the mothers who attended the clinic for postpartum visits, about 45% received care for themselves, 33% received care for mother and the baby while 11% received care for the baby only (HDIP, 2001). In Brimingram, the results for the type of care provided were far different from what was found in other areas; among the mothers who attended postpartum examination, 93% had abdominal and 70% had vaginal examination (Bick & MacAthur, 1995).

## 2.4 Information on postpartum attendance

It is expected that during antenatal clinic, mothers should be well informed about postpartum follow up visits. Adequate counseling during antenatal visits will enable the mother to become more aware of possible postpartum complications and where to seek solutions (Nitai et al, 2002). In West Bank and Gaza about 76% of the mothers reported that they were informed by the health workers that they should attend postpartum clinic within a month after delivery (HDIP, 2001). These results are not very different from what was found in Lindi, that 69% of the mothers responded that they were advised to come back for postpartum follow up clinic. The methodology used in such study has some advantage that the information obtained from mothers was also enquired from the service providers. In such a study the health workers volunteered that about 53% said they asked the mothers to return within first week, 42% asked them to come after six months, 3% asked the mothers to come back if only they had a difficult delivery, while the remaining 2% did not ask the mothers to come back at all. (Simbakalia et al, 1998). Nearly similar results were found in another study done in Urambo; 39% of the health workers asked the mothers to attend the clinic after one week, 45% after six weeks and 10% never asked the mother to come back (FCI, 2001). Further more, in Zanzibar, about two thirds of heath workers thought that post partum check up is within first week and 24% thought is within the first six weeks (ZSMP, 2000).

**2.5 Barriers Towards Utilization of Health Services During Postpartum period:**

Several literatures have tried to explore the reasons as to why women do not use the postnatal clinics for the purpose of their postpartum review;

**2.5.1 Economic Barriers:** The commonest economic reason is the accessibility to the health facilities. Most Tanzanian women live in rural and they are poor with low social economic status. It is estimated that 78% of its population lives in a rural areas with an overall access to safe motherhood services of about 53% (MNPI, 2001). Despite the long distances there is problem of poor road infrastructure and reliable vehicles in the rural areas. It was found that 84% of the mothers in Tanzania had intended to deliver at health facility, but could not do so because of lack of transport (Biego et al, 1998). These results are similar with what was found in Malawi whereby 90% of the mothers had intended to deliver at health facilities but only 25% could manage to do so because of the same reason. (Lisle & Sembalay, 1990)

**Costs:** Although in most of MCH clinics in Tanzania the services are free of charge, but there could be some formal and informal cost which may be involved e.g. transport and time which could be used for economic activities. In the study done in Lindi it was found that 81% did not pay anything, while 19% paid between 500 – 4200/= at mission hospitals (Simbakalia et al, 1998).

**2.5.2 Culture and beliefs: -**

Culture differences are other factors, which can act as barriers towards postpartum clinic attendance. In some societies, mostly is the husband and sometimes, in-laws who have the authority to decide for the mother to seek health care. In Nepal one study had shown that 79% of the mothers did not believe that antenatal and postnatal check up was essential (FCI, 1990).

In Nigeria and Democratic Republic of Congo it was found that almost all cases husbands have to give permission to their wives to attend medical care. If it happens that the husband is absent, then other relatives may resist to give permission no matter how pressing the need be ( Thadeus & Maine , 1985). All those may not see the importance of going for postpartum check up while she has already delivered safely.

In some other society's cultural norms regarding maternal care plays part towards postpartum follow up clinic attendances. For example in India the mother and the newborn should remain indoor for several months to protect the mother and the newborn from the evil spirit and exposure to illnesses. This norm will prevent the mothers from attending the postpartum follow up clinic (Benn et al, 1992).

**2.5.3 Gender inequalities: -**

From birth women experience a position of subordination. Girls are subjected to discrimination in terms of family resource allocation including access to health care. They are subjected to poor health needs, limited educational opportunities, poor nutrition and mentioned needs as compared to their counterparts. (WHO,1994). Womens' decision-making power is extremely limited whereby husband's

permission is required for a woman to seek medical care including life saving care or sometimes the mother-in-law has to decide whether the woman should seek medical care and of which type (EC/UNFPA, 2002). In Bangladesh, the mother in law and husbands are the ones who make decision whether the women should attend health care or not, (FCI,IAG, 1998 & WHO, 1994).

**2.5.4 Health facility problems: -**

There is problem of the health system to take into account needs of the mothers. FCI, IAG reported several problems in health facilities, which act as barrier towards use of postnatal clinics. These include lack of skilled staff, shortage of equipment, drugs and basic supplies (FCI, IAG, 1998).

**Interaction with Health providers:**

Health workers in some health facilities were reported to be rude, unkind, with lack of sympathy. In the study done in Tanzania 21% of women reported that they had their deliveries at home although they would like or had intended to do so at health facility simply because of health workers' rudeness (WHO, 1998)). In such situation, it is very unlikely for such mothers to attend postpartum clinic while they have already delivered unless they faced serious complications, though they can also act otherwise.

**Privacy:**

Lack of privacy is another barrier towards postpartum attendance. Mothers of low social economic status would feel ashamed of being exposed to health workers who

seems to be of higher social economic status. This may direct mothers to seek health care from traditional healer where such difference is minimal. In Sudan some women felt ashamed of been poorly undressed in front of health workers who were of higher socio economic status thus reduce the number of attendances to the clinic (WHO, 1998). A study in Lindi showed that 79% of the clients expressed its concerned on lack of privacy (Simbakalia et al, 1998).

**2.6 Postpartum complications**

Although some women are at higher risk if developing postpartum complications, they cannot always be predicted; any woman can develop complications during antenatal, delivery or post delivery, therefore timely adequate medical care is essential to reduce maternal complications (WHO, 1994). Majority of complications cannot be prevented or predicted but almost all can be managed if appropriate care is provided. The survival rate of the mother depends on quick access to essential obstetric care. The prevention of complications calls for comprehensive approach in all the three periods; antenatal, childbirth and postpartum period. The care should start at antenatal clinics where the mothers should be well informed on how to care for her postpartum period. They should be aware of the importance of postpartum visits and the anticipated complications. On discharge they should be well informed of the symptoms of complications and the importance of reporting earlier to the health facility for care. Should complications arise during this period, the mother should be well knowledgeable about the danger sings that indicate the need for care.

Arkutu pointed out some of the danger signs of which the mother should be aware of; bleeding increasingly, fits thrombosis, fever, vomiting, severe abdominal pain, painful swelling or redness of the breast and urine or faces leakage through the vagina (Arkut , 1995). Should the mother see any of those symptoms a health worker should attend her without delay.

There are several causes of post partum maternal complications and deaths worldwide. Among the direct causes is haemorrhage, which constitutes the highest percentage (24%). eclampsia (12%) and infection (15%). The indirect causes include anemia, malaria, heart diseases and others contribute about 28% (WHO, 1994). Among these the most common causes of postpartum complications are haemorrhage, infection and the indirect causes. In Matlab , postpartum hamorrhage was the most serious complication whereby it was noted in 70% of the surveyed record cards (Maine et al, 1996).

# CHAPTER 3

## 3.0 METHODOLOGY

### 3.1 Study area

The study was conducted in Temeke Municipal. The area is mainly urban densely populated with different levels of health facilities; run by the government, voluntary agencies and private owned health facilities.

Temeke is one of the three municipalities that form Dar es Salaam region. It is located in the southern part of the region. It covers an area of 656 sq. Km and is the largest among the three municipalities.

Administratively, the Municipal is currently divided into 24 wards. Temeke has a total population of 771,500 with 389,245 males and 382,255 females (National Population census 2002). The population growth rate in Temeke municipal is 4.8%. About 4% of the population is infants (31,085) while 20% (155,462) is children under five years. About 18% (155,459) of the population are women of child bearing age 15 –49. Maternal mortality rate for Temeke municipality is 430/100,000 live births. (TMCCHP, 2002)

The Municipal has three hospitals of which one is public owned and two are private owned. There are three health centers one public and two maternity homes. There are 105 dispensaries of which 85 are private and 19 are public. Most of private health facilities are concentrated in the urban part of the district. About 90% of the population has access to health facility within 5 km radius. Population per health facility is 1:5397 while population per nursing staff is 1:4000. There are 65 facilities

which provide MCH/Family planning services out of which 26 are public and 41 are private owned MCH services provided include antenatal care, immunization, Family planning, health education, treatment of sick under five children, postnatal care and sexually transmitted infections treatment. Antenatal attendance for the year 2001 was 47,849. Among the facilities which provide MCH services, 8 facilities conduct deliveries for 24 hours.

### 3.2 Study design

The study done was a cross sectional, descriptive study to determine utilization of postpartum care services. Quantitative research methods were employed and data was collected using structured questionnaire containing both closed and open-ended questions.

### 3.3 Study population

The study population was mothers of children under one year of age and MCH service providers working in health facilities in Temeke district.

### 3.4 Sampling procedure

#### 3.4.1 Mothers' interview:

Multistage random sampling technique was used. A sampling frame containing all the 24 wards of Temeke district was obtained. Four wards (16.6%) were selected randomly from the list. From the selected wards a list of all streets were obtained and two streets were selected from each ward. All mothers of infants from the selected streets were eligible for the interview.

### 3.4.2 MCH service providers' interview:

All hospitals and the largest maternity home were purposefully included to enable to get senior staff who mostly don't work in the dispensaries. Lower level health facilities (Dispensaries) which provide MCH services were selected randomly by simple random sampling technique. All MCH service providers from the twelve selected facilities were interviewed.

### 3.5 Sample size - Household interview:

The sample size was calculated using the formula:

$n=Z^2pq/E^2$: Whereby: n =Desired sample size

Z= Percentage of the standard normal distribution corresponding to 5% significance level. (Z = 1.96)

P= Prevalence of use of postpartum care in Tanzania =15% (Simbakalia et al, 1998)

E= Maximum likely error set at 0.06(6%)

Design effect = 2 since the sampling technique involves selection of clusters. The sample size was calculated using EPI6 program.

