A STUDY TO ASSESS THE USE OF THE PARTOGRAM BY MIDWIVES IN LUSAKA URBAN MATERNITY CLINICS.

BY

GERTRUDE NAMUNJI KAMBOLE

NOVEMBER 1998
A STUDY TO ASSESS THE USE OF THE PARTOGRAM BY MIDWIVES IN LUSAKA URBAN CLINICS

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ZRN (1984) – NDOLA
ZRM (1989) – NDOLA

A RESEARCH STUDY SUBMITTED TO THE DEPARTMENT OF POST BASIC NURSING, SCHOOL OF MEDICINE, UNIVERSITY OF ZAMBIA, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN NURSING

NOVEMBER, 1998
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DECLARATION

I, Gertrude Namunji Kambole, hereby declare that the work presented in this study, for a Bachelor of Science Degree in Nursing, has not been presented either wholly or in part for any other Degree and is not being currently submitted for any other Degree.

Signed: ___________________________  Date: 4/2/99

Signed: ___________________________  Date: 3/2/99
STATEMENT

I hereby certify that, the work presented in this study is entirely the result of my own independent investigation. The various sources to which I am indebted are clearly indicated in the text and in the references.

Signed: [Signature]
CANDIDATE
DEDICATION

To my mother Mrs. Jessie Moono Z. Kambole and my late father Mr. Kambole Kambole whose values of decency, justice and dignity will always be an inspiration.

To my brothers, Kambole, Peter, Jones and John who have seen me this far in my education, my sisters Namasiku, Namangolwa and Mungenda for the love we have always shared.
ABSTRACT

The study was conducted to assess the use of the partogram by midwives in Lusaka Urban Maternity Clinics labour wards.

A descriptive study was conducted and a self administered questionnaire was used for data collection.

A sample comprised of 50 labour ward midwives who were randomly selected for the study.

Data was analyzed manually using a pocket calculator.

The results of the study revealed that respondents working in Lusaka urban maternity clinics graduated from all the midwifery schools in the country, with the majority from enrolled midwifery schools. The mean age of the respondents was 38 years.

The study further revealed that majority of the respondents 92% regardless of their having been taught the use of partogram at training school, found a different partogram design in the clinics. Majority of them appreciated attendance of a workshop to be updated with the partogram in use at the clinic. Nevertheless there was low knowledge on
the use of the partogram despite having attended a workshop on the partogram. Majority of the respondents 46% had low knowledge on when to draw the transfer line. 68% of the respondents had no partogram guidelines but were able to detect prolonged labour using the partogram.

Majority of the respondents 18% had 5 to 7 deliveries per shift and worked on a ratio of 1 midwife to 6 deliveries.

However, the hinderance to good practice cited were inadequate supply of partograms, inability to interpret and plot on the partogram and low staffing levels. Nevertheless, the respondents appreciated the use of partogram.

From the above findings it was recommended that the Ministry of Health, Lusaka District Health Management Board, the General Nursing Council, Maternal and Child Health / Reproductive Health, other agencies, assist in improving the conditions of the midwives in the hope of reducing maternal and neonatal morbidity and mortality.
# LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ZDHS</td>
<td>Zambia Demographic and Health Survey</td>
</tr>
<tr>
<td>NHPS</td>
<td>National Health Policies</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children Emergency Fund</td>
</tr>
<tr>
<td>CboH</td>
<td>Central Board of Health</td>
</tr>
<tr>
<td>UTH</td>
<td>University Teaching Hospital</td>
</tr>
<tr>
<td>UNIFPA</td>
<td>United Nations Population Fund</td>
</tr>
<tr>
<td>ZRH</td>
<td>Zambia reproductive Health</td>
</tr>
<tr>
<td>HSR</td>
<td>Zambia Systems Research</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>GNC</td>
<td>General Nursing Council</td>
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</tbody>
</table>
CHAPTER 1

1.0. INTRODUCTION

1.1. Background Information

Lusaka is the capital city of Zambia. It is located within Lusaka Province, which is one of the 9 provinces of Zambia. Lusaka urban is found in Lusaka District which is one of the 67 districts.

In 1990, national census reported total population of Zambia as 7.8 million. The growth rate varies by province. As a nation, it was estimated at 3.1 percent per annum in the 1969-1980 intercensal period. Average density for Lusaka ranged from 50 people or more per square kilometre. (ZDHS, 1996).

In addition to being one of the two most densely populated provinces, other than Copperbelt, Lusaka is also the most urbanized areas in the country (ZDHS, 1996). Women of childbearing age are 286,000 (22%) out of the Lusaka population of 1.3 million (District Annual Report, 1998).

Zambia has fairly good health service infrastructure and a reasonable cadre of health personnel by standards of a developing world. The system is however biased in 2 ways; it favours curative services over preventive services, and urban population over the rural population (NHPS, 1992).
Using the Primary Health Care (PHC) strategy and the Principles of Leadership, Accountability and Partnership (LAP), the Zambian Government forged to reform the health sector in 1992. This was to provide the Zambian with equity of access to cost effective quality health care as close to the family as possible. Thereby improve and promote the life and health of the people, including the reduction of maternal morbidity and mortality (MOH, 1992).

District Management Boards have been established in all districts throughout the country and referral hospitals will be managed by autonomous Boards of Management. The importance of keeping women healthy and improving reproductive health has received attention worldwide. This is evidenced by the launching in 1987, of the Safe Motherhood Initiative (SMI). The four key aspects of this programme are: - advocacy, development of normative guidelines, technical support for countries and research (WHO / UNICEF, 1995).

SMI has been defined as a programmatic approach to create circumstances within which a woman can choose to become pregnant. If she does, she has access to antenatal care, normal delivery and post natal care, including family planning and receiving care for prevention and treatment of pregnancy and delivery related complications (Diallo, M. 1998).
In 1996, WHO in conjunction with UNICEF carried out a Safe Motherhood Needs Assessment as an essential first step to strengthen the SMI in Zambia. The emphasis was to assess the country's capacity to provide maternal and neonatal care (MOH/CBOB, 1998).

In response to the results of the need assessment, the Safe Motherhood Policy, Strategies and Guidelines were developed and are currently being finalized for submission to the Zambian Government. Once finalized, these will be a major tool for health workers which include managers and service delivery personnel, in the provision of quality reproductive health services in Zambia (Diallo, M. 1998).

The other strategy the government has undertaken in the promotion of the health of women and children is to orient personnel such as midwives, obstetricians, Traditional Birth Attendants (TBAs) and family health nurses to the concept of SMI.

Midwives represent a significant group of professionals. This is why training facilities have been made available in nearly all provinces to facilitate training of this category of health workers. This is to meet the human resource needs.
There are 8 Enrolled midwifery training schools, and 3 Registered midwifery training schools in Zambia. The highest number of schools being in the Southern and Eastern provinces. The total number of midwives in Zambia is 8,390 as shown in the table A, below:

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrolled midwives</td>
<td>4,308</td>
</tr>
<tr>
<td>Registered</td>
<td>4,082</td>
</tr>
</tbody>
</table>

Source: General Nursing Council, 1998

The midwifery schools have been active in the initiation and early implementation of the Safe Motherhood programme. They have taken the lead in the WHO multi centre programme study and field of the midwifery Safe Motherhood modules. The midwifery training programme advocates for the individual close observation of a mother in labour by the use of the partogram. The midwifery tutor is supposed to teach both theoretically and practically, the use of the partogram. The student midwife is supposed to make a return demonstration. The researcher's observations are that when the midwives qualify they do not make use of the partogram and this can contribute to maternal and foetal morbidity and mortality.

However, the causes of morbidity among women of childbearing age, those related to pregnancy and childbirth varies from place to place. According to Nsemukila (1994), the maternal mortality ratio was 118 deaths per 100,000 births in Lusaka (UTH), and 889 per 100,000 deaths in Mongu (ZDHS, 1996). This
shows that maternal mortality in this country is a silent epidemic (UNICEF, 1995). National-level estimates vary from 202 to 940 maternal deaths per 100,000 births (WHO / UNICEF, 1996).

In order to curb high infant/maternal mortality and morbidity rates the Government, Non-governmental organizations (NGOs), Private Sectors and individuals have embarked on services to promote the health of women and children through the Maternal and Child Health (MCH) programme, though this programme is being integrated into a broader Reproductive Health Strategy (WHO / UNIFPA, 1998).

Lusaka urban is dived into 8 zones for administrative purposes in the delivery of health services. There is one central hospital, the UTH, which is a referral hospital for both, hospitals and health centres across the country. There are 22 government health centres which offer curative and preventive services, of which 9 offer maternity services on 24 hour basis, (appendix I). 8 of these are run with the aid of the Irish Government. The 9 health centres use the partogram.
Table B shows the 9 clinics and the staffing status of midwives for each clinic for last year.

**Table B: Staffing per Health Centre 1997**

<table>
<thead>
<tr>
<th>Name of Clinic</th>
<th>Registered Midwife (RM)</th>
<th>Zambia Enrolled Midwife (ZEM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chawama</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Chelstone</td>
<td>7</td>
<td>22</td>
</tr>
<tr>
<td>Chilenje</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Chipata</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>George</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>Kanyama</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Kalingalinga</td>
<td>6</td>
<td>09</td>
</tr>
<tr>
<td>Matero reference</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Mtendere</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>56</strong></td>
<td><strong>150</strong></td>
</tr>
</tbody>
</table>


Midwives render services in the 22 clinics but more especially in the 9 clinics, the area of their speciality. Table C: shows the total deliveries conducted for each clinic. Out of the totals shown above, others have to attend workshops/seminars, in-service courses and other national and international calls. Others have to have their leave and others have and are still leaving the country for greener pastures. Unfortunately, others are dying as shown in Table D. May their souls rest in peace.
Table C: Individual Clinic Deliveries 1997

<table>
<thead>
<tr>
<th>Name of the Clinic</th>
<th>Number of deliveries</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chawama</td>
<td>5,508</td>
<td>18.3</td>
</tr>
<tr>
<td>Chelstone</td>
<td>2,045</td>
<td>6.8</td>
</tr>
<tr>
<td>Chilenje</td>
<td>2,226</td>
<td>7.4</td>
</tr>
<tr>
<td>Chipata</td>
<td>5,032</td>
<td>16.8</td>
</tr>
<tr>
<td>George</td>
<td>3,874</td>
<td>13.0</td>
</tr>
<tr>
<td>Kanyama</td>
<td>4,438</td>
<td>14.8</td>
</tr>
<tr>
<td>Kalingalinga</td>
<td>1,108</td>
<td>3.7</td>
</tr>
<tr>
<td>Matero Reference</td>
<td>3,671</td>
<td>12.2</td>
</tr>
<tr>
<td>Mtemdere</td>
<td>2,089</td>
<td>7.0</td>
</tr>
<tr>
<td>Total</td>
<td>29,991</td>
<td>100</td>
</tr>
</tbody>
</table>

Table D: Deaths of Midwives 1997.

