



THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE

**NEAR MISS MATERNAL MORBIDITY AT THE  
UNIVERSITY TEACHING HOSPITAL, LUSAKA – A  
DESCRIPTIVE STUDY**

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DISSERTATION SUBMITTED IN PARTIAL FULFILMENT  
OF THE REQUIREMENT AND FOR THE DEGREE OF MASTER OF  
MEDICINE IN OBSTETRICS AND GYNAECOLOGY

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## **DEDICATION**

TO ALL THOSE WHO STRIVE TO MAKE INTELLECTUAL PURSUITS  
WORTHWHILE.

## **ACKNOWLEDGEMENTS**

I AM GRATEFUL TO MY SUPERVISORS MS G MKUMBA AND DR M MWANAHAMUNTU FOR THEIR GUIDANCE. I WOULD ALSO LIKE TO SHOW SINCERE GRATITUDE TO DR Y AHMED AND DR B VWALIKA FOR THEIR INVALUABLE INPUT.

MANY THANKS SHOULD ALSO GO TO DR S MACHA, TO MY HUSBAND KAPEMBWA NGOSA SIMBAO AND MY FAMILY FOR THEIR SUPPORT AND ENCOURAGEMENT, TO MWAMBA SIMBAO FOR INFORMATION TECHNOLOGY SUPPORT AND TO ALL THOSE WHO HELPED ME IN ONE WAY OR THE OTHER.

**STATEMENT**

I HEREBY STATE THAT THIS DISSERTATION IS ENTERELY THE RESULT OF MY OWN PERSONAL EFFORT. THE SOURCES TO WHICH I AM INDEBTED TO ARE MENTIONED IN ACKNOWLEDGEMENTS.

SIGNED.....

**DR CATHERINE MKANDAWIRE SIMBAO**

**DECLARATION**

I HEREBY DECLARE THAT THIS DISSERTATION PRESENTED FOR THE DEGREE OF MASTER OF MEDICINE IN OBSTETRICS AND GYNAECOLOGY HAS NOT BEEN PREVIOUSLY SUBMITTED EITHER WHOLLY OR IN PART FOR ANY OTHER DEGREE AT THIS OR ANY OTHER UNIVERSITY, NOR IS IT BEING CURRENTLY SUBMITTED FOR ANY OTHER DEGREE.

SIGNED.....

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**APPROVAL**

THE DISSERTATION OF DR. CATHERINE MKANDAWIRE SIMBAO IS APPROVED AS FULFILLING PART OF THE REQUIREMENT FOR THE AWARD OF DEGREE OF MASTER OF MEDICINE IN OBSTETRICS AND GYNAECOLOGY BY THE UNIVERSITY OF ZAMBIA.

**SIGNATURES**

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## **ABSTRACT**

### **Background**

For every maternal death there are many others who suffer serious life-threatening complications of pregnancy, referred to as 'near miss' morbidity. In the past, maternal audit using deaths have traditionally been used to improve maternal health outcomes. Reviews of cases of survivors of life-threatening complications in pregnancy, in addition to maternal death reviews, are becoming an important method of evaluating and improving maternal health outcomes. Although maternal mortality has been studied in Zambia, the extent and types of 'near miss' morbidity are not well described.

### **Methods**

The study was a cross-sectional descriptive study involving case file review of patients admitted as a life-threatening complication in pregnancy or the puerperium and survived to discharge. These patients, termed 'near misses' or severe maternal morbidity were admitted in the Department of Obstetrics and Gynaecology of the University Teaching Hospital, Lusaka over a 3 month period from 1<sup>st</sup> September to 30th November 2007. Data was collected on patient characteristics, past pregnancy, antenatal care, referral status, type of complication, mode of delivery, timing and availability of care, care provider, mode of delivery, and outcome.

### **Findings**

There were 205 cases defined as 'near-miss' from within 5672 admissions (3.6%) during the study period. The 'near misses' according to clinical type were:

hypertensive disorders of pregnancy (HDP i.e. pre-eclampsia and eclampsia) (n=129, 62.9%), haemorrhage (43, 21.0%), abortions (16, 7.8%) and 'others' (17, 8.3% - including 10 cases of ectopic pregnancy and 2 of severe puerperal sepsis). There were 26 maternal deaths during this time and the case fatality for life-threatening complications was thus  $26/(205+26)=11.3\%$ ; higher for haemorrhage (17.3%) compared to HDP (4.4%). Just under half were reviewed within 30 minutes and 22.9% required blood transfusion. Overall 41.5% were delivered by caesarean section (compared to the typical caesarean rate of under 20%). The fetal outcome was worse in cases of haemorrhage compared to HDP (32.6% vs. 11.6% deaths).

### **Interpretation**

The study has described, for the first time, the extent and type of 'near miss' cases occurring at UTH, in addition to the timings and availability of care. The occurrence of more cases of 'near miss' morbidity as opposed to cases of maternal mortality offers an opportunity for further audit to improve upon maternity care in a less threatening manner.



## CONTENTS

Dedication .....	i
Acknowledgements .....	ii
Statement.....	iii
Declaration.....	iv
Approval.....	v
Abstract.....	vi
Contents.....	viii
Tables.....	ix
Abbreviations.....	x
Introduction.....	1
Literature Review.....	3
Study Justification.....	17
Research Question.....	17
Objectives.....	18
Methodology.....	19
Results.....	28
Discussion.....	46
Study Limitations .....	54
Conclusion.....	56
Recommendations.....	57
References.....	58
Appendix.....	66

## TABLES

Table 1	Summary of data obtained during study (1 <sup>st</sup> September 2007 to 30 <sup>th</sup> November 2007) .....	28
Table 2	Gynaecology Admissions (pregnancy and puerperium). Dept of Obstetrics and Gynaecology, UTH, Sept-Nov 2007 .....	29
Table 3	Labour ward admissions and delivery statistics. Dept of Obstetrics and Gynaecology, UTH, Sept-Nov 2007 .....	30
Table 4	Type of 'near miss' and case fatality .....	33
Table 5	Residence and age of 'near miss' patients .....	35
Table 6	Past history and booking status of 'near miss' patients .....	36
Table 7	Gravidity, parity and gestation of 'near miss' patients .....	38
Table 8	Timings on admission and availability of resources .....	39
Table 9	Condition of 'near miss' patients when assessed on admission...41	
Table 10	Management / Delivery Characteristics and Outcome .....	43
Table 11	Blood transfusion and Hysterectomy .....	44
Table 12	Fetal outcome of index pregnancy and duration of inpatient stay.45	

## ABBREVIATIONS

ARDS	Acute Respiratory Disease Syndrome
ANC	Antenatal Care
APH	Antepartum Haemorrhage
CRHCS	Commonwealth Regional Health Community Secretariat
CSO	Central Statistical Office
DBP	Diastolic Blood Pressure
EmOC	Emergency Obstetric Care
HDP	Hypertensive Disorders of Pregnancy
HDU	High Dependency Unit
ICU	Intensive Care Unit
JRMO	Junior Resident Medical Officer
MOH	Ministry of Health
O <sub>2</sub>	Oxygen
PMMN	Prevention of Maternal Mortality Network
PPH	Postpartum Haemorrhage
QA/QC	Quality Assurance/Quality Control
SBP	Systolic Blood Pressure
SD	Standard Deviation
SRMO	Senior Resident Medical Officer
USA	United States of America
TBA	Traditional Birth Attendant
UTH	University Teaching Hospital
WHO	World Health Organisation