Therefore the minimum required sample size is 273 mothers

### 3.6 Data collection and management

**3.6.1 Training of Research assistants:**Data collection was done by the principal investigator with assistance from two Research Assistants. Research assistants were trained intensively by the principal investigator on: -

-Aim of the study

-Introduction to the questionnaires and mode of interviewing techniques (Data collection skills). This was done through role-plays and field tests.

The issues of ethics and interviewing skills were also well covered.

The pre- testing of research instruments was done in Ilala Municipal to assess the clarity of the questions, and whether the questions would generate the required information to answer the research questions. Any problem detected in the questionnaire was modified before starting actual fieldwork.

### 3.6.2 Data collection process

*i) Household interview*:

The interviewing exercise was conducted from house to house guided by the ten-cell/ street leaders. The whole team was interviewing one village/street then move to another one to ensure close supervision of the research assistants by the principal investigator. If the respondent was not present during the interview a follow up visit was scheduled at least three times before she was declared as a non-response.

*i) Health Service Providers' interview:*

The exercise was conducted at the selected twelve health facilities. All the MCH service providers in each of the selected facility were interviewed. The MCH service provider in charge of each health facility was requested to present the MCH records concerning antenatal and post delivery visits where available. The interviewer explored the records and documented the number of antenatal and postpartum visits for one year from June 2002 to May 2003.

### 3.6.3 Data management/quality assurance:

For consistency purposes, the filled in questionnaires were being re-checked for completeness every day after fieldwork. There was a brief discussion between the interviewers to explore any problems or any irregularities observed during interviews and try to find solutions. Any errors detected were brought to the attention of respective interviewer for correction and if necessary the concerned household or health facility was revisited. Properly filled questionnaires were then coded and double-checked by the principal investigator.

### 3.7 Data analysis:

A questionnaire field for data entry was prepared in EPI-INFO 6 program. The data was entered into the computer soon after the fieldwork. Data cleaning was performed before analysis. Frequency distribution tables were run to determine utilization of postpartum care services and the type of services provided. Cross tabulations were used to assess association between use of services and other variables. Chi-square test was used to test for statistical significance of the associations and p-values of less than 0.05 were considered as significant.

### 3.8 Ethical clearance:

Ethical clearance was obtained from MUCHS ethical board. Permission to conduct the study in Temeke was obtained from the Municipal Executive Office, MMOH, selected wards and streets. Oral consent was sought from the respondents. They were informed at they were free to discontinue the interview at any point they

wished. Privacy and anonymity was maintained throughout the interview process. Also they were assured that the information obtained would be confidential and will be used for research purposes only and no information will be leaked to people who might harm the respondent. Lunch allowance and sometimes drinks were offered to the ten cell leaders engaged in locating the households.

**3.9 Study limitations:**

The methodology used in this study had some limitations which include:

1. Recall bias: Some of the mothers might have gone through their postpartum period sometimes ago. This might limit their ability to recall accurately the post delivery events especially the type of service provided at the clinic. The fact that we collected information from the very last delivery which had occurred not more than one year, this minimized the bias.

2. Other research in the clinics: There was another continuing research in some of the clinics in Temeke which requested the mothers to go back to the clinic after six weeks for some investigations. The mothers could mix this visit with the routine post partum visits. During interview the visits done for research purposes were not taken as routine post partum care visits.

# CHAPTER 4

## 4.0 RESEARCH RESULTS

A total of 290 mothers of infants from the four randomly selected wards and 42 MCH health service providers from 12 health facilities in Temeke municipality were interviewed.

### 4.1 Background Characteristics of Respondents (household interview)

The mothers age ranged from 16 to 44 years and about two thirds (63.5%) were aged between 21 to 30 years. Their mean age was 25 years.

The respondents were predominantly Moslems (76.2%) and the rest were Christians.

About two thirds of the mothers were married (69.7%) while singles were12.1 %.

Nearly one third of the study population (30.3%) had no formal education while about half of the respondents (52.2 %) had primary school education.

More than half (56.9%) were housewives and a quarter (26.6%) were pet businesswomen.

More than one third (37.2%) of the respondents had become pregnant once and about a quarter (25%) twice. One (0.3%) respondent had become pregnant ten times. The number of children ever born to the mothers ranged from one (40%) to nine (0.3%), the median number of children is two.

Three quarters (75%) of the respondents reported that their spouses were the heads of their respective households while only 5.5% of the mothers headed their own households and other relatives headed the rest.

**TABLE 1: Socio-Demographic characteristics of the study sample (mothers):**

N= **290**

| **Age** | **Number** | **Percentage** |
|---|---|---|
| 15-19 | 42 | 14.5 |
| 20-24 | 109 | 37.6 |
| 25-29 | 75 | 25.9 |
| 30-34 | 41 | 14.1 |
| 35-39 | 18 | 6.2 |
| 40+ | 5 | 1.7 |
| **Religion** | | |
| Muslims | 221 | 76.2 |
| Christians | 69 | 23.8 |
| **Marital status** | | |
| Married | 202 | 69.7 |
| Cohabiting | 41 | 14.1 |
| Single | 35 | 12.1 |
| Divorced | 10 | 3.4 |
| Widowed | 2 | 0.7 |
| **Level of Education** | | |
| No Education | 88 | 30.3 |
| Adult Education | 4 | 1.4 |
| Primary School Education | 152 | 52.4 |
| Secondaryschool education | 30 | 10.3 |
| PostSec. School Education | 16 | 5.5 |
| **Occupation** | | |
| Housewife | 166 | 57.2 |
| Employed | 34 | 11.7 |
| Peasant | 6 | 2.1 |
| Pet business | 77 | 26.6 |
| Business | 2 | 0.7 |
| Labourer | 4 | 1.4 |
| Others | 1 | 0.3 |
| **Parity** | | |
| 1 | 102 | 39.8 |
| 2-4 | 132 | 51.6 |
| 5+ | 22 | 8.6 |
| **Total** | **290** | **100** |

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| **Total** | **290** | **100** |

Most of the respondents (92.4%) reported that they had their delivery in the modern health facilities with only 7.2% reported home delivery. Among the deliveries which occurred in modern health facilities about two thirds (69.1%) were at hospital level. It can be seen that Public sector is still the most reliable provider of maternal care in the study area as a significant higher proportion (81.4%) delivered in public health facilities (Table2).

**Table 2: Level and ownership of health facilities where respondents delivered. (N=269)**

| Level | Ownership | | | |
|---|---|---|---|---|
| | **Government** | **Private** | **V/Agency** | **n** |
| **Dispensary** | 8(38.1) | 3(14.3) | 10(47.6) | 21(7.8) |
| **H/Centre** | 47(75.8) | 2(3.2) | 13(21.0) | 62(23.0) |
| **Hospital** | 164(88.2) | 11(5.9) | 11(5.9) | 186(69.10 |
| **Total** | 219(81.4) | 16(5.9) | 34(12.6) | 269 |

Only 14 mothers (5%) had complicated delivery for the index child while the rest had normal delivery. Complicated delivery includes: 12 caesarean sections (86%) and 2 vaccum extractions (14%).

Most of the mothers had their deliveries (83.8%) assisted by skilled attendant (Doctor, trained nurse or MCH Aide), 8.6% by nurse assistants. The rest of the group that had home delivery were assisted by TBAs or relative/neighbor each contributing 3.8%

**4.2 Post delivery observation time:**

The mean post delivery observation time was 13.5 hours. About 62% percents of mothers who delivered at dispensary level were discharged home within 6 hours compared to those delivered at higher levels who accounted to 29% in the health centers and hospital level. None of the mothers were observed for 24 hours or more at the dispensary level (Table 3). There is an increase of post delivery observation time with level of health facility which is statistically significant ($P<0.05$).

**Table 3: Post delivery observation time by level of health facilities as reported by the mothers**

| Level of facility | Post Delivery Observation time (Hours) | | | | |
|---|---|---|---|---|---|
| | 1-6 | 7-23 | 24+ | N | % |
| Dispensary | 13(61.9) | 8(38.1) | 0(0.0) | 21 | 7.8 |
| H/centre | 18(29.0) | 39(62.9) | 5(8.1) | 62 | 23.0 |
| Hospital | 54(29.0) | 111(59.7) | 21(11.3) | 186 | 69.1 |
| Total | 85(31.6) | 158(58.7) | 26(9.7) | 269 | |

**Chi square = 11 df =4 p value= 0.02**

A large proportion (61.8%) of the respondents who delivered in health facilities run by voluntary agencies was discharged within 6 hours post delivery. This is in comparison to 43.8% and 26% in private and public facilities respectively. The proportion of respondents who were observed for the recommended 24 hours or more was high in private facilities (12.5%) compare to government (10.5%) and

voluntary agency run facilities (2.9%) [Table 4]. The association is statistically significant ($p<0.01$)

**Table 4: Post delivery observation time by ownership of Health facility as reported by mother**

| Ownership | Post delivery observation time (percentage Hours) | | | | |
|---|---|---|---|---|---|
| | 1-6 | 7-23 | 24+ | N | % |
| Government | 57(26.0) | 139(63.5) | 23(10.5) | 219 | 81.4 |
| Private | 7(43.8) | 7(43.8) | 2(12.5) | 16 | 5.9 |
| Mission | 21(61.8) | 12(35.3) | 1(2.9) | 34 | 12.6 |
| Total | 85(31.6) | 158(58.7) | 26(9.7) | 269 | |

Chi square =19.20 df = 4 P value =0.002

**4.3 Background characteristics of the MCH Service providers**:

A total of 42 MCH service providers from 12 health facilities were interviewed. Nearly half, (47.6%) were from dispensary level, while 23.8% were from hospital level.

About two thirds (66.7%) were from government hospital.

Half the respondents were MCH Aiders (50.0%).The median duration of working experience is 18.7years and it ranges from less than 1 to 39 years.