<table>
<thead>
<tr>
<th>Clinic</th>
<th>Name of the deceased</th>
<th>File Number</th>
<th>Date of Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chilenje</td>
<td>Grace Tembo</td>
<td>ZEN/ZEM 6118</td>
<td>14/08/97</td>
</tr>
<tr>
<td>Chilenje</td>
<td>Esther Handahu</td>
<td>ZEN/ZEM 4312</td>
<td>18/08/97</td>
</tr>
<tr>
<td>Mtendere</td>
<td>Getrude Nthani</td>
<td>ZEN/ZEM 2676</td>
<td>19/05/97</td>
</tr>
</tbody>
</table>

Source: MCH Report LUDHMB, 1998

As part of the SMI launched in 1987, the WHO has produced and promoted a partogram (appendix ii), with the view to improve labour management and therefore reduce maternal and foetal morbidity and mortality (WHO, 1994).
The pattern of cervical dilatation in normal labour in different racial groups is so similar that a suitably designed partogram should be applicable throughout the world. As the main feature of the partogram is the plotting of cervical dilatation against time.

The partogram is designed in such a way that progress of labour, maternal and foetal well being is monitored and rapidly recorded. This enables early recognition, prevention and or treatment of complications (Feuerstein, M. 1993).

1.2. STATEMENT OF THE PROBLEM

Maternal mortality remains one of the major problems in public health today, especially in developing countries where maternal mortality is estimated to be between 500 and 1000 deaths per 100,000 live births (De Groot, D. et al, 1995).

In Zambia, there is regional variation of maternal mortality rate and ratio. For instance, in Mongu, maternal mortality ratio was reported to be 889 per 100,000 live births and in Serenje it was 480 per 100,000 live births (MOH, 1994). In Lusaka urban it was reported to be 100,000 live births (Ahmed, 1995). At national level, the maternal mortality ratio is officially estimated at 202 per 100,000 live births (UNFPA, 1996). However, this figure is institutional as explained above.
The causes of mortality vary. Worldwide, the leading causes are haemorrhage, pre-eclampsia, abortion and obstructed labour (WHO, 1993). In Zambia, the causes vary in regions, the general causes being attributed to haemorrhage, abortion, anaemia, pre-eclampsia, obstructed labour and puerperal infections (Chongo, C. 1995).

The causes of morbidity among women of childbearing age, those related to pregnancy and childbirth varies from place to place. In UTH the causes recorded are complications related to pregnancy and childbirth (Chongo C. 1995).

The fertility trend in Zambia is of which childbearing begins early with over one-third of women becoming mothers by 18. Two thirds having had a child by the time they reach age 20 with a median age at first falling between 18 and 19 years and a mean medium number of children of 5.3 and 5.9 (ZDHS, 1996).

Most mothers receive their care, 3% from doctors and 93% from a nurse-midwife (ZDHS, 1996). In Zambia like all other countries worldwide a midwife has been recognized as the best trained health worker who can make an impact on maternal and child health.
The midwife as a health professional is qualified to give necessary supervision, care and advise to women during pregnancy, labour and postnatal period. She conducts deliveries and takes care of the newborn infant. The professional midwife practices in hospitals, clinics, domiciliary conditions or any other service (Myles, M. 1982).

In Zambia the nurses and midwifery training and practice was enacted by parliament in 1970. Midwives are practitioners in their own right and are an important part of the solution of maternal and child health problems. Professional midwifery in Zambia is an added speciality following basic nursing education. The duration twelve is (12) months for both enrolled and registered midwives.

The shortage of midwifery tutors is a problem in Zambia, where in some schools there would be the principal tutor only. For example, the researcher was turned down from carrying out the Nursing Education Teaching Practice in Kabwe because there were no tutors other than the Principal tutor. This would make supervision impossible.

According to the National Health Policies and Strategies (1992), there is no establishment for midwifery tutors. This, like in most other developing countries, has led to tutors not teaching life-saving skills, like the use of the partogram adequately (WHO, 1996).
In order to support the upgrading of midwifery skills, a set of midwifery training modules have been developed by WHO maternal Health and Safe Motherhood Programme. This includes use of partogram for early detection of obstructed labour.

In 1987, The Safe Motherhood Initiative was launched with the objective of reducing maternal mortality by 50% within 10 years. One of the methods introduced to reduce the high incidence of maternal and neonatal mortality in developing countries, is the partogram.

Zambia has pledged along with its United Nations partners to reduce morbidity and mortality among women and children. Through the MOH, the country has provided antenatal care, intra partum care, perinatal care, immunization of children and women of childbearing age and postnatal care. These services are available countrywide especially that these mothers are among the vulnerable groups who need special care and risk assessment.

Risk assessment is not a once-only measure, but a procedure continuing throughout pregnancy and labour. At any moment, early complications may become apparent and may induce the decision to refer the woman to higher level care (WHO, 1996). Thus, the well being of the mother and the foetus must be carefully monitored and recorded during labour. This monitoring does not necessarily require the use of special equipment, but always requires careful and
individualized observations and recordings by midwives or other selected staff who are able to carry out vaginal examinations (VE) in a sterile manner. UndueVEs lead to high risk of infection (Sitwala, J. 1996).

This close, individualized observation requires the use of a partogram. The partogram (appendix ii) is a graph upon which are displayed clearly on a single sheet the features denoting the rate of progress of labour together with relevant facts concerned with the state of the mother and foetus (Frost, O. 1980).

In Zambia, during the midwifery practice, the researcher observed that, where the partogram is used, especially in non-midwifery teaching hospitals, health staffs have to wade through chunks of lengthy descriptions in perhaps illegible handwriting.

Such recordings can be lengthy and difficult to follow, particularly when labour is prolonged or when there is change of staff. The partogram is designed so that progress in labour for both mother and foetus can be easily and rapidly recorded, to enable earlier recognition, prevention and/or treatment of complications.

In Zambia, many institutions and districts have partograms. However, it was found in the Safe Motherhood Needs Assessment, that they were seldom being used, their use was often started after the service provider had observed that there was a problem (ZRH, 1998).
The Zambian teenage mothers (15 – 19 years) who are reported to have had their first babies or pregnant with their first children (ZDHS, 1996) are at risk. They are susceptible to obstructed or prolonged labour which can be detected early and avoid other complications, such as fistulae. This detection can be done by the use of the partogram.

Despite the demonstrations of the effectiveness, the partogram has not been adopted as a universal tool to aid appropriate referral and management decisions in labour. Yet prolonged and difficult labour may contribute to at least a third of all maternal deaths. If the partogram can be more widely accepted in a functioning district health system, it has the potential to reduce the horrific toll of mortality and morbidity from prolonged and obstructed labour.

This suggests that the partogram is a reasonable screener for abnormal outcome and the need for intervention (Philpott, R. 1995).

Drawing lines on the partogram may present problems even for the literate, the use of partograms with pre-printed alert and action lines (as the WHO partogram) are recommended (Lennox, C. 1980). The partogram also needs a management protocol to follow. This indicates when to intervene labour process.

The spread of an improved quality of labour management and of appropriate intervention of labour, which should be achieved with a partogram, should
increase the likelihood of women making use of maternity services when in labour.

Lusaka urban clinics have tried to use the partogram, but have had problems.

1.3. HYPOTHESES

1.3.1. Adequate training on the partogram being used in the clinic leads to adequate utilization of the partogram.

1.3.2. Low staffing of midwives in a maternity ward leads to low utilization of the partogram

1.4. OBJECTIVES OF THE STUDY

General Objectives

To assess the use of the partogram by the midwives in Lusaka urban maternity clinics.

To achieve the general objective, the following specific objectives will be taken into consideration.
SPECIFIC OBJECTIVES

1. To determine the level of knowledge on the use of the WHO partogram among the midwives in Lusaka urban clinics.

2. To determine characteristics of nurses who work in clinic labour wards.

3. To assess the attitude of midwives towards the use of the partogram.

4. To determine the factors contributing to the usage of the partograms.

5. To provide data for further research.

6. To make recommendations to the concerned authorities on the use of the partogram in management of labour.

1.5. ASSUMPTIONS OF FACTORS CONTRIBUTING TO USE OF PARTOGRAM

1.5.1. Training on the use of the partogram

The shortage of midwifery tutors is a problem in Zambia. In some schools, there would be only one tutor. Worse still, there is no establishment for midwifery tutors in the country. This has led to tutors not teaching life-saving skills, like the use of the partogram adequately. The trainee midwives have to be taught theoretically and practically. Thus there is need for classroom tutors and clinical tutors.
1.5.2 Experience in the use of the partogram

At first glance, the partogram may seem to be a bit complicated. But, there is nothing complicated or mysterious about it. It has been used with ease, accuracy and confidence by doctors, midwives, trainee midwives in many countries. The more one uses it, the more competence one gains. Since midwives use different partogram designs from school to work place or from place to place, they end up with inadequate experience. This calls for orientation to the partogram being used in the clinic.

1.5.2. Availability of the partogram

A partogram is structured graphical representation of the progress of labour especially printed on a single sheet, which can be added in an obstetrical record booklet. This record has to be available for one to use it on every mother. The clinic must have a reliable source for the partograms of which it might not always be the case.

1.5.3. Workload on midwives

Midwives have left the country for greener pasture, others have died due to various causes. Sometimes, it is the way midwives are distributed in the clinics,
which could cause artificial shortages in other clinics. Apart from anomalies in the distribution, there could be misplacement of midwives within the clinic, for example a midwife may be asked to work in pharmacy. Given that monitoring a mother in labour requires careful and individualized observation and recordings by the midwife, when the midwives are few they over-stretch. When there are many mothers in labour to be observed by few midwives, it becomes impossible to use the partogram or give individualized care. Thus there should be a good midwife: client ration according to each clinic.

1.5.4. Attitudes of midwives towards the use of the partogram

Some midwives have negative attitudes towards the use of the partogram. They may demonstrate resistance to change and continue using lengthy descriptions of labour instead of partogram. The partogram may be perceived as a time consumer.

1.5.5. Availability of essential obstetrical and modern observation equipment

The modern obstetrical observation equipment enhances the use of the partogram. This includes equipment like sonicaid, doppler digital thermometer, sphygmanometer etc. These clinics may lack some of these modern equipment, which assist with quick observations.
1.5.6. Midwives knowledge on the use of the partogram/orientation

Since there are many partogram designs in schools of midwifery, the midwives have to be re-oriented when they enter the service. This can be done through frequent in-service or workshops on the use of the partogram. This might not be a usual practice.

1.6. OPERATIONAL DEFINITIONS

1. Partogram:
   A structured graphical representation of the progress of first stage of labour, especially printed on a single sheet. It is divided into – progress of labour, foetal well being and maternal well being.

2. Partography:
   A graphical method of recording observations in labour, giving visual presentations of how the first stage of labour is progressing.

