

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

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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.

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GHANA HEALTH SERVICE HEALTH FACILITY REFERRAL FORM

PATIENT REG. NO. _____

DAY	MONTH	YEAR		
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HEALTH FACILITY INFORMATION

NAME AND ADDRESS OF REFERRING HEALTH FACILITY: _____

NAME AND ADDRESS OF HEALTH FACILITY REFERRED TO: _____

TIME REFERRED: _____ TIME OF DEPARTURE (IF EMERGENCY): _____

PATIENT/CLIENT INFORMATION

SURNAME: _____		OTHER NAME(S): _____	
SEX	DATE OF BIRTH	INSURANCE STATUS	
MALE <input type="checkbox"/>	_____	UNINSURED <input type="checkbox"/>	
FEMALE <input type="checkbox"/>	_____	AGE: _____	INSURED <input type="checkbox"/> ID NO. _____

NAME AND ADDRESS OF CONTACT PERSON/RELATIVE: _____

TELEPHONE NO. OF CONTACT PERSON: _____

PATIENT/CLIENT CLINICAL DETAILS

PRESENTING COMPLAINT(S) _____

EXAMINATION FINDINGS _____

TEMPERATURE: _____	PULSE: _____	RESPIRATORY RATE: _____	BP: _____	WT: _____
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RESULTS OF INVESTIGATIONS CARRIED OUT _____

DIAGNOSIS(ES): _____

MEDICAL MANAGEMENT/TREATMENT GIVEN: _____

REASON FOR REFERRAL AND COMMENT FOR NEXT LEVEL _____

NAME OF OFFICER REFERRING: _____

POSITION: _____

SIGNATURE _____ DATE: _____

CONTACT(S) OF OFFICER REFERRING: _____

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 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.