**Table 5: Selected background characteristics of the MCH service providers.**

| Characteristics | Number | Percentage |
|---|---|---|
| **Cadre** | | |
| MO/AMO/CO | 2 | 4.8 |
| NO/PHN/NM | 19 | 45.2 |
| MCHA | 21 | 50.0 |
| **Working experience (yrs)** | | |
| 1 - 10 | 1 | 2.4 |
| 11 - 20 | 7 | 16.7 |
| 21 - 30 | 28 | 66.7 |
| 31 - 40 | 6 | 14.3 |
| **Level of Health facility** | | |
| Dispensary | 20 | 47.6 |
| H/Centre | 12 | 28.8 |
| Hospital | 10 | 23.8 |
| **Ownership of Facility** | | |
| Government | 28 | 66.7 |
| Private | 9 | 21.4 |
| Voluntary Agencies | 5 | 11.9 |
| **Total** | **42** | **100** |

## 4.4 Proportion of mothers who were informed to attend postpartum follow up clinics

Almost all respondents (99.7%) reported that they attended antenatal clinic but only about three quarters (73.1%) responded that at one time they were informed to come back to the clinic after delivery. Among those, only 50 respondents (23.3%) were advised to come for check up of both mother and baby's which is the ideal purpose

for the post delivery clinics. Eleven (5.1%) were requested to come for mothers service only, an advice which does not consider baby's examination. The huge majority (70.2%) was asked to come back for growth monitoring and vaccinations of their babies. Four mothers (1.8%) were not informed the reasons to attend the clinic. Therefore 28% of the mothers were asked to come for post partum care. (Figure 1)

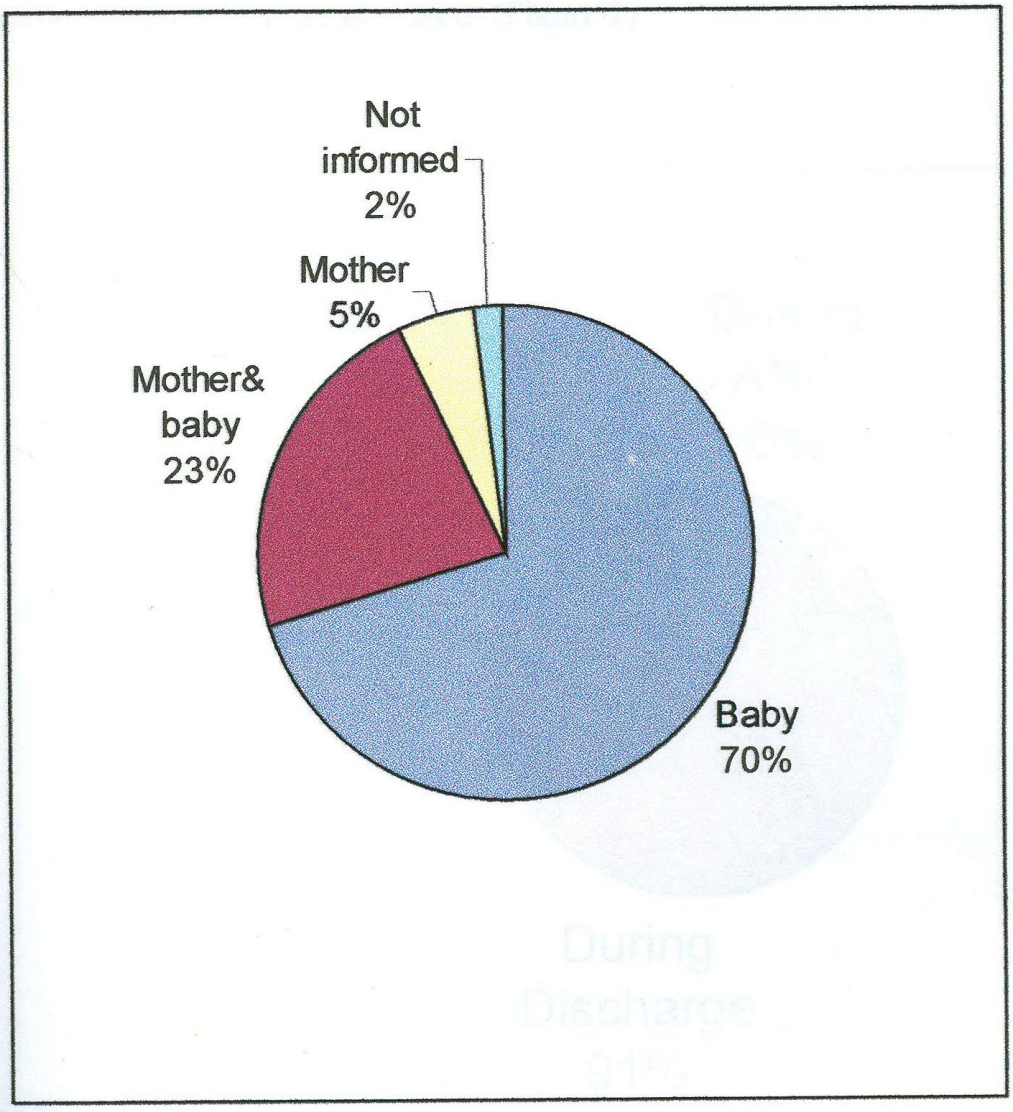



**Figure 1: Informed reasons for post partum attendance as reported by mothers (n=215)**

For effective communication to the mothers on post partum review visits, they should be continuously informed and reminded that they have to attend postpartum clinics after delivery. This should be done during antenatal visits. In this study, only 13 mothers (6%) were given that information during antenatal clinic. Most of the respondents, 196 (91.2%) were informed after delivery while being discharged home. Others (3%) were informed during labour and some could not recall the exact period when they were informed. (Figure 2)

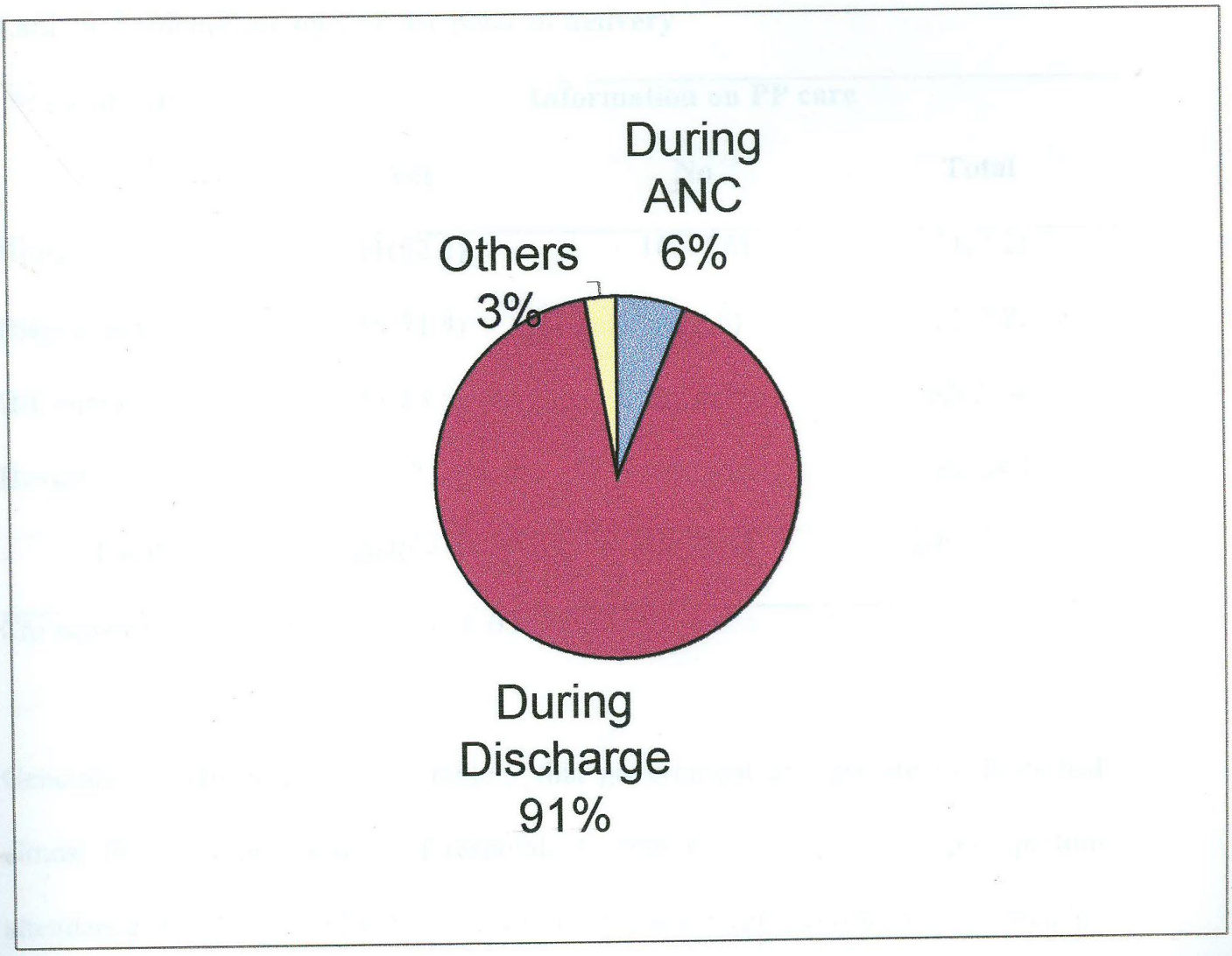



**Figure 2: Time of advice on PPC attendance as reported by mothers (n=215)**

Eighty five percents of mothers who gave birth in health centers were informed that they should come back for post partum care whereas only 71.4% of those who delivered in dispensaries were informed. Mothers who delivered at home had the least proportion (52.4%) of mothers who were informed of post partum care (Table 6). Chi square test shows statistically significant association between place of delivery and information on post partum care (P<0.05).

**Table 6: Information on PPC by place of delivery**

| Place of delivery | Information on PP care | | |
|---|---|---|---|
| | **Yes** | **No** | **Total** |
| **Home** | 11(52.4) | 10(47.6) | 21(7.2) |
| **Dispensary** | 15(71.4) | 6(28.6) | 21(7.2) |
| **H/Centre** | 53(85.5) | 9(14.5) | 62(21.4) |
| **Hospital** | 136(73.1) | 50(26.9) | 186(64.1) |
| **Total** | 204(74.1) | 65(25.9) | 290 |

Chi square=9.53 df= 3 p =0.02

Generally, it can be seen from table 7 that government and private facilities had almost the same proportions of respondents who were informed on post partum attendance which were (74.9%) and (75.0%) respectively. Mothers who attended Voluntary agency facilities had the highest proportion of mothers who were informed on postpartum care. The difference was however not statistically significant (P >0.05).