3. Maternal Mortality Rate:
   Is the number of women who die as a result of child bearing in a given year per 100,000 births in that year.

4. Maternal Morbidity:
   Refers to women who are impaired as a result of child bearing.
5. **Attitudes:**
The way midwives perceive the use of the partogram in management of labour.

6. **Knowledge:**
The ability to use the partogram without supervision or with no difficulties, and to answer questions on the use of partogram.

7. **Practice:**
The way midwives monitor labour using the partogram.

8. **Midwife:**
A nurse who is trained and specialized in maternal and childcare.

9. **Orientation:**
Being introduced and trained on the partogram being used in the clinic.
Inadequate use of partogram – inability to complete plotting of the partogram and to interpret findings on the partogram.

10. **Shift:**
A working period of six hours.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicators</th>
<th>Cut off points</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>High</td>
<td>- Scores of correct answers</td>
<td>10 – 13</td>
</tr>
<tr>
<td>Moderate level</td>
<td></td>
<td>- Scores of 2-3 answers</td>
<td></td>
</tr>
<tr>
<td>Low level</td>
<td></td>
<td>- Scores of 0-1 correct answer</td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>Experience</td>
<td>- Having used the partogram for over one year</td>
<td>16 – 19</td>
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<tr>
<td></td>
<td>Inexperience</td>
<td>- Having used the (same design of a) partogram for less than 6 months</td>
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</tr>
<tr>
<td>Attitudes</td>
<td>Positive</td>
<td>- Acceptance of use of partogram in management of labour</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>- Disagreement to the use of partogram</td>
<td></td>
</tr>
<tr>
<td>Workload</td>
<td>High</td>
<td>- Monitoring more than 2 clients at a time</td>
<td>33 – 35</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>- Monitoring 1 client at a time</td>
<td></td>
</tr>
<tr>
<td>Availability of the partogram</td>
<td>Available</td>
<td>- Partogram available for each client</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Not available</td>
<td>- Partogram not available for each client</td>
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</tr>
<tr>
<td>Training</td>
<td>Adequate</td>
<td>- Acceptance to having training and having attended one or more workshops on the partogram</td>
<td>8,9,14,15</td>
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<tr>
<td></td>
<td>Inadequate</td>
<td>- Disagreement to the above</td>
<td></td>
</tr>
<tr>
<td>Essential modern obstetrical observation equipment</td>
<td>Availability</td>
<td>- Sonicaid/doppler</td>
<td>31 – 32</td>
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<td></td>
<td>Not available</td>
<td>- Electrical monitor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Pulsometer</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Above mentioned equipment not available</td>
<td></td>
</tr>
</tbody>
</table>
ANALYSIS DIAGRAM SHOWING POSSIBLE CONTRIBUTING FACTORS TO THE USE OF THE PARTOGRAM

EXPERIENCE IN THE USE OF THE PARTOGRAM

MIDWIVES KNOWLEDGE ON THE USE OF PARTOGRAM

AVAILABILITY OF THE ESSENTIAL MODERN OBSTETRICAL OBSERVATION EQUIPMENT

THE USE OF PARTOGRAM BY MIDWIVES

TRAINING ON THE USE OF THE PARTOGRAM

AVAILABILITY OF THE PARTOGRAM

WORKLOAD ON MIDWIVES

ATTITUDES OF MIDWIVES TOWARDS THE USE OF THE PARTOGRAM
CHAPTER 2

LITERATURE REVIEW

One of the significant advances in management of labour in recent decades is the partogram, a visual presentation of how the first stage of labour is progressing. Just as the Road to Health chart dramatically shows when an infant’s growth is faltering, so the partogram shows very clearly when labour is lagging behind its normal course and points up any need for intervention (Lennox, C. 1996).

The difference between the Road to Health chart and the partogram is that, the later can be employed even by untrained person, where as the use of the partogram is dependent on trained health personnel such as midwives who are capable of carrying out vaginal examination which would determine the progress of labour. This entails that, of the two programmes to a campaign for safe motherhood, the partogram is a tool for the trained midwife.

Although the partogram is in use in many developed and developing countries, Zambia inclusive, it is not widely used as so expected, yet simple a method it ought to be.
THE PARTOGRAM AND ITS USE

Friedmann in the United States of America did the original work on cervical dilatation in labour nearly 40 years ago. He identified the pattern of progressive cervical dilatation in normal labour and its application with the aid of a partogram was developed by Philpott in then Southern Rhodesia in the 70s (Philpott, 1972). O’Driscoll, K. (1973), reports that Bird and O’ Driscoll made further development to the partogram by using it on primigravidae and multigravidae in active management of labour. Duignan, N. (1975) states that the pattern of cervical dilatation was further proved to be similar in different ethnic groups.

Thiery, M. (1986) further states that many other researchers, including the WHO, have done many more research on the partogram. The Safe Motherhood conference organized jointly by the World Bank, WHO, and the United Nations Population Fund (UNIFPA) held in Nairobi in 1987 recommended that appropriately trained personnel using practical and relevant technology should manage all pregnant women in labour.

Responding to this call, WHO developed a printed partogram, the format of which was agreed upon by a WHO technical Working group and published manuals, teaching aids and operations – research guidelines (WHO, 1993). In order, objectively to evaluate the
impact of the WHO partogram on labour management and outcome. WHO (1994) report states that, a multi central trial was done in Indonesia, Malaysia and Thailand.

The partogram gives the salient features of labour at a glance. On the partogram, the mother’s information which include name, gravida, para, registration/hospital number, date of admission, time of admission, time of rupture of membranes, is written at the top of the partogram (Sweet, B, 1988).

The other features and observations are recorded in symbols or plots. These include the following: (as shown in appendix ii), foetal heart: recorded every half-hour. The beats per minute indicated on the partogram ranges from 100 to 180 with the lines for 120 and 160 beats per minute being darker, to remind the midwife that these are the normal limits. When beats per minute are less than 120 or more than 160, it could show instantly: observation of foetal heart may be done by use of foetal scope, sonicaid, electrocardiograph, doppler.

Liquor: Whether intact or ruptured. If ruptured, the condition of the liquor and time of rupture is indicated. This can be felt through vaginal examination when intact and when ruptured, the membranes are absent and liquor can be seen draining.

Moulding: This is done per vaginum by feeling the overlapping of foetal skull bones through the sutures. Moulding can be mild, moderate and severe or excessive.
Cervical dilatation: This is the most important observation to monitor progress of labour, it also indicates the onset of labour. It is done through digital vaginal examination.

Descent of head: This is done per abdomen in fifths (5ths) and per vaginum by stations of the foetal head in relation to the ischial spines.

Time: In relation to all the above, especially cervical dilatation and descent. It is recorded using the time of admission as zero time.

Contractions per 10 minutes: The contractions are recorded as less than 20 seconds, 20-40 seconds, more than 40 seconds. Contractions are supposed to go with the cervical dilatation and descent of the head, they also tell the progress of labour. They are recorded under the time line. Contractions may be observed by feeling with the hand placed on the abdomen of the mother in labour for 10 minutes or more or by an electrical monitor, which records the foetal heart and contractions simultaneously. This assists to show the relationship between the contractions and foetal heart rate.

Oxytocin, drugs and Intravenous fluids: These are recorded in the space provided.

All the observations for the mother’s condition are recorded at the bottom of the partogram.

Blood Pressure, pulse and temperature have spaces where they are recorded.
Cervical dilatation: This is the most important observation to monitor progress of labour, it also indicates the onset of labour. It is done through digital vaginal examination.

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Oxytocin, drugs and Intravenous fluids: These are recorded in the space provided.

All the observations for the mother’s condition are recorded at the bottom of the partogram.

Blood Pressure, pulse and temperature have spaces where they are recorded.
Urine: Urinalysis is done 2-4 hourly. Urine is tested for protein, acetone and volume is also measured. This urinalysis for acetone and albumin is done by the use of acetex and albustix or both done by the use of multistix. All entries are made on the time line at which the observations are made so that an entire labour can be charted on one sheet of paper. (WHO/UNICEF/CBoH 1997).

The latent phase of early labour occurs from 0-3cm and should not last longer than 8 hours after admission in labour – hence the solid vertical line on the chart at 8 hours. In the active phase of labour, dilatation of 3 to 10cm, cervical dilatation is expected to progress at a rate of at least 1cm per hour following the alert line. Each square on the partogram represents one hour. Action line is printed 4 hours to the right of and parallel to the alert line (WHO, 1996).

According to Lennox, C. (1992), when a mother is admitted already in the active phase of labour, cervical dilatation is plotted straight onto the alert line and other observations are charted in same time zone of the partogram.

If the transition from latent to active phase occurs less than 8 hours after admission in the latent phase, cervical dilatation is transferred to the appropriate place on the alert line and other observations follow (appendix ii).
This partogram has been tested in a multicentre trial in South East Asia involving 34,484 women. Introduction of the partogram with an agreed labour management protocol reduced both prolonged labour and from 6.4% to 3.4% of labours and the proportion of labours requiring augmentation from 20.7% to 9.1%. Emergency caesarian section fell from 9.9% to 8.3% and intrapartum still births from 0.5% to 0.3%. Among singleton pregnancies with no complicating factors, the improved outcome was even more marked, with caesarian sections falling from 6.2% to 4.55%. The improvement took place among both nulliparous and multiparous women (WHO, 1994).

Reports of the use of the partogram in many countries have been published and it has become clear that it can be used worldwide since pattern of cervical dilation in normal labour, in different racial groups, is similar (Duignan, N. et al, 1975).

The partogram is designed so that progress in labour for both mother and foetus can be more easily and rapidly recorded. This enables early recognition, prevention and/or treatment of complications. This is important because half a million women worldwide die annually as a result of pregnancy and childbirth. These deaths could be prevented since many of them are as a result of failure to identify problematic labours which require referral and/or poor management of labour within obstetric units (Lennox, C. 1992).

The partogram is widely used in developed countries. It is reported that 89% of consultant units in England record labour on the partogram (Feuerstein, A. 1993). In the
United States, it has been used to reduce caesarian section rates and improving foetal outcome (Mother Care, 1993)

In the developing countries, doctors, midwives and trainee midwives have also used it with easy, accuracy and confidence. This has been revealed by many recent projects, which are being done in different countries. For instance, it was found that enrolled nurse midwives in Malawi and maternity assistants in Zimbabwe make correct referral decisions in labour based on the partogram (WHO, 1987). According to Frost, O. (1980) obstructed labour from urban maternity centres in Zimbabwe to the University Hospital ceased after the introduction of the partogram. A comment from Zimbabwe such as “we wonder how we ever managed without it”, shows how they value the partogram (WHO, 1993).

The partogram is used in the management of labour in Indonesia, Thailand and Malaysia. It is also used in Uganda, Botswana, Nigeria, Ghana, Papua New Guinea and other developing countries (Kwest, B. E, et al 1993).

