

Maternal referral systems in the northern region of Ghana

by

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Thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

under the supervision of

Professor Angela Dawson Dr. Carolyne Njue Professor Nguyen Toan Tran

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Certificate of Original Authorship

I, Edward Kwabena Ameyaw, declare that this thesis is submitted in fulfilment of the

requirements for the award of Doctor of Philosophy in the Faculty of Health at the University

of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition,

I certify that all information sources and literature used are indicated in the thesis. This

document has not been submitted for qualifications at any other academic institution.

This research is supported by the Australian Government Research Training Program.

Student's Signature:

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Image 1: A typical referral form used in the Northern Region

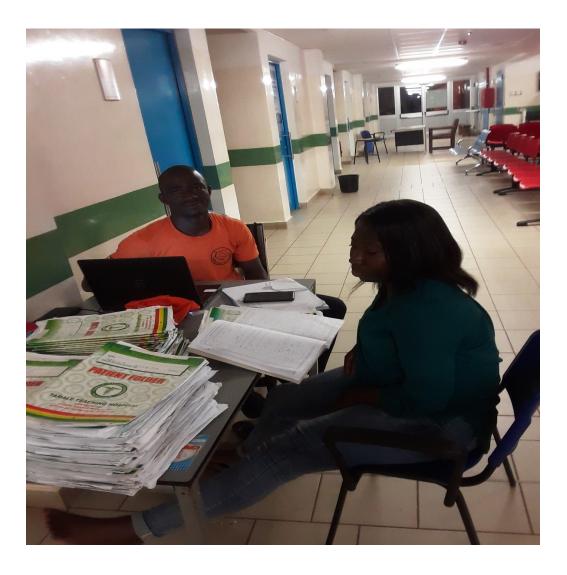


Image 2: The researcher (left) and clinical midwife during a record review session



Image 3: The researcher and a mother during an interview session

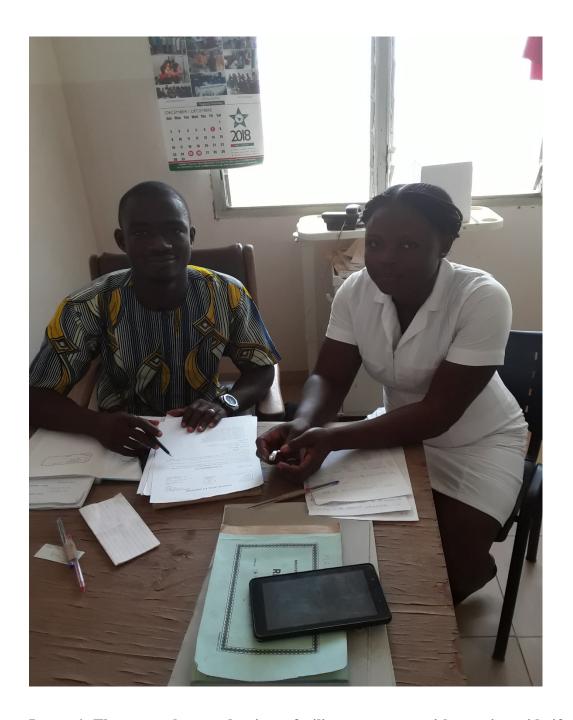


Image 4: The researcher conducting a facility assessment with a senior midwife

Abbreviations

AAAQ Availability, accessibility, acceptability and quality

ANC Antenatal Care

BEmONC Basic emergency obstetric and neonatal care

CASP Critical Appraisal Skills Program

CEE Central Eastern Europe

CEmONC Comprehensive Emergency Obstetric and Newborn Care

CHPS Community-based Health Planning Services

EmONC Emergency Obstetric and Newborn Care

FBOs Faith-based organisations

FGD Focus Group Discussion

FWCW Fourth World Conference for Women

GHS Ghana Health Service

GIS Geographic Information Systems

GSS Ghana Statistical Service

ICF Inner City Fund

ICI International Childbirth Initiative

ICPD International Conference on Population and Development

IMBCI International MotherBaby Childbirth Initiative

IRB Institutional Review Board

LLMICs Low and lower-middle income countries

MMR Maternal Mortality Ratio

NGOs Non-Governmental Organisations

NICU Neonatal Intensive Care Unit

NMR Neonatal Mortality Rate

PCC Person-Centered Care

PICO Population, Interventions, Comparators, Outcomes

RCOG Royal College of Obstetricians and Gynaecologists

SARA Service Availability and Readiness Assessment

SDG Sustainable Development Goals

SMI Safe Motherhood Initiative

SMS Short Message Services

SPSS Statistical Package for Social Sciences

SPA Service Provision Assessment

SSA LLMICs Sub-Saharan African low and lower-middle income countries

TBAs Traditional birth attendants

TTH Tamale Teaching Hospital

UI Uncertainty Interval

UN United Nations

UNFPA United Nations Population Fund

UNICEF United Nations Children's Fund

WCC Women Centered Care

WHO World Health Organisation

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Abstract

Background

Ghana has a high maternal mortality ratio of 310 maternal deaths per 100,000 live births. The Northern Region of Ghana experiences serious maternal healthcare challenges, including the appropriate referral of pregnant women. Efficient referral can prevent 18 percent of neonatal deaths, 27 percent of stillbirths and 50 percent of maternal deaths. To date, no study has investigated maternal referral services in the Northern region of Ghana. This study, therefore, investigated the practice and quality of maternal referrals in comprehensive emergency obstetric care facilities in the Northern Region of Ghana and identify opportunities to improve the healthcare women receive.

Methods

This research employed a convergent parallel mixed method design. The study was conducted in all the nine districts that have district hospitals in the Northern region. An assessment of hospital maternal health services as well as a review of documentation that accompany referred women was undertaken using the Service Provision Assessment (SPA) tool and a checklist respectively. Qualitative in-depth interviews were conducted with women who had been referred and discharged for any maternity condition as well as maternity healthcare providers. Descriptive statistics were applied to the quantitative data using SPSS version 22 and Excel. NVivo version 12 was used to manage the qualitative data and content analysis was conducted.

Results

All the ten hospitals assessed (nine district hospitals and a regional hospital) lacked some essential equipment and human resource. All the ten hospitals had infant scales, stethoscopes and blood pressure cuffs. Delivery bed ratio per 10,000 population was 0.08 whilst maternity

bed ratio was 0.42. Some referral forms were filled partially. Tricycle, locally termed as "yellow", was the principal means of transport for referrals. Most of the women acknowledged that there was no communication between the health facilities during referral.

Conclusions

This study is the first to comprehensively investigate maternal referral processes and experience of women in the Northern region of Ghana. The management of district hospitals in the region need to consider less expensive transportation means, such as tricycles. The regional health directorate should collaborate with the numerous non-governmental organisations in the region and mobilise resources to improve the availability of essential equipment to enhance referral services. Completing forms and digitizing health records can help ensure further efficiencies in the health information system and sustain good maternity referral documentation practices. Financial and non-financial incentives to entice midwives, obstetricians and medical officers to the Northern region should be implemented.