**Table 7: Information on PPC by ownership of health facility as reported by mothers**

| Ownership | Information on PP attendance | | |
|---|---|---|---|
| | Yes | No | Total |
| **Government** | 164(74.9) | 55(25.1) | 219(81.4) |
| **Private** | 12(75.0) | 4(25.0) | 16(5.9) |
| **V/Agency** | 28(82.4) | 6(17.6) | 34(11.7) |
| **Home Delivery** | 11(52.4) | 10(47.6) | 21(7.2) |
| **Total** | 215(74.1) | 75(25.9) | 290 |

Chi square= 6.45 df=3 P value=0.091

It is recommended that mothers should be reviewed within seven days after delivery. Findings in this study show that about half (49.3%) of mothers were requested to return to the clinic within 7 days. Twelve respondents (5.4%) reported that they were informed to return to the clinic after 42 days. Half of the mothers (50.5%) who had delivered by C/section were requested to come after the recommended seven days.(Table8)

**Table 8: Information on timing for first PP visit by mode of delivery. (N=215)**

| Mode of delivery | Days | | | |
|---|---|---|---|---|
| | 1-7 | >7 | n | % |
| **Normal** | 101(49.3) | 104(50.7) | 205 | 95.5 |
| **Complicated** | 5(50.0) | 5(50.0) | 10 | 4.6 |
| **Total** | 106(49.3) | 109(50.7) | 215 | |

Chi square=0.6

**4.5 Proportion of mothers who attended health facilities for post partum review.**

Although high percentage of the respondents (88%) reported that they attended the clinic after delivery for one reason or another, only 57 (23.0%) of the mothers did so for postpartum purposes. The rest 199 (77%) just brought the babies for growth monitoring and vaccinations (Figure3)

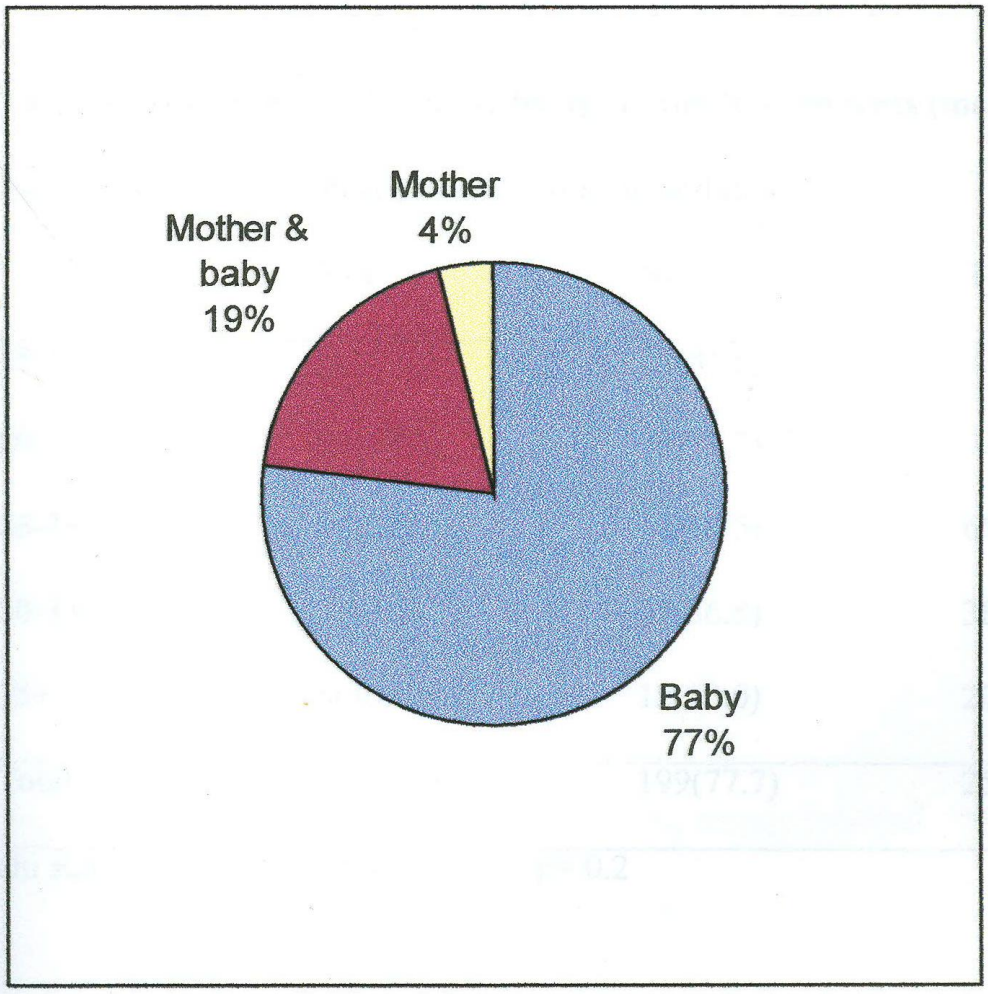



**Figure 3: Reasons to attend postpartum clinics as reported by mothers**

**(N= 256)**

Proportion of respondents who reported that they attended postpartum care increased with age from 18.2% in the group of 15-19 years to 40% among those aged 35 years or more. However, the age group30-34 had the lowest proportion (13.2%) of respondents who attended post partum clinic.(Table 9)

**Table 9: Attendance to PP clinic by age of the Respondents (mothers) [N=256]**

| Age (years) | Post partum clinic attendance | | |
|---|---|---|---|
| | **Yes** | **No** | **Total** |
| **15-19** | 6(18.2) | 27(81.8) | 33(12.9) |
| **20-24** | 22(22.7) | 75(77.3) | 97(37.9) |
| **25-29** | 16(23.5) | 52(76.5) | 68(26.6) |
| **30-34** | 5(13.2) | 33(86.8) | 38(14.8) |
| 35+ | 8(40.0) | 12(60.0) | 20(7.8) |
| Total | 57(22.3) | 199(77.7) | 256 |
| chi square = 5.85 | df=4 | p= 0.2 | |

Generally there is increasing trend in proportion of mothers who attended postpartum clinic with level of education. For mothers with no education only 15.9% attended whereas those with post secondary education 35% attended (Table10). However, the increasing trend in post partum clinic attendance with age was found to be not statistically significant (p> 0 .05).

**Table 10:Postpartum Attendance by Level of Education of the Mothers(N=256)**

| Level of education | Postpartum attendance | | |
|---|---|---|---|
| | Yes | No | Total |
| No Education | 13(15.9) | 69(84.1) | 82(32.0) |
| Primary Education | 32(24.4) | 99(75.6) | 131(51.2) |
| Sec. Education | 7(24.1) | 22(75.9) | 29(11.3) |
| Post Sec. Education | 5(35.7) | 9(64.3) | 14(5.5) |
| Total | 57(22.3) | 199(77.7) | 256 |

**Chi square for linear trend = 3.201** **p value 0.074**

Findings from table 11 show that large proportion (28.3%) of mothers with only one child attended the post partum clinic compared to 13.6% of the multiparous. The decreasing trend of postpartum attendance with increasing parity was found to be statistically significant (P value <0.05).

**Table 11: Post Partum Clinic Attendance by Parity (N=256)**

| Parity | Post partum attendance | | |
|---|---|---|---|
| | Yes | No | Total |
| 1 | 29(28.4) | 73(71.6) | 102(39.8) |
| 2-4 | 25(18.9) | 107(81.1) | 132(51.6) |
| 5+ | 3(13.6) | 19(86.4) | 22(8.6) |
| Total | 57(22.3) | 199(77.7) | 256 |

Chi square for linear trend = 3.9 P value <0.05

Among the mothers who attended the clinic for postpartum purposes, 30 respondents (52.6%) did so in the recommended 1st week and 7 mothers (12.3%) after 42 days.(Fig 4)

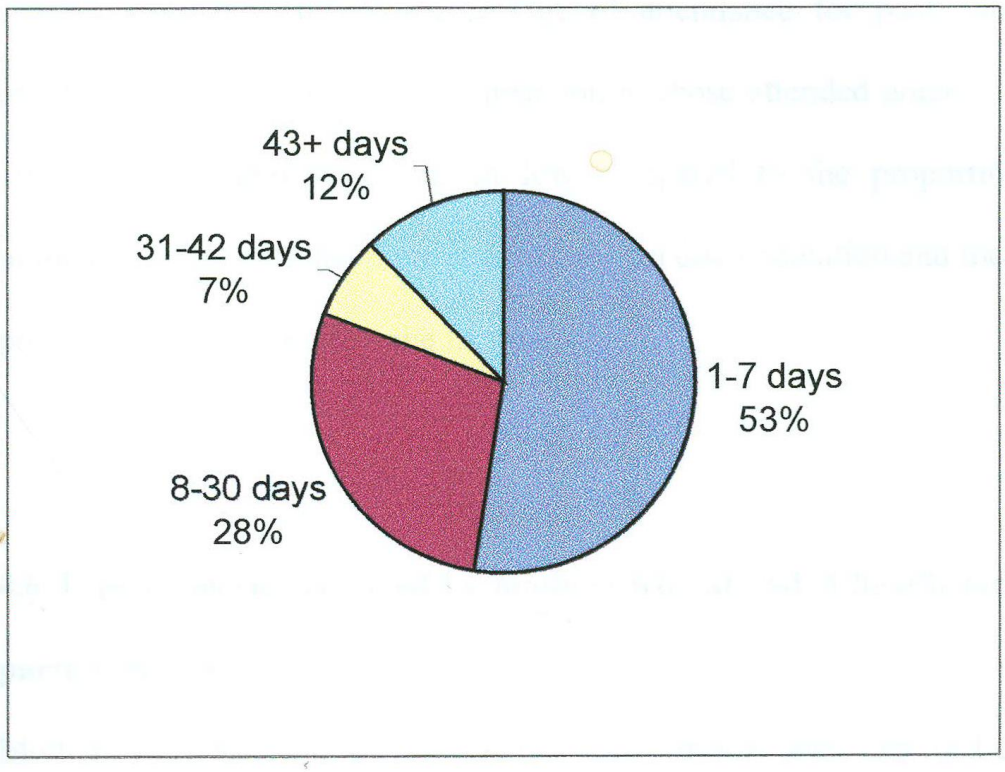



**Figure 4: Timing for the 1st Postpartum visit as reported by mothers (n=57)**

Majority of the mothers (69.7%) who returned to the clinic after delivery, only did so once for the whole post partum period.