The WHO partogram is said to have been adopted in Zambia and it is found in all the districts, yet there are few district hospitals and health centres, which use them (CBoH, WHO. 1998). In Lusaka, there are maternity service clinics, which operate on 24-hour basis. These clinics have partograms (Mwale, A. 1998).
The partogram itself is of little more than observational value without a management protocol. The protocol used in the WHO trial merely indicated the timing of certain interventions such as having guidelines about when to start the partogram. O’Driscoll, K. (1975), emphasized the critical importance of the diagnosis of labour. According to him, a partogram should not be started until labour is diagnosed. The WHO trial used clear definitions involving cervical dilatation and the contraction pattern. Labour wards intending to use the WHO partogram may adopt local management protocol of their own. This is one of the other problems experienced with the use of the partogram. Some other problems include the following:

i). Vaginal examinations: Both the accuracy of and the actual performance of cervical assessment by vaginal examination may be difficult. No partogram can avoid this procedure. The use of an accurately scaled dilatation board and training with experienced midwife is essential, for acquiring this knowledge.

ii). Literacy: This is essential for partography. Drawing lines on the partogram may present problems even for the trained, and the use of partograms with reprinted alert and action lines such as the WHO partogram, is highly recommended (Lennox, C. 1988).

iii). Essential obstetric functions: To achieve the partogram’s potential as a tool for guiding appropriate referral in labour, essential obstetric functions must be in place. This includes transportation and access to an appropriately equipped centre.
Women of all ages and countries have done noble work as midwives throughout the centuries. The midwife has been described as a most necessary and honourable officer, being a helper of nature (Carter, J. 1986).

Biblical references to midwives have always been to their honour. In the Bible we read of a maternal death; of a case of obstructed labour; of babies being born before the arrival of the midwife and the midwives fear of God. Genesis Chapter 35 verses 17-19 reads “And when she was in her hard labour, the midwife said to her, fear not, for now you will have another son. And as her soul was departing, she called his name Benoni, but his father called his name Benjamin. So Rachel died, and she was buried on the way to Ephrath”.

Zambia is a Christian nation and one of the norms of Christians is the fear of God, which entails the beginning of wisdom. When midwives are Christians they will fear God and this fear guides them to integrity. This is described in the Bible: Exodus Chapter 1, verses 15-17, which reads “Then the king of Egypt spoke to Shipharah and Paul, the two midwives who helped the Hebrew woman give birth. He said to them, kill the baby if it is a boy, but if it is a girl let it live. But the midwives feared God and so they did not obey the king. Instead, they let the boy live”.

30
Historically, the majority of women helpers developed a considerable base of traditional knowledge. This knowledge was often jealously guided and only taught to female relatives. There was no scientific and theoretical knowledge, nor was there institutional training for these helpers called midwives (Squarre, R. 1996).

In the seventeenth century, midwives in Europe, who through studies and hard work broadened their knowledge in midwifery. They wrote books on midwifery. Midwives were then organized, trained and registered. In the same century, male midwives gained ground, though there was great opposition and competition from female midwives and from some of the general public (Aveling, J. 1972).

The duration and content of midwifery education varies from country to country with some training programmes ranging from three to twelve months respectively (WHO, 1994). The International Confederation of Midwives (ICM) and the International Federation of Obstetricians and Gynecologists (FIGO) has an international definition of a midwife which states that “If the education programme is recognized by the government that licenses the midwife to practice, that person is a midwife” (Peters, 1995). Generally he or she is a competent caregiver in obstetrics, especially trained in the care during normal birth.
More important than the type of preparations for practice offered by any government, is the competence and ability to act decisively and independently. This is the reason why it is vital to ensure that any programme of midwifery education safeguards and promotes the midwives ability to conduct most births, to ascertain risk and, where local needs dictates, to manage complications of childbirth as they arise (Treffers et al. 1995).

In developing countries midwives function in the community and Health Centres, often with little or no supervisory support. Efforts are being made to promote an expanded role of midwives, including life-saving skills such as the use of the partogram in management of labour, in several countries of many parts of the world (Kwast, B. E. and O’Heir 1996).

In Zambia, the nurses and midwifery training and practice was enacted by Parliament in 1970. The Act gave the midwives the power to practice in their own right and this has made midwives the more important medical personnel in solving the maternal and child health problems (Nurses and Midwives Act, 1970). Professional midwifery training in Zambia is an added speciality following basic nursing education. The duration of training is twelve (12) months for both Enrolled and Registered midwives, though, there are more Enrolled midwifery schools than the Registered midwifery schools (GNC/MOH, 1989).

As student midwives, they are expected to conduct, among other procedures, a number of supervised deliveries, which are recorded in practical procedure record books. This is to
ensure the competence in management of labour. This is the time when he or she is taught the use of partogram. The partogram design would depend on what that particular School/Hospital had adopted (GNC, 1989).

This means that a qualified midwife could find a different design in her new posting. This requires orientation to the partogram being used in that clinic. This can be done effectively if the health centre draws up a labour management programme so that all the midwives have a chance of adapting to the WHO partogram through workshops, seminars etc, workshops have been found to be motivators too. This is important because a detailed analysis of the design of the WHO partogram did not suggest that any modification is necessary (WHO, 1994), so it is important to understand it the way it is designed and used.

In many developing countries, Zambia inclusive, the midwife is considered the key person in the provision of maternity care (Mati, Chiti and Susu, 1994). However, that is not the case in all: some face a shortage of midwives. In Latin America, Schools of midwifery have closed down. In other countries, like Zambia, the number of midwives is declining, and those that are present are maldistributed (GNC, 1998).

The visual presentation of clinical information can affect decision-making and this may be particularly true of the partogram (WHO, 1991).
CONCLUSION

In developing countries, Zambia included; 500 to 100,000 women die for every 100,000 live births. Prolonged labour due to cephalopelvic disproportion resulting in obstructed labour is responsible for many of these deaths, especially among primigravidae.

The partogram is a graphic recording of the progress of labour in centimeters of cervical dilatation plotted against time in hours. It therefore acts as an early warning system for labour that is not progressing normally. It has been used since 1970 in a number of countries, such as Zimbabwe, Papua-New Guinea, United Kingdom, the United States of America, Thailand and Malaysia, and has been shown to be effective in preventing prolonged labour and reducing operative intervention.

It is based on the principle that: the active phase of labour starts at 3cm cervical dilatation; the latent phase should not last more than 8 hours. During active labour, the cervical dilatation should not be slower than 1 cm/hour; a lag time of 4 hours between slowing of labour and need for intervention is acceptable. Vaginal examinations should be done no more often than every 4 hours; and a partogram with present lines is best for constructing alert and action lines. If cervical dilation moves to the right of the alert line, the woman should be transferred to hospital and observed closely. If cervical dilatation crosses the action line (4 hours to the right of the alert line), intervention may be necessary.
The partogram is also used to record the foetal heart rate, descent of foetal head, quality of uterine activity, and vital signs. Use of the partogram implies an adequate referral system and trained midwives who can perform vaginal examinations in labour and plot cervical dilatation accurately.
CHAPTER 3

3.0. RESEARCH METHODOLOGY

3.1. RESEARCH DESIGN

The study was descriptive. A descriptive research design is one, which aims predominately at describing phenomena rather than explaining them (Hungler, B. et al. 1983).

Descriptive studies are not concerned with relationship among variables, but their purpose is to observe, describe and document aspects of a situation. Achola and Bless (1988), point out that in a descriptive survey design, the purpose is to give an accurate of the characteristics of a particular phenomenon, situation, community or person. Further more, descriptive research design is less expensive than the experimental method and the problem of obtaining the co-operation of study subjects is less formidable.
3.2. RESEARCH SETTING

The study was conducted in the following 9 Lusaka urban maternity clinics, labour wards: Chawama, Chelstone, Chilenje, Chipata, George, Kanyama, Kalingalinga, Matero reference centre and Mtendere.

3.3. STUDY POPULATION

The study population included all those who conform to the definition of a midwife and were working in any of the 9 Lusaka urban clinics, which offer Maternal-Child Health, and Maternity services. Midwives from the 9 health centres were sampled for the study.

3.4. SAMPLE SELECTION

There are 9 maternity health centres under Lusaka urban from which 50 midwives were selected using the systematic sampling method. Individuals were chosen at regular intervals from the sampling frame, which was midwives clinic – allocation list.
A systematic sample was selected from 206 midwives of the clinics. The sample size selected was 50. The sample was selected using linear systematic random sampling.

The sampling fraction is:

\[ N = 206 \quad n = 50 \]

\[ K_{(th)} = \frac{N}{n} = \frac{206}{50} = 4 \]

The first midwife was randomly selected using lottery method, from the first 4 midwives. Random sampling, using systematic was chosen because midwives are stable and confined population. Biasness was avoided since every midwife was accorded a chance of being selected in the sample.

3.5. SAMPLE SIZE

The eventual sample size is usually a compromise between what is desirable and what is feasible. (HSR, 1988).

Out of the population of 206 midwives working in selected Lusaka urban clinics, 50 responded to self-administered questionnaire.
3.6. DATA COLLECTION TECHNIQUE AND TOOL

The data was collected through primary source using a questionnaire (appendix iv). This technique was considered to be more appropriate because the respondents were literate.

In this study, the questionnaire was selected as a data method for the following advantages as outlined by Treece and Treece (1986).

1. It is a rapid and efficient method of gathering information.
2. Respondents can remain anonymous.
3. The subject has time to contemplate his/her response to each question.
4. The researcher is able to gather data from a widely scattered sample.

The researcher is aware of the following disadvantages associated with the use of questionnaire, also outlined by Treece and Treece (1986).

1. The instrument is unable to probe in depth without becoming lengthy.
2. The respondent may omit or disregard any item he/she chooses without giving an explanation.
3. The researcher cannot observe the subject’s non-verbal cues.
4. The researcher does not have an opportunity to interact with the respondent.

5. Some items may force the subject to select responses that are not his/her actual choice.

Another technique which was used was observation of how mothers in labour were monitored using the partogram. This was to see how the partogram was being used/plotted. The observation was done on those midwives who did not complete questionnaires, to avoid bias.

3.7. PILOT STUDY / PRE-TESTING

A pilot study was conducted at Chainama Hills Hospital labour ward. Ten midwives completed self-administered questionnaires. This was to identify problem areas with the proposed instrument and to perfect the instrument for final use by testing its feasibility, reliability, validity and possible time to administer the tool. Two questions were closed, 1 was omitted.

3.8. CULTURAL / ETHICAL CONSIDERATIONS

Before conducting the study, a letter requesting for information, which included access to clients' records, permission to conduct the study, from the District Director of Health, (Appendix iii) was written. Permission was given and
information given to the researcher. The researcher further obtained permission from the individual midwives who participated in the study. The purpose of the study was explained to the respondents and the responses treated confidentially, and anonymity of data was assured.
4.0. DATA ANALYSIS AND PRESENTATIONS OF FINDINGS

4.1. DATA ANALYSIS

This chapter is concerned with presentation of data from 50 midwives randomly selected from 9 clinics in Lusaka urban in order to assess the use of the partogram by midwives.