**Documentation on PP Clinic Attendances**

When the respondents were requested to present the antenatal card for the index child, 193 (66.2%) had their cards available. Among these only 38(19.8%) of the presented cards there was documentation on the appointment for PPC attendance,

and only in 10% among them there was documentation on the attendance by the mother. In 2.1% documented cards showed that the mother attended after 6 weeks. About 83% of the facilities keep post partum records as reported by facility in charges. However, overall percentage of attendance for post partum clinics as observed from the records in comparison to those attended antenatal clinic is only 10.7%. This proportion is much low compared to the proportion reported by mothers. This shows that there is deficiency in documentation and incompleteness of postpartum data in most of the facilities.

**4.6 Type of service received by mothers who attended health facilities for post partum review**

Mothers were asked to mention the type of services they received during the post partum visits and health workers were asked to mention the type of services they provide during the post partum period. It is surprisingly that only 2 out of 57 mothers (3.5%) had full review of all of the recommended post partum examinations. Self-expression was the most frequently service mentioned by the mothers (78.9%) while a large proportion of service providers (66.7%) reported abdominal examination. Perineum, abdominal and breast examinations. which were the most expensive procedures in terms of time, privacy and discomfort to the client had the least percentage reported by mothers but highest percentage reported by service providers. (Figure5). The type of examination mostly reported by the service providers present relatively lower than percentage reported by mothers. This

indicates that probably Health service providers don't practice what they know but they concentrate more on history than doing physical examination.

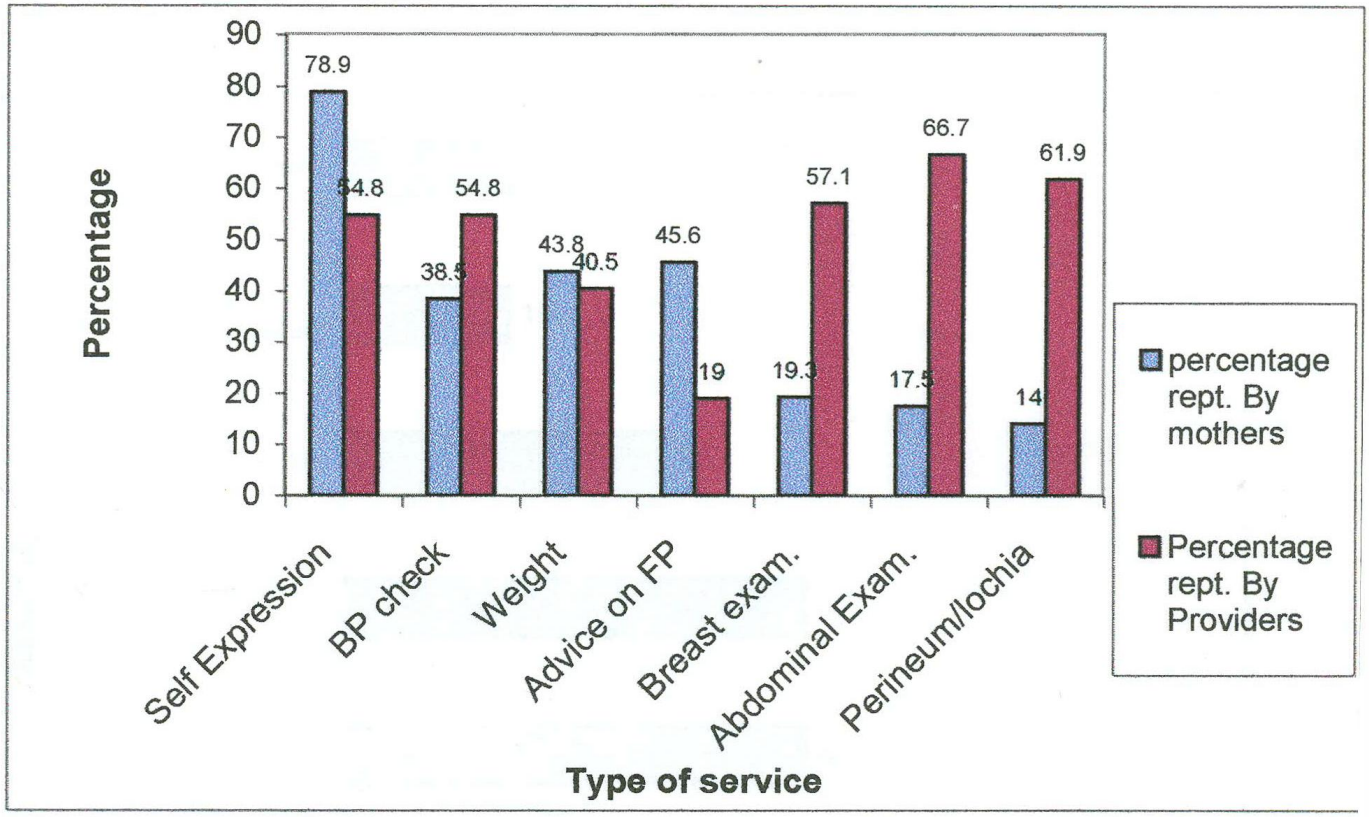



**Figure 5: Type of service offered as reported by mothers and HSPs mothers (n=57)**

### 4.7 Reasons for failure to attend PP clinic as perceived by the mothers

More than half (57.8%) responded that they were not informed that they should attend the clinic after delivery. Other reasons posed by the mothers are presented in Figure 6. Among them the highest proportion of mothers claimed that they did not attend the clinic because they felt themselves with no problem as they had delivered safely. Other major reasons reported by 41.5% of the respondents were mother and baby not allowed to go out before 40 days and the same percentage mentioned that

mothers were instructed to come back after six weeks. About one third of the respondents said that they feared to face the health workers in case they attend the clinic without appointment.

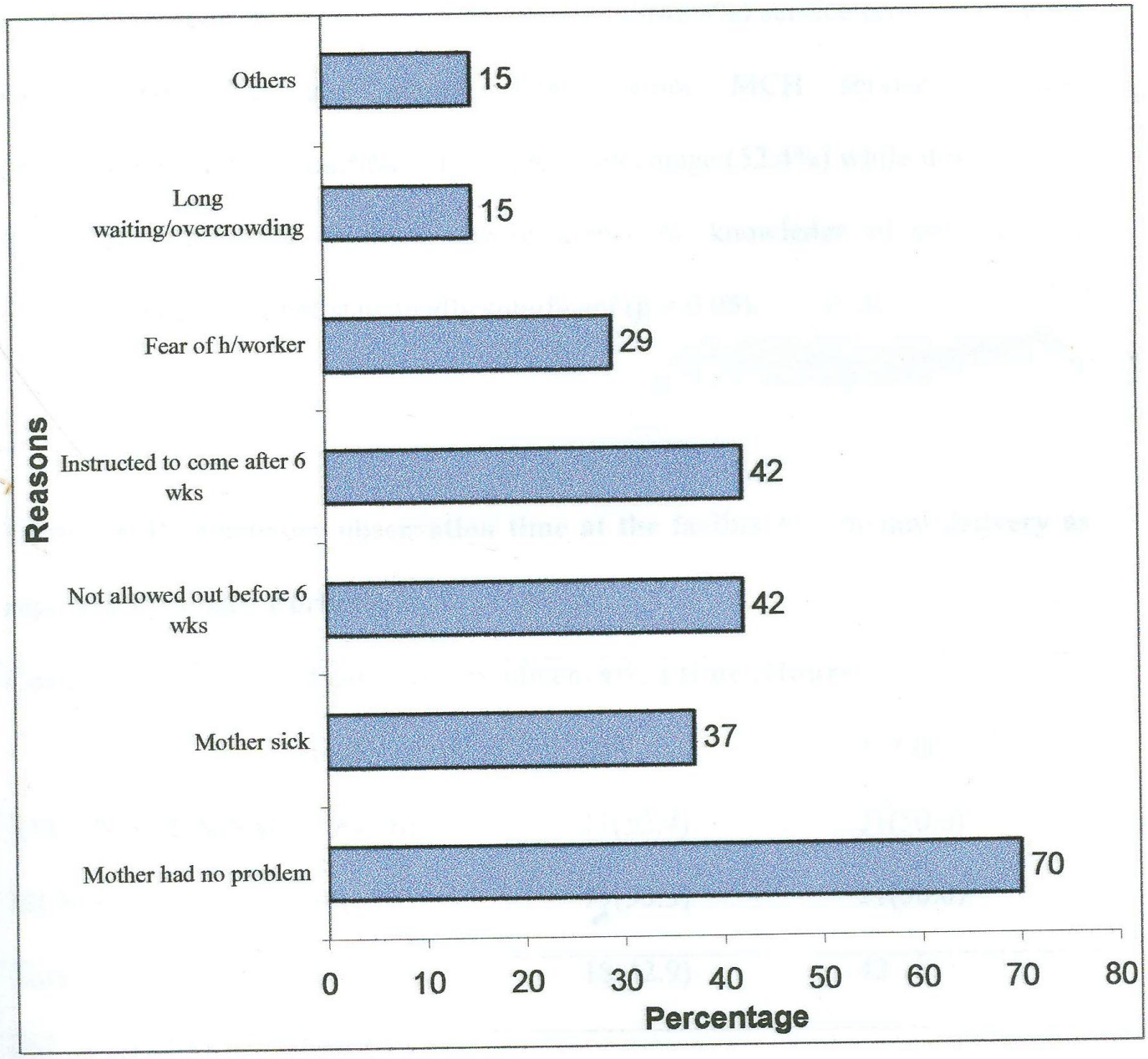



**Figure 6: Distribution of reasons for not attending PP care as reported by mothers (N=41).**

**4.8 Health service providers' knowledge on the need and timing for PP review clinics.**

Usually if the mother has undergone normal delivery, she should be observed in the facility for at least 24 hours. In this study, only 18(42.9%) service providers had the correct knowledge, and among them, senior MCH service providers (AMO/NO/PHN/NM) contribute the highest percentage (52.4%) while it was 33.3% for MCHA (Table13). However the difference on knowledge of post delivery observation time was not statistically significant ($p > 0.05$).