The data was collected using a self-administered questionnaire.

All questions were checked for accuracy, completeness and consistency. Responses from closed-ended questions were coded and open-ended questions were categorized and coded. The coded data was entered on a data master sheet for manual analysis. Data is presented in graph and tabular form. Seaman, C. (1987) points out that tables conserve space because the narrative is reduced.
### PRESENTATION OF FINDINGS

**TABLE 1: DEMOGRAPHIC DATA OF RESPONDENTS**

<table>
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<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE (%)</th>
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<tr>
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<tr>
<td>Female</td>
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<td>100</td>
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<td><strong>TOTAL</strong></td>
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<td>100</td>
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<td>100</td>
</tr>
<tr>
<td>Moslem</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hindu</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bhuddist</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td><strong>CATEGORY OF MIDWIFE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrolled Midwife</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>Registered Midwife</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>VARIABLE</td>
<td>FREQUENCY</td>
<td>PERCENTAGE</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td>MIDWIFERY TRAINING SCHOOL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chikankata EM</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Chilonga EM</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Chipata EM</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Kabwe EM</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>Katete EM</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Livingstone EM</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Lusaka RM</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Monze EM</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Ndola RM</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Ronald Ross EM</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>LENGTH OF SERVICE AS A MIDWIFE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 – 3 Years</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>4 – 6 Years</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>7 – 9 Years</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>10 – 12 Years</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>13 – 15 Years</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>16 – 18 Years</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>19 – 21 Years</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>22 – 24 Years</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>25 – 27 Years</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>
Majority of the respondents 60% (30) who were taught in school do not use the same partogram design.

Majority of respondents 44% (22) of those that have attended a workshop are Enrolled Midwives (EM) as compared to Registered Midwives (RM, 8% (4).
TABLE 4: NUMBER OF RECORDED SUPERVISED DELIVERIES DURING TRAINING SCHOOL IN RELATION TO WHAT WAS USED TO MONITOR THESE DELIVERIES

<table>
<thead>
<tr>
<th>NUMBER OF RECORDED SUPERVISED DELIVERIES</th>
<th>WHAT WAS USED TO MONITOR RECORDED SUPERVISED DELIVERIES</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PARTOGRAM</td>
<td>PARTOGRAM AND HOSPITAL OBSERVATION RECORD</td>
</tr>
<tr>
<td>10</td>
<td>2(4%)</td>
<td>1(2%)</td>
</tr>
<tr>
<td>20</td>
<td>15(30%)</td>
<td>19(38%)</td>
</tr>
<tr>
<td>30</td>
<td>2(4%)</td>
<td>4(8%)</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>19(38%)</td>
<td>24(48%)</td>
</tr>
</tbody>
</table>

Majority of respondents 48% (24) used partogram and hospital made observation record and 38% (19) used partogram only.
**TABLE 5: EVER ATTENDED A WORKSHOP ON USE OF PARTOGRAM IN RELATION TO KNOWLEDGE WHEN TO DRAW A TRANSFER LINE**

<table>
<thead>
<tr>
<th>Ever Attended A Workshop on Use of Partogram</th>
<th>Knowledge on When to Draw a Transfer Line</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>When the Hours Between the Alert and Action Lines Are Less Than 4 Hours</td>
<td>If the Transition to Active Phase Occurs Less Than 8 Hours After Admission in Latent Phase</td>
<td>When Complication Is Observed in the Active Phase</td>
</tr>
<tr>
<td>YES</td>
<td>2(4%)</td>
<td>12(24%)</td>
</tr>
<tr>
<td>NO</td>
<td>2(4%)</td>
<td>15(30%)</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>4(8%)</td>
<td>27(54%)</td>
</tr>
</tbody>
</table>

Majority of the respondents 54% (27) had knowledge as to when to draw the transfer line of which 30% (15) had not attended a workshop and 24% (12) had attended.

**TABLE 6: ATTITUDE OF RESPONDENTS TOWARDS USE OF PARTOGRAM**

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>49</td>
<td>98%</td>
</tr>
<tr>
<td>Negative</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Majority of the respondents 98% (49) have a positive attitude towards use of partogram.
PROBLEMS FACED BY MIDWIVES WHEN USING THE PARTOGRAM

- Repeated information on partogram
- Missing information on the partogram
- Plotting on the partogram
- Interpreting the findings on the partogram
- Non availability of partogram
- No problems

 Majority of the respondents 18% (9) had the problem of non availability of partograms while 16% (8) had problems with interpretation of findings on the partogram.
TABLE 8: RESPONDENTS LENGTH OF SERVICE AT THE CLINIC IN RELATION TO ATTENDANCE OF WORKSHOP ON THE PARTOGRAM

<table>
<thead>
<tr>
<th>LENGTH OF SERVICE AT CLINIC</th>
<th>ATTENDANCE OF A WORKSHOP</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>0 - 5</td>
<td>13 (26%)</td>
<td>18 (36%)</td>
</tr>
<tr>
<td>6 - 10</td>
<td>10 (20%)</td>
<td>6 (12%)</td>
</tr>
<tr>
<td>11 - 15</td>
<td>1 (2%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>16 - 20</td>
<td>0 (0%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>24 (48%)</td>
<td>26 (52%)</td>
</tr>
</tbody>
</table>

Majority the respondents 26% (13) who had attended the workshop had served 0-5 years and only 2% (1) on those who had served for 11 – 15 years.
TABLE 9: LENGTH OF SERVICE AT THE CLINIC IN RELATION TO LEVEL OF KNOWLEDGE

<table>
<thead>
<tr>
<th>LENGTH OF SERVICE AT THE CLINIC</th>
<th>LEVEL OF KNOWLEDGE ON THE USE OF THE PARTOGRAM</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HIGH (2%) MODERATE (22%) LOW (26%)</td>
<td>30 (60%)</td>
</tr>
<tr>
<td>0 - 5 Years</td>
<td>1 (2%)</td>
<td></td>
</tr>
<tr>
<td>6 - 10 Years</td>
<td>0 (0%) 11 (22%) 7 (14%) 10 (20%)</td>
<td>17 (34%)</td>
</tr>
<tr>
<td>11 - 15 Years</td>
<td>0 (0%) 0 (0%) 2 (4%)</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>16 - 20 Years</td>
<td>0 (0%) 0 (0%) 1 (2%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>1 (2%) 18 (36%) 31 (62%)</td>
<td>50 (100%)</td>
</tr>
</tbody>
</table>

Majority of the respondents 36% (18) who had low knowledge had served for 0 - 5 years.
Table 10 shows that majority of the respondents 24% who did not attend a workshop were not invited followed by those who were not around when the workshop was on.
### TABLE 11: EVER ATTENDED A WORKSHOP IN RELATION TO KNOWLEDGE ON THE USE OF THE PARTOGRAM

<table>
<thead>
<tr>
<th>EVER ATTENDED A WORKSHOP</th>
<th>LEVEL OF KNOWLEDGE ON USE OF THE PARTOGRAM</th>
<th>COLUMN TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HIGH</td>
<td>MODERATE</td>
</tr>
<tr>
<td>YES</td>
<td>0(0%)</td>
<td>8(16%)</td>
</tr>
<tr>
<td>NO</td>
<td>1(2%)</td>
<td>9(18%)</td>
</tr>
</tbody>
</table>

COLUMNTOTAL: 1(2%) | 17(34%) | 32(64%) | 50(100%)

There was an equal number of respondents 32% (16) who had low knowledge between those who had attended a workshop and those who did not.

### TABLE 12: SUPPLY OF PARTOGRAM IN RELATION TO WHAT RESPONDENTS USED TO RECORD LABOUR OBSERVATIONS

<table>
<thead>
<tr>
<th>SOURCE OF SUPPLY OF PARTOGRAM</th>
<th>WHAT RESPONDENTS USED TO RECORD LABOUR OBSERVATIONS</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PARTOGRAM AND OBSERVATION CHARTS MADE IN PATIENTS FILES</td>
<td>PARTOGRAM ONLY</td>
</tr>
<tr>
<td>Ordered from District Health Management Office</td>
<td>20(40%)</td>
<td>30(60%)</td>
</tr>
</tbody>
</table>

COLUMN TOTAL: 20(40%) | 30(60%) | 0(0%) | 50(100%)

All respondents 100% (50) use partograms ordered from the District Management Health Management Office.
Majority of the respondents 46% (23) had the opinion that midwives were not using the partogram because of inadequate orientation on how to use the clinic partogram.
TABLE 14: AVAILABILITY OF CLINIC PARTOGRAM GUIDELINES

<table>
<thead>
<tr>
<th>PRESENCE OF CLINIC PARTOGRAM GUIDELINES</th>
<th>FREQUENCY</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>NO</td>
<td>28</td>
<td>56</td>
</tr>
<tr>
<td>I don't know</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Majority of respondents 56 (28) did not acknowledge the availability of partogram guidelines.

TABLE 15: RESPONDENTS OPINION ON MODERN OBSTETRICAL OBSERVATIONS EQUIPMENT HAVING A BEARING ON THE USE OF THE PARTOGRAM

<table>
<thead>
<tr>
<th>RESPONDENTS OPINION</th>
<th>FREQUENCY</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modern obstetrical equipment is not different from using hands for labour observations.</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>For quick, accurate observation and recording of findings on the partogram</td>
<td>41</td>
<td>82</td>
</tr>
<tr>
<td>The use of the partogram does not need modern obstetrical observation equipment</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Majority of respondents 82% (41) had the opinion that modern obstetrical observation equipment had a bearing on the use of the partogram.
Majority of the respondents 66% (33) detected prolonged labour complication.
FIGURE 17: RESPONDENTS MEANS OF COMMUNICATION USED WHEN REFERRING PATIENTS TO UTH

Majority of the respondents 76% (38) use the radio and the ambulance when referring patients to UTH.
<table>
<thead>
<tr>
<th>NUMBER OF DELIVERIES PER SHIFT</th>
<th>FREQUENCY</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 – 7</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>8 – 10</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>11 – 13</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>14 – 16</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>17 – 19</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>20 – 22</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>23 – 25</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

There was an equal number of respondents 18% (9) who had 5 – 7 deliveries per shift and those who had 20 – 22 deliveries per shift, 14% (&) had the highest deliveries 23 – 25 per shift.
Majority of the respondents 40% (20) were 3 per shift and 6% (3) worked alone and only 2% (1) were on duty per shift.
A minority of the midwives (22%) were able to conduct 6 deliveries per shift.
The majority of the respondents 60% (30) are capable of nursing the patient on a nurse-patient ratio of 1 to 1 when using the partogram.

The need for the use of partogram in management of labour.

The results of the study show that 98% (49) of the respondents were in favour of the use of the partogram and only 2% (1) was against, saying it was too demanding.
The respondents indicated that use of partogram in midwifery practice was necessary for the following reasons:

1. Reduction of maternal and child complications.
2. Early detection and management of complication of labour.
3. Midwives are able to record accurate observations.
4. Labour progress is monitored easily and efficiently.
5. Alerts midwives on any deviation from normal labour.
6. Assists with timely and appropriate referrals.
7. Early interpretation of findings and follow up.
8. Reduction of maternal and foetal morbidity and mortality rates and thus foster safe motherhood.

SUGGESTIONS BY RESPONDENTS FOR ENCOURAGEMENT OF THE USE OF THE PARTOGRAM IN LUSAKA URBAN MATERNITY CLINICS.

The respondents forwarded the following suggestions:

1. Induction of newly qualified midwives.
2. Clinical presentations on partogram case studies.
3. Improve midwife: delivery ratio.
5. Motivation of midwives by giving them incentives such as extra qualification allowance and necessary equipment.

6. Workshops for all midwives so that individual questions are answered. Calling even those on holiday or off duty, day or night off, to attend.

7. Having workshops or seminars whenever midwives are rotating from maternal and Child Health (MCH) department to labour ward.

8. Formation of labour management committee to ensure use of partogram.

9. Constant supervision of midwives in labour wards, even by peers, to ensure constant use of partogram.

These suggestions need attention since they were raised by the users and on behalf of the recipients of the service being rendered.
CHAPTER 5

5.1. DISCUSSION OF FINDINGS

The study was conducted for the purpose of addressing the use of partogram in Lusaka urban maternity clinics. The discussion is based on the data analysis of respondents from fifty (50) midwives working in Lusaka urban maternity clinics, labour wards.

CHARACTERISTICS OF RESPONDENTS

To assess the use of the partogram by midwives in Lusaka urban maternity clinics, the characteristics of the midwife was assessed. Sex was considered a variable since both male and female midwives practice midwifery in Zambia, like other countries. The study revealed that all the respondents 100%, were females.

This demonstrates that midwifery is still a female dominated field of practice today as it was in the past. This is supported by Chamberlain, M. (1981), who stated that midwifery has always been synonymous with the care of pregnant women by women, during and after birth. Bergstrom, S. (1993) stated that, the woman appears to be the most socially and culturally acceptable health worker to assume the responsibilities of midwifery since she is a woman herself. she sees things from a woman's point of view, she is readily acceptable to other women, she uses the same words and ideas and can freely talk, as there is no sex barrier.
In Zambia it is also reported that midwifery has traditionally been synonymous with care for pregnant women by women, ante, intra and post nataly. Only elderly female relatives who had given birth before, to more than one child and had experience in deliveries were allowed to attend to an expectant mother.

The situation changed when male nurses started being trained as male midwives in 1986 but on a small scale with an average of 1 male: 10 females. GNC (1998) further reported that out of 38 male midwives in Zambia, only 9 were practicing midwifery, while 29 were out of practice due to misplacement or in most cases lack of acceptance by mothers.

Contrary to the above findings, Lewis P. (1987), found out that majority of women felt those men, as midwives were generally acceptable to women. Furthermore, contrary to the gender association of midwives, in his study on mothers attitude towards male midwives in maternity unit at St. Francis Hospital, Katete, Muteta, A. (1995), found out that most mothers rated caring and understanding as the most important quality in a midwife regardless of gender.

Under characteristics of the respondents, age was also considered a variable since, in midwifery practice, age of the midwife entails experience. Both experience and age are of significant importance since some women prefer to be attended to by elderly female relatives. The study revealed that majority of the respondents,
30%, were in the age group 30-51 years. the mean age was 38 years and the mode was 40 years.

The researcher is of the opinion that there were mature midwives working in the clinics as far as age is concerned and that they are experienced. Thus the mothers could have confidence in the midwives.

Region was considered a variable in the study since midwifery practice calls for dedication and integrity. The study revealed that all respondents, 100%, were Christians.

From these findings, one can postulate that there was dedication and integrity among the midwives practicing in Lusaka urban maternity clinics. Integrity, which is defined as wholeness, an unimpaired moral state, freedom from moral corruption, innocence, uprightness, fair dealing, honesty and sincerity (Oxford English Dictionary, 1996). This is a characteristic desired from a midwife. These qualities can be there if the midwives fear God.

These findings were supported by the Holy Bible, New International Version, Exodus 1 verses 15 to 17, which illustrates a situation where the king of Egypt had instructed midwives to kill the baby who was going to be born a boy, but, because the midwives feared God, they did not obey the king, they let the baby live.
The revelation confirmed that Zambia is a Christian country. Further more nursing and midwifery has always been associated with Christianity and the fear of God. This is a good indication because midwives are entrusted with the life of the mother and the baby, especially at birth where the midwife is faced with serious situations, which call for integrity.

Category of the midwife was another variable considered under characteristics of respondents since there are two cadres of midwives practicing in Zambia, the Registered and Enrolled midwives.

The study revealed that 80% of midwives working in Lusaka urban maternity clinic – labour wards were enrolled midwives. The study further revealed that the midwives were graduates from all midwifery schools with the majority 22% from Kabwe Enrolled Midwifery School seconded by Lusaka Registered Midwifery School, 16%.

The findings confirmed the fact that there are more enrolled midwifery schools than registered midwifery schools (GNC/MHO, 1989). The findings further show that centralization was being practiced in the registration/enrollment of midwives in these clinics.
In determining experience, the length of service with the use of the partogram was assessed. The study shows that majority of respondents 24% had been practicing midwifery for 7 months to 3 years.

In midwifery, especially with the use of the partogram, experience is of significant importance since it takes theory and practice to understand and practice midwifery skillfully. Experience solidifies what one has learnt.

Feuerstain M. (1993) confirms with the above concept when she states that, at first glance, the partogram may seem to be a bit complicated but with experience one discovers that there is nothing complicated or mysterious about the partogram. WHO (1994), further states that, with experience, the partogram has been used with easy, accuracy and confidence by doctors, midwives, trainee midwives and nurse-midwives in many countries.

According to the findings in this study, it is suggestive that the midwives working in Lusaka urban maternity clinics have experience on the use of the partogram.

**KNOWLEDGE ON THE USE OF THE PARTOGRAM**

Good practice on any programme is dependent on adequate training of care providers. This would elicit good and positive attitude, in this case, towards the use of the partogram and consequently improve the quality of care for mothers in
labour. This would further help reverse the trend, which considers maternal mortality, in developing countries, Zambia inclusive, as a silent epidemic. The midwives acquire knowledge on the use of the partogram, from training school and then build on it at the service area.

The study revealed that 92% of the respondents were taught the use of the partogram while at school. The study further showed that respondents were taught different partogram designs and that out of those who were taught at school, 60% of them found different partogram designs in the clinics.

The findings confirmed that there were different partogram designs used in different institutions. This situation jeopardized the knowledge, which the midwives are supposed to acquire on the partogram application in the management of labour, while at school.

Furthermore, the researcher observed that the partogram being used in the clinics had non pre-printed Latent, Alert and Action lines. This finding is contrary to the GNC (1998) report which stated that Zambia adopted and was using the WHO partogram design since WHO partogram has pre-printed Latent, Alert and Action lines, respectively (appendix ii).

To assist the above situation, workshops are arranged and conducted as in-service training to update or harmonize the midwives' knowledge on the partogram the
clinics are using. Furthermore, workshops are other ways of acquiring knowledge on the use of partogram, considering that education is a continuous process of reconstruction.

The study revealed that the majority of the respondents 52% had attended a workshop on the use of the partogram while 48% did not. The study further revealed that out of those who had attended, 44% were enrolled midwives while 8% were registered midwives.

The study confirmed that there were more enrolled midwives than registered midwives working in the clinics. The study further confirmed the Lusaka Urban District Health management Board Action Plan (1998) report which stated that the Board would emphasize capacity building among members of staff as being one of the priorities to be undertaken.

The findings are in agreement with the National Health Policies and Strategies (1991) report, which stated that opportunities for all staff to attend refresher courses should be encouraged to support the quality of services. These must include multidisciplinary approaches.

During training, the students were encouraged to use the partogram in management of labour and they had stipulated number of deliveries to be conducted by each student. This is supported by WHO (1993), which stated that
training programmes are most effective when they emphasize 'hands on' or experimental training. Table 4 shows this, however, the study revealed that only 38% used the partogram only, to record the deliveries. The rest, 48% used the partogram in conjunction with other records, while 14% never even used the partogram to record the deliveries. This development was attributed to lack of tutors/clinical instructors in the clinical areas to teach and supervise these students.

The findings are contrary to the expectations of the GNC which believes that comprehensive midwifery practice relies on knowledge as well as experience and that it is this experience that students will gain as they put what they had learned into practice when they go to their respective working places (GNC, 1998).

The study shows that the student midwives are inadequately prepared in the practical use of the partogram while at training school.

The unfortunate part was that there was no establishment for midwifery tutors as the National Health Policies and Strategies (1991) reported. It further stated that there had been a notable exodus of nurses to other countries in search of better opportunities. It was further envisaged that with eminent strengthening of the private health sector, the shortage would be even more accurate. These are the nurses who were supposed to be assisting the students in the practical areas. The
study further shows that inadequate practical training on the use of the partogram, contributed to inadequate use of the partogram.

Knowledge on how and when to draw the transfer line on the partogram is also important in that if it is not drawn or if it is drawn wrongly it would give false readings or information such as false complications like prolonged latent phase. WHO (1994), states that there could be wrong referrals due to wrong plotting on the partogram.

The results of the study indicated that 54% of the respondents had knowledge as to when to draw the transfer line while 46% did not know. The study further revealed that 30% of those with the knowledge had not attended a workshop on the partogram and 24% had attended.

The findings suggest that there were wrong referrals to the UTH as such contravened the reasons that satellite maternity clinics were constructed, which was to decongest the UTH from low-risk pregnant women.

The findings further show that there was no correlation between knowledge acquired through workshops and the knowledge midwives acquired through other ways such as peer teaching, trial and error etc.
The results could further indicate that the workshops are not very effective. Such findings were amplified by the Safe Motherhood (1998) report, which stated that in developing countries, there is a shortage of persons with midwifery skills. The content of training courses that teaches these skills is often out of date and does not reflect new knowledge and techniques. In-service refresher training is often insufficient.

FACTORS CONTRIBUTING TO INADEQUATE USE OF THE PARTOGRAM

According to WHO (1994), appropriate technology is defined as "methods, procedures, techniques and equipment that are scientifically valid, adapted to local needs, acceptable to those who use them and to those whom they are used, and that can be maintained and utilized with resources the community or country can afford".

To assess this, attitude of the respondents towards the use of the partogram, availability of the partogram and other problems being faced by midwives in the use of the partogram, had to be included in the variables.