**Table 13: Post delivery observation time at the facility for normal delivery as reported by health workers.**

| **Cadre** | **Post delivery observation time (Hours)** | | |
|---|---|---|---|
| | **1-23** | **24+** | **Total** |
| **AMO/NO/PHN/NM** | 10(47.6) | 11(52.4) | 21(50.0) |
| **MCHA** | 14(66.7) | 79(33.3) | 21(50.0) |
| **Total** | 24(57.1) | 18(42.9) | 42 |
| Chi square=1.56 | P=0.2 | | |

Generally, most of the MCH service providers (95%) in this study had the knowledge that women should come back for postpartum review. However 2(10.0%) of MCHAs had perception that there is no need for postpartum review clinics. (Table14). This observation is of importance since MCHA's are the ones who attend the majority of women and if they don't know, the message will never go through to the clients.

**Table 14: Knowledge on the need for postpartum review visits by cadre**

| Cadre | Need for Post partum care | | |
|---|---|---|---|
| | Yes | No | Total |
| AMO/NO/PHN/NM | 21(100) | 0(0.0) | 21(50.0) |
| MCHA | 19(90.5) | 2(9.5) | 21(50.0) |
| Total | 40(95) | 2(5.0) | 42 |

Most of the health service providers 78.6% had knowledge that the first visit post delivery should be done within seven days. Senior service providers are more knowledgeable than junior with proportions; 85.7% and 71.4% respectively, however the difference between these proportions is not statistically significant. (P> 0.05). [Table 15]

**Table 15: Knowledge on Timing for the First Postpartum Follow up Visits by MCH Service Provider Cadre.**

| Cadre | Timing for the 1st visits (Days) | | |
|---|---|---|---|
| | 1-7 | 7+ | Total |
| AMO/NO/PHN/NM | 18(85.7) | 3(14.3) | 21(50.0) |
| MCHA | 15(71.4) | 6(28.6) | 21(50.0) |
| Total | 33(78.6) | 9(21.4) | 42 |

Fisher exact test P = 0.23

It is recommended that mothers attend post partum care at least three visits

Senior service providers had higher proportion of individuals with the correct knowledge on number of visit per postpartum period; AMO/NO/PHN/NM, 62% as compared to MCHA 57.9%. (Table16). However, the difference is not statistically significant (P>0.05).

**Table 16: Knowledge on frequency of attendance for postpartum review clinics by cadre. (N=40)**

| Cadre | Number of required visits per post partum period (days) | | |
|---|---|---|---|
| | 1-2 | 3+ | Total |
| AMO/NO/PHN/NM | 8(38.1) | 13(61.9) | 21(52.5) |
| MCHA | 8(42.1) | 11(57.9) | 19(47.5) |
| Total | 16(40.0) | 24(60.0) | 40 |

Chi square = 0.58 df = 8 P value = 0.75

Two respondents who said no need for postpartum care are excluded.

Only 15% of the HSPs had the correct knowledge that mothers should be informed about postpartum follow-up visits during their antenatal visits. It is surprising to note that there is high degree of knowledge among the lower cadre; MCHA (21%) as compare to the senior service providers (9.5%) [Table16]. The association is not statistically significant (p value >0.05)

**Table 16: Knowledge of HSPs on when to inform mothers about postpartum care by their cadre.**

| Cadre | Timing for advice on PP visits | | |
|---|---|---|---|
| | During ANC | After delivery | N |
| **AMO/NO/PHN** | 2(9.5) | 19(90.5) | 21(52.5) |
| **MCHA** | 4(21.1) | 15(78.9) | 19(47.5) |
| **Total** | 6(15.0) | 34(85.0) | 40 |

Fisher exact test P= 0.5

**4.9 Health service providers' perception on the need and timing for post partum care.**

The reasons perceived by health workers as to why majorities of the mothers don't attend PP clinics were explored.

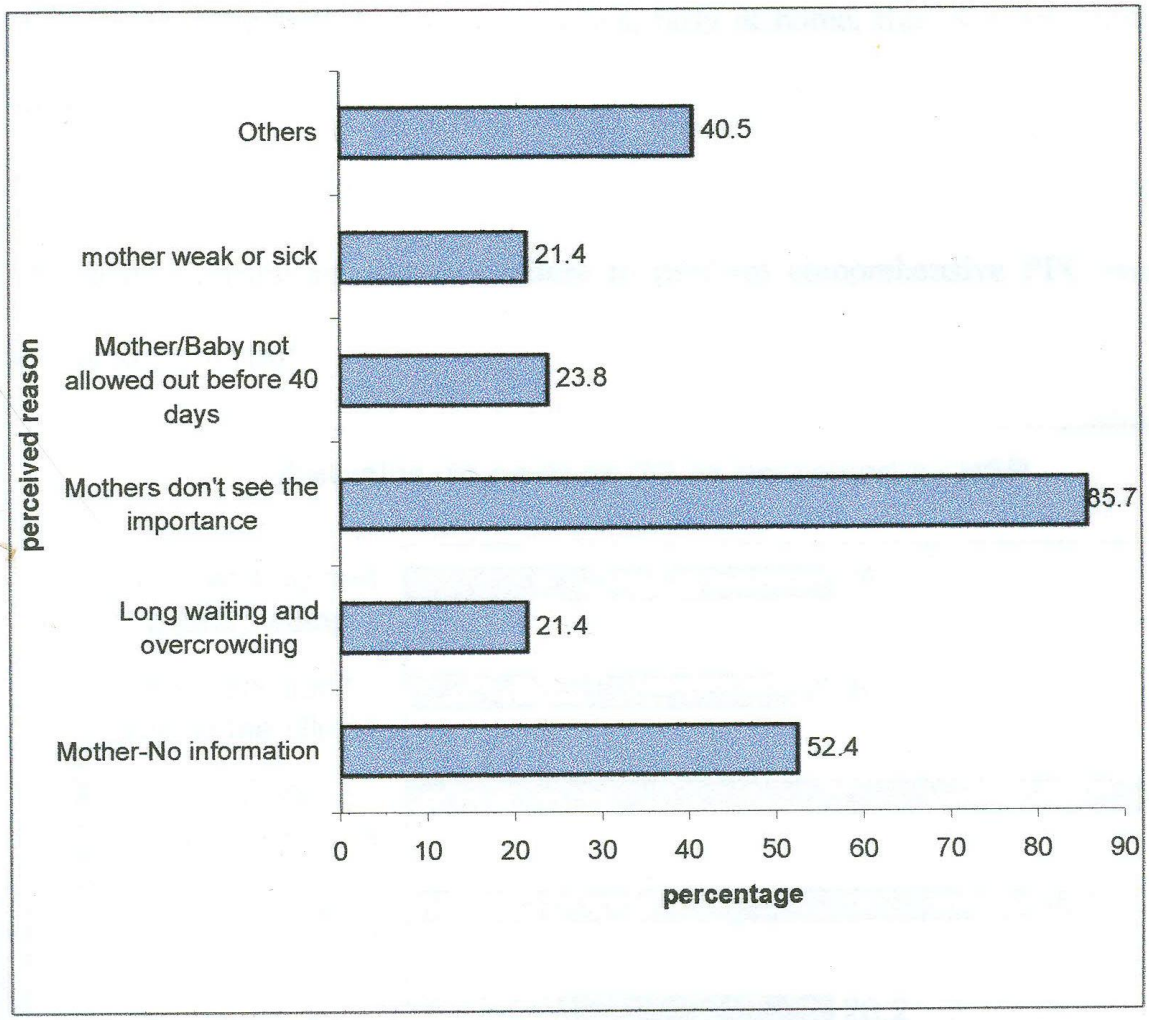



**Figure 7: Reasons for the mothers not attending PP follow-up clinics as perceived by the health service providers (N=42)**

The responses from health service providers were more or less the same from what was reported by mothers; that is the commonest reason for low post partum clinic attendance was due to the fact that mothers themselves feel that they have

delivered safely and no reason to attend PP clinics. This was reported by (85.7%) of the service providers while 70.0% of the mothers reported the same reason.

Lack of information also ranked second in both groups of respondents, service providers 52.4% while it was 59% for the mothers (Figure 7). Reasons mentioned in the group of "others" include: no reasons, busy at home, transport and mother had forgotten.

Obstacles contributing towards failure to perform comprehensive PPC were also explored from HSPs.