The results of the study show that 98% of the respondents appreciated the use of the partogram in labour management. They gave reasons such as, partogram assist
in early detection and prompt management of labour complications. This is positive attitude. Only 2% said the partogram was very demanding in time.

Despite this revelation, the respondents gave some problems, which they faced, while using the partogram, which if attended to would contribute to adequate use of the partogram. The problems included non-availability of partograms at times 18%, interpreting the findings on the partogram 16%, plotting on the partogram 10%, repeated information on the partogram 2%. However, 52% of the respondents had no problems in the use of the partogram.

The study further revealed that partograms are ordered from District health office as obstetric record booklet and that 60% of the respondents used partograms only to record the labour observations while 40% used partograms and other observation charts.

The findings suggest that the midwives could not be using the partogram adequately because of the above problems. For instance, WHO (1994), states that when using the partogram, observation of the progress of labour was clearer and this helped in interpreting findings and communication between members of the maternity-care team. This is contravened if the midwife has problems in interpreting the findings on the partogram.
The study appeared to confirm the findings by WHO, (1994) which stated that drawing lines on partograms may present problems even for the literate and that use of partograms with pre-printed alert and action lines (as the WHO partogram) is highly recommended.

The study further showed that the midwives in Lusaka urban maternity clinics are mastering the partogram. This is confirmed by the 52% of the respondents who had no problems in the use of the partogram. If only they could be assisted by pre-printing the recommended lines.

Length of service at the health centre was also considered as a variable. The length of service was assessed in relation to attendance of a workshop.

The study revealed that the majority of the respondents 26% who attended a workshop on the partogram had served between 0 – 5 years, seconded by those who had served for 6 – 10 years and only 2% of those who had served between 11 – 15 years.

The study further shows that 36% of the respondents had moderate knowledge on the use of the partogram, of these 22% are those who had served for 0 – 5 years and 14% for 6 – 10 years but 36% of those who served for 5 years had low knowledge. Respondents gave reasons for not having attended a workshop. 24% said that they were not invited, 14% were not around when the participants were
being invited and 4% attributed the non-attendance to staff shortage while 8% said they never heard of a workshop on the partogram. The study further revealed that there was equal knowledge, low, between those who had attended and those who had not attended a workshop on the use of the partogram.

The study further shows that those who had been in the service for 5 years had more chance of attending a workshop. It could be further assumed that there was no policy or criteria on how to choose participants for a workshop.

RESPONDENTS OPINION ON WHY A MIDWIFE DID NOT USE THE PARTOGRAM

Midwives could be having their own reasons for not using the partogram. To assess this, opinion was also considered as a variable.

The study revealed that the majority of the respondents 46% had the opinion that midwives could not be using the partogram because of inadequate orientation on how to use the clinic partogram while 16% cited workload as the reason.

The revelations in these findings were that different midwifery schools used different partogram designs and that partogram knowledge was not grasped at school. This made it imperative for the qualified midwife to be oriented to the partogram found in the clinic.
The findings show that the above reasons, among others, as shown in table 13, were hindering the use of the partogram. Thus, lack or inadequate orientation contributed to the inadequate use of the partogram.

The study shows that this was the reasons for the findings of the Zambia Safe Motherhood Needs Assessment conducted in 1996, which stated that, many health institutions and districts have partograms but there were seldom being used (Zambia Reproductive Health News, 1998).

The partogram must be used with guidelines to assist in the uniformity of actions. To assess the use of partogram, partogram guidelines were considered also as variables.

It was revealed in the study that majority of the respondents 56% did not acknowledge the availability of partogram guidelines while 32% acknowledged and 12% did not even know about partogram guidelines.

The findings show that there is no uniformity in the actions being taken when using the partogram. This is contrary to the use of the partogram regulations, since WHO (1994), stated that the partogram alone is unlikely to have an influence on the progress of labour unless a labour management protocol is introduced as well. WHO (1994), further stated that specific management protocol
can be developed as appropriate for different local situations but the value of the action line is apparent. One of the protocols recommended by WHO is that, all women whose labour progress moves to the right of the alert line should be transferred to a centre with facilities for oxytocin augmentation and caesarian section, if not already in such a centre.

Lusaka urban maternity clinics do not have facilities for caesarian section, thus the need to have and observe such protocols as mentioned above. Use of the partogram could be influenced by some factors such as modern obstetrical observation equipment.

In the study it was revealed that midwives appreciated the use of modern obstetrical observation equipment as shown in table 15. They advanced some reasons for the appreciation. Majority of the respondents 82% cited quick, accurate observation and recording of findings on the partograms. Some of the equipment in view are digital sphygmomanometer and thermometers, doppler and some contraction assessment equipment, fluid regulators and pulsometer. The partogram has many parts, which demand vigilant observations to be carried out and recorded. During the data collection, the researcher observed a midwife who was observing a contraction of a mother in labour, using her palm. No sooner had she been there for 5 minutes than the mother called for a bedpan to void some urine. The midwife stopped and looked for a clean bedpan. The mother passed 10 mls of urine, by the time the midwife was through with what she could call
urinalysis" the mother was ready for her observations for temperature, foetal heart, and vaginal examination. The midwife had time to do all this but had no time to record all this on the partogram, because the mother went in second stage of labour spontaneously. She delivered a bounce live baby. The midwife recorded the labour progress but the partogram was left blank other than the initial plotting. Many other midwives were observed in more or less such situations. This could be the usual pattern in the labour wards.

The study further indicated that despite the above observations, the midwives were able to detect some serious complications of labour using the partogram. The complications detected included, prolonged labour 66%, foetal distress 18%, obstructed labour 14%, and pre-eclampsia 2%. According to table 17, majority of the respondents 76% used the radio and the ambulance when referring these patients to UTH while 24% used the telephone, radio and ambulance. The above finding is in agreement with the WHO (1991) findings, that the partogram helps to identify the appropriate timing for the transfer of cases of prolonged labour from peripheral to a central unit which might otherwise have caused the death of both mother and her baby. The WHO further states, that to achieve the partogram’s potential as a tool for guiding appropriate referral in labour, essential obstetric functions must be in place including transportation. Good quality maternal health services fulfil a number of criteria. They are accessible and available as close as possible to where women live, they are acceptable to users, they have necessary supplies and equipment, they provide comprehensive care.
with links to other reproductive health services and they provide for continuity of care and follow-up. These services also offer economic and social support to health workers so that they can do their job to the best of their ability (WHO, 1994).

Ministry of Health plays a dominant role in the provision of health services in Zambia. However, in the context of health reforms, responsibility for operational management is given to the District Health Management Boards and Boards of Management in hospitals, in an effort to improve efficiency, the quality and quantity of health services. Is the district health team able to maintain the ambulances on the roads considering the prices of fuel, so as not to defeat the midwives efforts to reduce maternal and neonatal mortality rates, of which maternal mortality rate (MMR) is estimated at 649 per 1000 live births. As the results of the study show that 66% of respondents had detected prolonged labour, 76% of them depended on the ambulance to transfer these mothers to the UTH. The midwives expressed the need for more ambulances because the few ambulances have to be in three or more areas at the same time.

Staffing is yet another aspect to be looked at when considering the success of a programme like safe motherhood. The study indicates that there is variation in the number of deliveries in the clinics ranging between 5 and 25 deliveries per shift. The study further indicated that the number of respondents in labour ward per shift ranged between 1 and 6 with the majority 40% being 3 per shift. Considering
the midwife: delivery ratio, the study revealed that majority of the midwives 22% work at the ratio of 1 midwife: 6 deliveries followed by 1:7, the lowest ration was 1:2 which was 12% of the respondents. One wonders whether the midwife who has to attend to 6 deliveries a shift can be able to plot on the partogram. Especially that this midwife has to listen to the foetal heart for a full minute every quarter of an hour to hourly, observe contractions by feeling, laying her palm on the mother's abdomen for a good 10 minutes to get the intensity, duration of a contraction and frequency of contractions. She has to carry out vaginal examinations, observing all the aseptic techniques. To take the blood pressure and the pulse not to mention other observations and examinations like urinalysis. Is the partogram being put to good use or should the concerned authority reconsider what can be done to ameliorate the situation. During the data collection the researcher never saw a partogram which was fully plotted. The respondents said they were short staffed.

The results of the study further revealed that 60% of the respondents were capable of attending to the mothers on a midwife: patient ration of 1:1 when using the partogram to allow for the observations and plotting.

The problems of staffing in the Ministry of Health is not new, neither are the problems of maternal and child health. More clinics are being opened; the midwives are leaving the country or dying due to unsafe conditions of service. It is important for Health Management Boards to consider staff a priority when
considering sensitive and broad programmes like safe motherhood initiative, with special consideration on the application of the WHO partogram in the management of labour, as all States of the world especially the developing countries consider reduction of maternal mortality rate which range from 500-1000 deaths per 100,000 live births, to half by the year 2000.

SUGGESTIONS BY THE RESPONDENTS FOR ENCOURAGING THE USE OF THE PARTOGRAM BY MIDWIVES IN LUSAKA URBAN MATERNITY CLINICS.

The respondents forwarded the following suggestions:

1. Induction of newly qualified midwives.
2. Clinical presentations on partogram case studies.
3. Improve midwife: delivery ratio.
5. Motivation of midwives by giving them incentives such as extra qualification allowance and necessary equipment.
6. Workshops for all midwives so that individual questions are answered. Calling even those on holiday or off duty, day or nights off, to attend.
7. Having workshops or seminars whenever midwives are rotating from maternal and child health (MCH) department to labour ward.
8. Formation of labour management committee to ensure use of partogram.
9. Constant supervision of midwives in labour wards, even by peers, to ensure constant use of partogram.

These are suggestions that need attention since they were raised by the users and on behalf of the recipients of the service being rendered.

During data collection, the researcher observed that the midwives are working very hard in the management of the Lusaka urban maternity clinics. These cadres of health workers have a lot to contribute to the safe motherhood initiative programme in view of reduction of maternal and foetal morbidity and mortality.

The suggestions to the constraints in their delivery of health care have been cited above. The researcher is of the opinion that these suggestions are valid. For instance, every programme ventured in will always need resources such as manpower, financial, material and time. The situation in the health sector lacks these resources.

The researcher is of the opinion that the concerned parties and midwives, sitting together could assist the situation so that efforts to the reduction of maternal and neonatal morbidity and mortality is not in vain.
4.3. IMPLICATION TO HEALTH SYSTEM

The Government invests a lot of money and valuable resources in the training of midwives in Zambia. This is in response to the pressing health problems affecting mothers and child. During training, midwives acquire knowledge-skills to help others in need. It is against this background that the Ministry of Health and District Management Team in particular, ought to make full use of this valuable human resource in their fight against potential and actual health problems affecting women and children. The partogram was produced and promoted by WHO and adopted by Zambia with a view to improving labour management and reducing maternal and foetal morbidity and mortality, of which the MMR is estimated at 649 per 1000 live births (ZDHS, 1996).

It is mandatory for educators of midwives to emphasize the importance of the partogram in management of labour. A good staffing system should be worked out to normalize the midwife: client ratio.

There should be adequate equipment and other logistics needed for provision of better maternal and child health services.
CONCLUSION

The study was done to assess the use of partogram by midwives in Lusaka urban maternity clinics.

The information from the study showed that the midwives had a positive attitude towards the use of the partogram and that they were using it with difficulties to identify labour complications such as prolonged labour and obstructed labour.

The midwives expressed the need for orientation in the use of the partogram since majority of them had different partogram designs at training school.

The study further revealed that the main constraints in the use of the partogram are shortage of staff, inconsistent supply of partograms, inadequate equipment as well as lack of staff motivation.

Midwives are an essential part of the solution to maternal and infant morbidity and mortality. Unless resources are allocated significantly the use of partogram by midwives will remain a strained effort.
4.5. RECOMMENDATIONS

In view of the findings of the study, the researcher made the following recommendations.

1. Midwives curriculum

There is need for the midwifery curriculum to incorporate a standard or use the WHO partogram design which has pre-printed alert and action lines, for the schools of midwifery to avoid the inconsistency in the school partogram designs. The GNC to inspect for the presence of partograms in schools and hospitals especially those offering midwifery training.

The GNC and MOH to ensure that the health institutions are using a uniform partogram.

2. Staff development

There is need for follow-up staff development in skills training especially on the use of the partogram, for the midwives to be motivated and kept up to date. Encourage "hands on" or experimental learning during the workshops.

i). Make a criteria for selecting the staff to attend a workshop such as identifying a training need of a staff member before selecting participants, invite even those on off days.

ii). Make a policy to ensure that those called from their off days won't ask for their days.
3. **Staffing**

   i). To train more midwives, if possible make midwifery a component in the training of all nurses.

   ii). Effective distribution of midwives in labour wards. The District Health Management Team to distribute the midwives in the clinics according to deliveries.

   iii). Midwives to be attracted to work in these clinics.

   iv). The District Health Management Team to be having periodical meetings with midwives in the clinics for correction of situations in time, midwives could be having solutions to their problems.

4. **Logistical support and supplies**

   i). The charge-nurses to be ordering enough partograms and the District Health Management Team to supply adequately.

   ii). Procurement of extra ambulances to avoid instances where referral cases are delayed because the ambulance has to be in three or more areas at the same time.

5. **Intersectoral collaboration**

   A network with other organizations involved in maternal and child health needs to be established, include the recipients of the services.

6. **Further research**

   A research on a wider scale to enable generalization would help strategies on a wider scale.
1.7. LIMITATION OF THE STUDY

The study was conducted within the major limitation of time, finances and busy schedule of the researcher. It was done within the stipulated academic year.

The results from this study had a small sample of fifty (50) respondents, in Lusaka Urban Maternity clinic labour-wards. Thus, cannot be generalized to all midwives and health centres in the country.

It was difficult to obtain adequate amount of literature on the use of the partogram in Zambia-not much has been documented.

The researcher had to travel to 9 health centres by public transport several times, which increased the cost of transport.


17. GRZ (1970) *Nurses and Midwives’ Act*.


Mrs. B.  
Gravida 1  Para 0  Hospital no. 1059

admission 27.3.1988  Time of admission 5:00  Ruptured membranes 2 hours

Fetal heart rate: 140

Liquor Moulding: C C C C

Descent of head Plot C

Temp °C

- 180
- 170
- 160
- 150
- 140
- 130
- 120
- 110
- 100
- 90
- 80
- 70
- 60
- 50
- 40
- 30
- 20
- 10
- 0

SVD of live female infant at 13:10 on 27.3.1988, wt 2800 gm

Protein - Acetone - Volume

200 100 100 80
8th July, 1998

Dear Sir/Madam,

This is to introduce Gertrude N. Kambele, a Fourth Year BSC (Nursing) Student in the Department of Post Basic Nursing, School of Medicine, University of Zambia. The student is undertaking a Research Study in partial fulfilment of the above mentioned degree.

The Research Programme for the study is to assess the use of the partogram by midwives in Lusaka urban clinics.

We shall be most grateful if you could access the student to information on the subject or clients and any other assistance the student may require.

Yours faithfully,

Lydia Jumbe
COURSE CO-ORDINATOR
DEPARTMENT OF POST BASIC NURSING
APPENDIX IV

UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE
DEPARTMENT OF POST BASIC NURSING

SELF - ADMINISTERED QUESTIONNAIRE FOR MIDWIVES ON THE
ASSESSMENT OF THE USE OF THE PARTOGRAM

STRUCTURED INTERVIEW SCHEDULE

DATE: _____________________________

HEALTH CENTRE: ___________________

QUESTIONNAIRE NO: __________________

INSTRUCTIONS TO RESPONDENTS

1. Do not write your name on the questionnaire.

2. Information given will be considered confidential.

3. Indicate the answer to the question by ticking ( ) in the box provided and write
your response to open-ended questions in the space provided.

4. Please answer all questions.
1. What is your sex
   a). Male
   b). Female

2. What was your age last birthday

3. What is your religion?
   a). Christian
   b). Moslem
   c). Hindu
   d). Bhuddist
   e). Other (Specify)

4. What category of a midwife are you?
   a). Enrolled midwife
   b). Registered midwife

5. Where did you train as a midwife?

6. How long have you been working as a midwife?
7. During your training, were you taught on how to use the partogram?
   a. Yes
   b. No

8. How many recorded supervised deliveries did you conduct during your training?
   ____________________________

9. What did you use to monitor all the recorded deliveries?
   a. Partogram
   b. Partogram and hospital made observation charts
   c. Made own observation chart from plain papers
   d. Other (Specify)________

SECTION B

10. What is a partogram?
    a. A tool to be used in labour
    b. A graphical method of recording 1st stage of labour
    c. A salient feature of recording the whole process of labour
    d. Other (Specify)_______
11. What is the use of a partogram?
   a). To monitor maternal morbidity
   b). To identify those women likely to require intervention of labour
   c). To monitor maternal mortality
   d). Other (Specify)

12. When do you start plotting on the partogram?
   a). At 3cm cervical dilatation
   b). At 2cm cervical dilatation
   c). When labour is diagnosed
   d). When you detect complication in labour
   e). Other (Specify)

13. When is the transfer line drawn?
   a). When the hours between the alert and action lines are less than 4 hours
   b). If the transmission from latent to active phase occurs less than 8 hours after admission in the latent phase
   c). When a complication is observed in the active phase
   d). Other (Specify)
14. Have you ever attended a workshop on the use of the partogram?
   a). Yes
   b). No

15. If the answer to question 14 is No, what could be the reason?
   a). Not invited for the workshop
   b). Never heard of a workshop on the use of the partogram
   c). Was not around when the workshop was on
   d). We were short staffed so I could not attend
   e). Other (Specify)____

SECTION C

16. How long have you been working at the clinic?
   __________________________

17. Since you started work at the present clinic, what has your clinic been using to record labour observations?
   a). Partogram and observation charts made in patients files
   b). Partogram
   c). Observation charts made on plain papers
   d). Other (Specify)____
       __________________________
18. Is the design of the partogram you used during the training the same as the one you are using in your clinic?

a). Yes

b). No

19. If the answer to question 18 is NO, what is the difference?

a). The one used at school had no transfer line while the clinic one has.

b). The alert and action line are already drawn on the clinic one.

c). The whole layout of the partogram

d). Other (Specify)____

20. If there is a difference between the partogram used during training and the one in the clinic, how were you oriented to use of the partogram in your clinic?

a). Attended a workshop

b). Taught by colleagues in the clinic

c). Trial and error

d). Other (Specify)____

21. What would you suggest as the best way to orient a midwife to the partogram being used in the clinic?

__________________________

__________________________
22. What problems are you facing in using the partogram?
   a). Non availability of the partogram
   b). Plotting on the partogram
   c). Interpreting the findings on the partogram
   d). Other (Specify)____

23. How are partograms supplied at your clinic? Please state your answer.

24. Do you think orientation to the partogram being used in the clinic has a bearing on the adequate use of the partogram?
   a). Yes
   b). NO

25. What could be your reason for your answer in question 24?
   a). To follow up what you know about partograms
   b). To be updated with the partogram being used in the clinic
   c). Whether oriented or not, the partogram is the same
   d). Other (Specify)____
26. What are the three (3) most serious complications of labour are you able to detect by the use of the partogram?
1. ____________________
2. ____________________
3. ____________________

27. Which of the above complications of labour have you ever detected using the partogram? Name one:

28. How was the mother managed?
   a). Syntocinon was commenced
   b). Mother was referred to the UTH
   c). Obstetrical operation was done at the clinic
   d). Other (Specify) ______

29. Can the use of the partogram improve maternal and child health in Lusaka urban?
   a). Yes
   b). No

30. Please give an explanation for your answer to question 29.
    ______________________
    ______________________

31. Do you think modern obstetrical observation equipments have a bearing on the use of the partogram?
   a). Yes
   b). NO
32. What could be the reason for your answer to question 31?
   a). Modern obstetrical equipments are not different from using hands for observations
   b). They assist with quick, accurate observation and recording of findings on the partogram
   c). The use of partogram does not need modern obstetrical observation equipments
   d). Other (Specify)

33. How many midwives does your clinic have?
   a). RM:_______
   b). EM:_______
   c). I do not know

34. How many midwives work in labour ward per shift?

35. How many deliveries are conducted at your clinic on average per shift?
36. What could make a midwife not to be able to use the partogram when monitoring a mother in labour?

a). Inadequate orientation on how to use the partogram being used in the clinic

b). Lack of motivation in the use of the partogram

c). Provision of other alternative observation charts

d). Lack of commitment

e). Other (specify) __________

37. Do you think staffing levels have a bearing on the use of the partogram?

a). Yes

b). No

38. What could be your reason for your answer to question 37?

a). The midwife can observe and record findings accurately even when there are 2 mothers in labour at a time

b). It is difficult to observe and record findings accurately on the partogram when there is more than 1 mother in labour at a time

c). The midwife can still observe and record findings accurately even when there are more than 2 mothers in labour at a time.

d). Other (Specify) __________
39. Do you have any clinic guidelines to follow when monitoring a mother using a partogram?
   a). Yes
   b). No

40. If the answer to question 39 is YES, list 2 clinic guidelines.
   1. __________________________
   2. __________________________

41. What do you feel about the use of the partogram in management of labour?
   a). Good
   b). Bad

42. State reason for your answer to question 41.
   __________________________
   __________________________

43. Do you have a programme on the use of the partogram in your clinic?
   a). Yes
   b). No

44. What means of communication does your clinic use when referring patients?
   a). Telephone, radio and ambulance
   b). Radio and ambulance
   c). Telephone and ambulance
   d). Telephone and Radio
   e). Other (Specific)
45. What suggestions would you make in order to encourage the use of the partogram by midwives in your clinic?