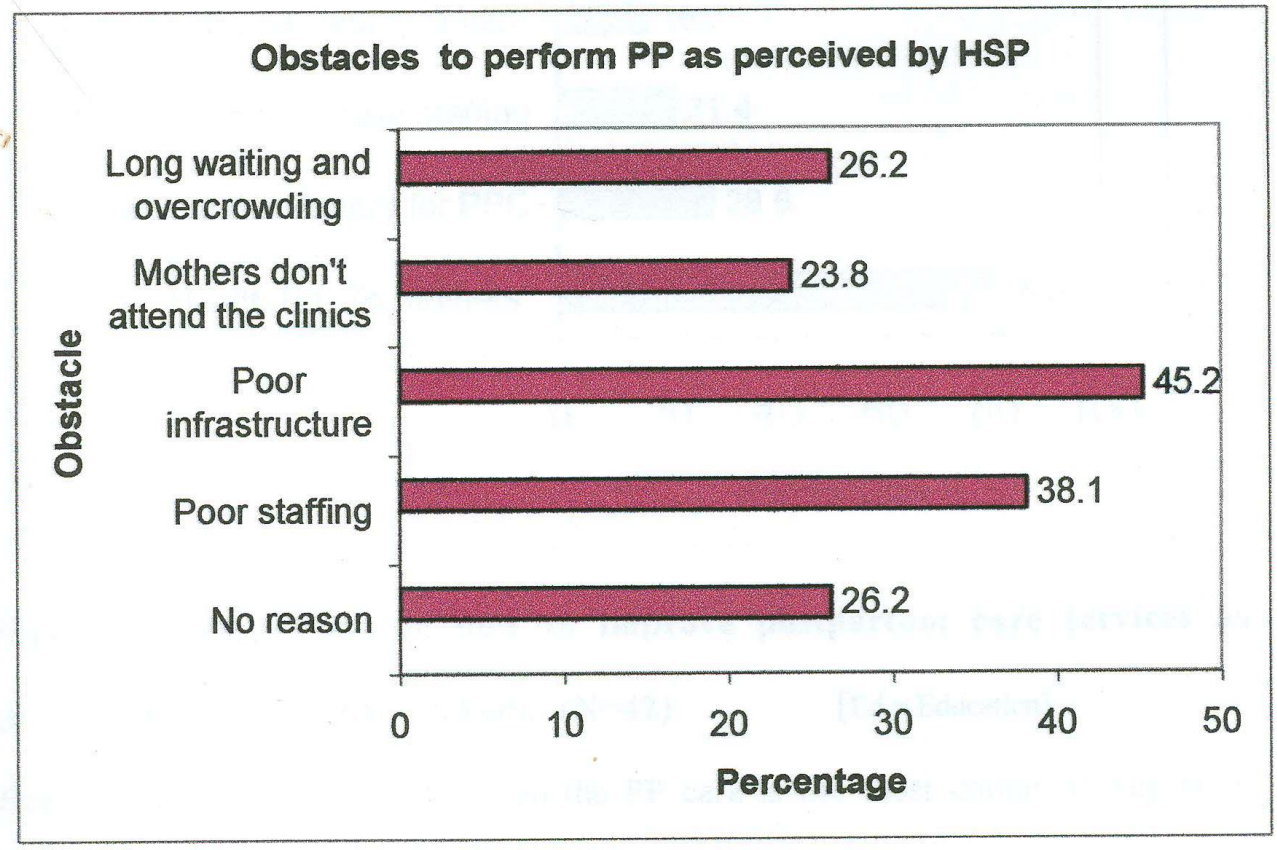



**Figure 8: Obstacles towards comprehensive PPC services as perceived by HSPs.**

Poor infrastructure (45%) followed by poor staffing 38.1% were the most perceived obstacles towards provision of post partum care services. Eleven respondents (26.2%) said that they had no reasons for not performing PPC (Figure 8).

HSPs were requested to give suggestions on which areas which need improvement so as to improve post partum care.

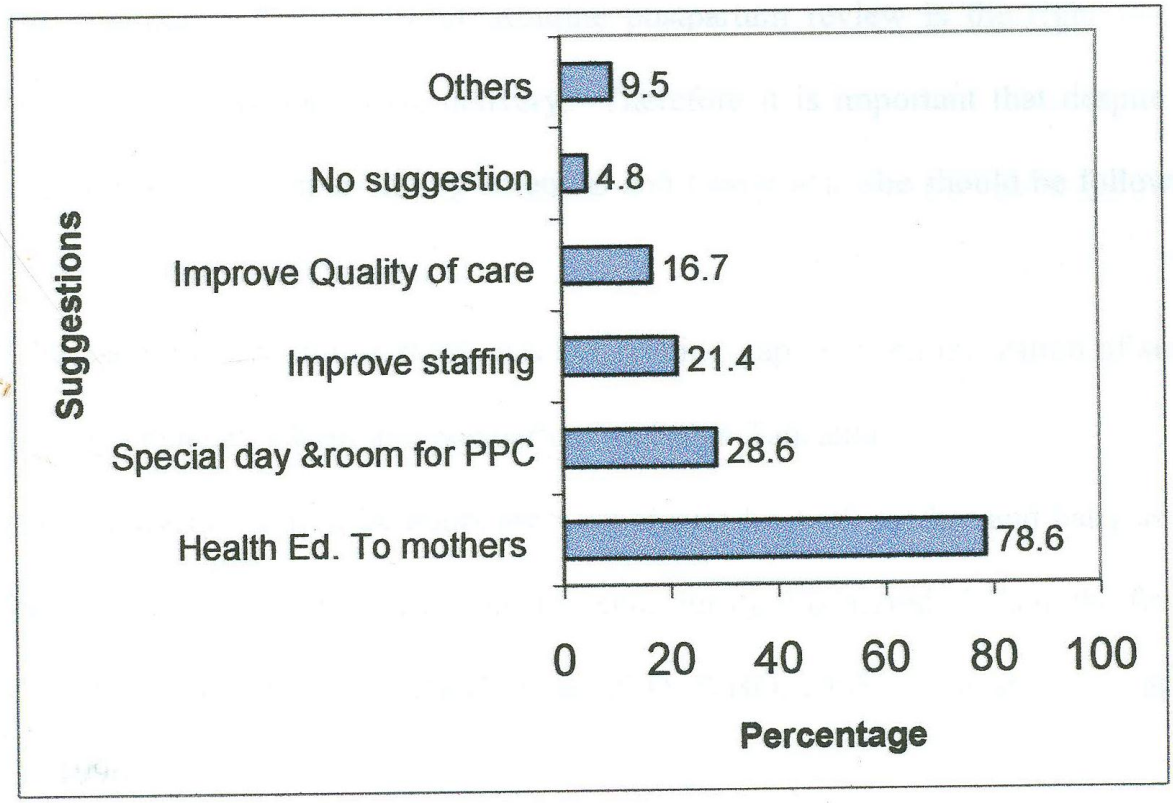



**Figure 9: Suggestions on how to improve postpartum care services as perceived by the health workers. (N=42)** [Ed = Education]

Health education to the mothers on the PP care is the most common suggestion posed by health service providers (78.6%). About five percents of the respondents had no suggestion on how to improve the services (Table 9). Included in the group of "others" are; refresher course to the service providers, home visiting, health education to TBAs and to involve community leaders.

# CHAPTER 5

## 5.0 DISCUSSION

Lack of care provided to women and newborn during postpartum period is a serious gap in the primary health care (HDIP, 2001). In most developing countries there has been relatively less attention to antenatal and labour by mothers, health workers, and the community (WHO, 1996). Routine postpartum review is the right for every woman who has undergone delivery. Therefore it is important that despite close monitoring of a woman during antenatal and labour also she should be followed up to the postpartum period.

The main concern in this study was the existing gap between utilization of services during antenatal, labour and postpartum period in Tanzania.

After delivery the first 24 hours are very crucial for both mother and baby as it has been observed that most of the deaths occur during this period; 50% in the first day, and 70% within the first week (Urassa, 2002; WHO, 1985; Abouzah, 1997; & Li et al, 1996).

### 5.1 Post delivery observation time

In this study mothers were observed at the facility for short time especially in the lower level facilities (dispensaries) where the resources are limited. Some previous studies had suggested that if there is good communication system and facilities for home visiting shorter hospital stay is recommended (Mandl et al, 1997 & Gagnon et al, 1997). It had been recommended by WHO that mothers and their babies should be discharged home as early as possible to avoid nosocomial infection but mother and baby's support equivalent to that provided in the hospital should be made

available at home (WHO, 1986). The same applies if the mother for certain logistic reasons e.g. transport or, cultural the mother can not leave home, then outreach services are recommended (WHO, 1994).However, it was noted in USA that home visiting were expensive than visiting the clinics (Lieu et al, 2000). In developing countries like Tanzania, there is poor communication especially transport to the facilities, limited resources to perform home visiting. At the same time, there is problem of overcrowding in our facilities therefore hardly they can keep the mothers up to the recommended 24 hrs. All these constraints pose a challenge towards postpartum care delivery system.

It was observed in this study that private facilities keep mothers longer than others. This is due to the fact that they are less overcrowded since only few can afford as it was observed that most of deliveries took place in the facilities owned by the government. Probably the other reason could be due to the fact that private facilities are profit makers and so are likely to keep the patients longer than their counter parts.

**5.2 Information on post partum attendance**

If the mothers are explained the right purpose to attend the clinic and at the right time, this may facilitate attendance. From the study findings, majority (88%) of the mothers were asked to come back to the clinic after delivery. However, there was misconception on the whole purpose for the visit among health service providers and the community as a whole. Although most of the service providers acknowledged that the mother should be reviewed post delivery, majority of the mothers were informed to come to the clinic to bring their babies for vaccination and growth

monitoring. The misconception has been spreading among the community members that the mother should bring the child to the clinic and not for herself as well. The same findings were observed in Lindi whereby the same percentage (70%) of mothers attended the clinic for baby's vaccination (Simbakalia et al, 1998) and in Zanzibar 82% (ZSMP, 2000).

It had been pointed out that adequate information and counseling during antenatal visits will enable the mothers to become aware of the complications (Nitai et al, 2002). Reported time to inform mothers on postpartum care visits by both mothers and health service providers' interviews revealed gross deficiencies. Only 15% of the service providers had the correct knowledge that the mother should be informed on postpartum care while attending antenatal clinics and only 6% of the mothers reported that was given such information during their antenatal visits. This has an implication in terms of implementation of the postpartum visits as it is easy for the mothers to forget some of the instructions given on discharge as compared to repeated information during antenatal visits.

Therefore it is important that the health service providers to understand that, the ideal time is during antenatal, which was mostly missed in this study.

It has been said earlier that keeping the mothers longer in health facilities in our situation is not feasible; therefore timing of the first postpartum visit is very essential. It seems that there is lack of understanding about Ministry of health policy on post partum care. Despite the fact that large percentage (78%) of health service providers had knowledge on timing of the first postpartum visit, only about half (50%) of the mothers reported that they were requested to return to the clinic in the

first week, whereby among the health workers, 33% responded that they asked the mothers to come in the first week. Better results were observed in Lindi whereby 53% of the HSPs asked the mothers to come within the same period (Simbakalia et al, 1998). In Urambo39% of the HSPs asked the mothers to come in the first and 10% never asked (FCI, 2001).

Studies from different places show that some health workers ask the mothers to come to the clinic after the 7th day and even after six weeks. In this study, about one fifth (21.4%) of the HSPs asked the mothers to come after seven days. These results are far better from what was found in Zanzibar whereby three quarters of the HSPs had perception that the first visit should be after 28 or 42 days (MoH(b), 2000 & ZSMP, 2000) and in Urambo 45% requested the mothers to come back after six weeks (FCI, 2001). It is documented in the MCH card No. 4 that there should be three visits during the postpartum period: at 1st, 4th and 6th week. However, majority of the HSPs had knowledge that the mother should attend the clinic once. The above different findings from the same country under one health policy suggest that there is lack of emphasis and standardized guidelines to the Health service providers on timing for the postpartum visits.

**5.3 Post partum clinic attendance**

It is mostly not possible to predict which woman will develop complications in the future just by considering only antenatal heath status of the mother. In this study large percentage of mothers attended antenatal clinic (99%) but only less than one quarter (23%) attended the clinic for postpartum check up. There is a relative increase in postpartum attendance as compared to what was found in Lindi in the

last five years; 15% (Simbakalia et al, 1998) and in 10% in Zanzibar (ZSMP, 2000). However, the results are far better as compared to what was found in West Bank and Gaza whereby the proportion of mothers who attended post partum care was only 3.3% (HDIP, 2001). The study findings are also within the same range of 5-30%, which was found by WHO, 1996 among developing countries. In USA a different trend was observed that there was increasing attendance of antenatal attendance with postpartum attendance (York et al, 2000).

Tanzanian MoH policy recommends that every woman who has undergone delivery should be reviewed within seven days. From the study, only half of the mothers attended the clinic within seven days and 28% within one month. Contrasting results from Zanzibar shows that nearly one third the mothers attended within one week and half within one month (ZSMP, 2000). Moreover a good proportion of health service providers acknowledge that there is a need for postpartum review within the first seven days. Surprisingly, what the mothers reported as was instructed concerning postpartum care deviate from the above knowledge. It was noted in USA that majority of mothers attend post partum visit and only 15% of the respondents had not made the visit within six months (Luc &Prentice , 2002)

Mothers' education was observed as a facilitator for postpartum clinic attendance while those with high parity were seen to be less likely to attend postpartum clinics. As it is expected this might be due to the fact that experience from previous deliveries make them confident with the index one, which might not always be the

case. The health education delivery staff should focus on this group, as with increased parity there is also increased risk for postpartum complications.

**5.4 Services provided by the HSPs/Received by the mothers**

Health services providers reported relatively higher proportions of services been provided than those reported by the mothers.

It is easier for the health workers to mention what they understand from their training and policy but putting them in practice may be questionable. This might explain the different results of the same question asked from both health workers and mothers.

Similar proportions of minimal postpartum examinations performance were also observed in Lindi whereby blood pressure was checked in only 10% of the respondents, vaginal examination in and abdominal exam 15% (Simbakalia et al, 1998). More surprising results were obtained in Zanzibar whereby only 5% had abdominal examination, 6% had blood pressure check up, while none had vaginal examination (ZSMP, 2000). Worst results were obtained from Urambo whereby it was found that post partum examination was almost not done (FCI, 2001).

**5.5 Reasons for low post partum attendances**

In this study reasons for not attending post partum care were explored from both mothers and HSPs. Generally, lack of information was the predominant reason for the mothers not to attend the clinic.

Health service providers acknowledge that majority of the mother do come to the clinic after delivery to bring the child for service without being aware that

themselves are supposed to be reviewed as well. In the study among other reasons mentioned by the HSPs was that the mother would send a relative to bring the child to the clinic while she remains at home. This is contributed by the fact that mothers are not aware that even after delivery there could be complications which can be fatal and cause disability or death. The general society also has the same belief that once the mother has delivered she is quite safe and no need to go back to the clinic for check up.

Economical reasons also contribute towards underutilization of post partum care services. Sometimes the mothers felt themselves still weak and especially if they had episiotomies such mothers would need reliable transport to facility and even accompanying relative. Although in this study transport did not come up as a major obstacle mentioned by the mothers, in other studies it was among the major barriers towards utilization of services. (FCI & IAG, 1998 ; WHO, 1998). This might be due to the fact that the study was done in urban areas where the facilities are relatively near to the mothers and reasonable public transport. In rural areas there is increased physical distance to the health facilities, scarcity of vehicles, poor road conditions which make the mothers extremely difficult to reach the facilities. Results from Kisarawe district in Tanzania revealed that transport contributed significantly towards home delivery (Peter, 2000).

Similar studies by WHO, 1998 revealed that informal costs and "under the table fee" were among the barriers. In this study such factors were not mentioned among the major barriers towards utilization of services.

It has been observed previously that quite a large proportion of mothers did attend the clinic for one reason or another but mostly for babies care. This was an opportunity for the health service providers to perform the postpartum review to the mothers as well. Therefore main problem seem not to be the physical attendance but to whom the service is provided and to what extent. In most cases there is no initiation from the health service providers to examine the mother although most of them acknowledged that definitely there is a need to review the mother even if she had safe delivery. Therefore it seems there is a gap between what they understand as policy and their practical performance.

Each society has its own culture and norms. Some societies have culture of keeping mothers indoor after delivery for different periods of time for different reasons. The most common period is forty days, the so called "arobaini". This can act as an obstacle towards postpartum care. In this study, 41.5% of the mothers who were informed to attend the clinic did not do so because they were still in "arobaini". The similar obstacle was observed in India whereby mothers and babies were kept in door for several months to avoid them meeting the evil spirit (Benn et al, 1992). Although the question of gender inequalities was found in other studies like in Bangladesh (WHO, 1994; FCI & IAG, 1998) as an obstacle towards utilization of heath facilities, in this study, none of the respondent mentioned it as an obstacle towards post partum care attendance.

About one sixth (16.7%) of the mothers reported that at one time they had thought of going back to the clinic for check up but then, they were afraid of facing health

workers just for routine check up if they were not appointed to do so. In a similar study to find out contributing factors towards home delivery, 21% of the mothers delivered at home because they feared rudeness of health staff (WHO, 1996).

It is also surprising that some of the health service providers instructed the mothers to attend the first postpartum visit after 42 days as it was reported by one eighth of the mothers. However, these results are better than what was reported in the previous five years in Lindi whereby among the health workers, 42% informed the mothers to come within six months, 3% asked the mother to come if only she had problem and 2% did not ask the mothers to come back (Simbakalia et al, 1998).

Health system infrastructure in Tanzania is mostly inadequate. In this study, Poor infrastructure and shortage of staff were the most common obstacles mentioned by the MCH service providers. According to the structural process at the MCH clinics, there are different rooms for vaccinations, antenatal check, and weight check for the babies, family planning and postpartum check. In most clinics, the current structure does not have a room and a staff to deal with the postpartum mothers. As a result these mothers who come for post partum care are attended last after all other procedures are done or when opportunity arises. It is discouraging for the mother who has delivered safely with no complaint at the time of the visit to keep on waiting for so long just to be examined. Therefore, most of the mothers abscond the clinic and some don't appear at all. In this study, both mothers and health service providers pointed out such obstacles. Improving the infrastructure of the MCH clinics to have a post partum care room will ensure that mothers are examined on time and in privacy which may encourage the mothers to seek for postpartum services.

# CHAPTER 6

## 6.0 CONCLUSION AND RECOMMENDATIONS

### 6.1 Conclusions

From this study we can conclude that:

1. The gap between use of antenatal and labour and postpartum care in Temeke Municipal still exists. Although there is high utilization of antenatal and delivery services, postpartum services are still underutilized.
2. General community and particularly mothers lack knowledge and information that post delivery mothers should attend postpartum clinics regardless of whether she has complaints or not. Most of the mothers have misinformation that they should attend the clinic after delivery but for their babies' service and not for their post partum care as well.
3. Majority of the mothers are given educational messages on post partum care at the wrong time; during discharge after delivery while in actual sense it would be better if it had been during antenatal visits. Again most of the MCH service providers lack knowledge on the right time to give such messages to their clients.
4. Generally, despite the service providers' knowledge on type of services which need to be provided during postpartum visits, most of the services were performed to less than 50% of the mothers. Examinations which require time, privacy or cause discomfort to the mothers were done to very small proportion of mothers.
5. Most of the Health Service providers acknowledged that there is a need for routine post partum visits even if the mothers had normal delivery. However,

there is deficiency in knowledge on the purpose for post delivery attendance in terms of who has to be reviewed, timing on the 1st visit and frequency of attendance.

6. There is lack of emphasis and follow up on post partum care from both MoH policy markers and Health workers. Also there is poor documentation on postpartum care services.

7. The health facilities in Temeke Municipality are not yet ready to accommodate and perform comprehensive postpartum care to all post delivery mothers as they are faced with poor health infrastructure and limited resources.

## 6.2 Recommendations

1. There is a need to increase public awareness on the importance of postpartum care. There should be pertinent information education and communication (IEC) messages and behavior change communication (BCC) strategies. There is a need to reverse the notion that "post delivery clinics are for babies vaccination and growth monitoring only" but for monitoring health of both mothers and babies.

2 .In developing countries like Tanzania there is limited resources to keep mothers in the health facilities long enough, or to perform home visiting to post partum mothers so as to diagnose, treat, and prevent complications. Therefore the best option is to encourage the mothers to attend the clinic timely.

3 Upgrading and refresher training programs for heath service providers to update their knowledge and emphasize on timely, comprehensive post patum care provision. The on going introduction of Advanced Life Saving skills curriculum should be speeded up and the post partum care section given much emphasis.

4. Heath system infrastructure should be improved in such a way to accommodate efficiently, timely and comprehensive post partum care. There should be established mechanisms to ensure high quality services so as to attract mothers to attend the care. There is a need to re-structure the sections for example provide a special room for postpartum examinations and a service provider available for that purpose so as to provide timely postpartum care.

5. Majority of the mothers did not attend the post partum clinics because they had no problems. There is a need for more researches to justify the need for three post partum visits if practically most developing countries have failed to maintain the single visit to a reasonable extent, how about the 2nd and 3rd visits? Taking into consideration the limited resource in developing countries, may be the best option would be to make sure that every woman should attend at least one post partum visit and be given health education on danger signs during post partum period and encouraged to come back in case they suffer such complications .The 2nd and 3rd s may be reserved for mothers who were found with complications in the 1st visit.

6. There should be emphasis and standardized format for post partum documentations for example including a section of post partum attendances in the HMIS.

7. Enforce standards and written protocols for post partum service delivery including management and supervision. The Ministry of Health should make the policy on post partum care more clear to health service providers and also provide management protocols.

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