

Factors Influencing Access to Maternal Health Services in Rural Zimbabwe

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Zimbabwe

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Factors Influencing Access to Maternal Health Services in Rural Zimbabwe

A thesis submitted in partial fulfillment for the degree of Master of Public Health


By

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Zimbabwe

Declaration:

Where other people's work has been used (either from a printed source, internet or any other source) this has been carefully acknowledged and referenced in accordance to with departmental requirements. The thesis "Factors Influencing Access to Maternal Health Services in Rural Zimbabwe" is my own work.



Signature:.....

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Acknowledgement

As the one year period of education draws to a close I reflect at all the experiences that I have gained and the transformation that I have made from being a pure clinician to a public health professional. It has not been easy fusing the two together but now I realize just how important public health approaches are for not only Zimbabwe but the entire world. I hope to be able to put the knowledge garnered to assist in alleviating the plight of those in need particularly the poor and the oppressed.

I would like to thank the Netherlands government through Nuffic for according me the opportunity to study in this wonderful country and at one of the world leading institutes of public health, KIT. Thank you to the Royal Tropical Institute for conducting the program.

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Abstract

Background: 287 000 pregnancy related death are happening in the world and 85% of these in Sub-Saharan Africa and South-east Asia. Globally the maternal mortality ratio has been on the decline since 1990 but for Zimbabwe it has been rising and now is 960/100 000 live births in rural areas. It has been noted that antenatal care visits are low and that 50% pregnant women deliver at home without skilled birth attendants and this has been linked to the high numbers of morbidity and mortality in rural Zimbabwe. Therefore this leads to the question: why are pregnant women not accessing maternal health services in rural areas?

Study Objective: To describe the factors influencing access to maternal health services so as to inform policy and practice related to maternal and child health to help improve outcomes for pregnant women in rural Zimbabwe.

Methodology: A review of literature from Low and Middle income countries using internet based search sites and databases. The David Peters Model is employed to direct this study.

Results: Availability of well-trained and polite skilled birth attendants was important and influenced pregnant women's perception. Distances to health centers interacted with transport and opportunity costs to reduce access. Educational levels mainly amongst pregnant rural women influenced health seeking behavior, access to resources and decision making power in the household. Lack of community involvement was also an important finding. Underlying all these factors is the issue of poverty. There is evidence that Maternity Waiting Homes, Task Shifting of Emergency Obstetric care to intermediate cadres, Increasing Community Participation and Community loan funds can increase access to maternal health services in rural areas.

Recommendations: The Ministry of health should mobilize and build community capacity for involvement in planning and implementing health activities. Maternity Waiting homes should be made operational and funding to maternal health need to be increased. Parliamentarians should strive to address poverty issues and resource allocation.

Keywords: Maternal, Access, Cost, Health and Zimbabwe
Word Count 13103

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List of Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
ANCs	Antenatal Care Services
BeMOC	Basic Emergency Obstetric Care
CHW	Community Health Worker
CPR	Contraceptive Prevalence Rate
DFID	Department For International Development
EmOC	Emergency Obstetric Care
GBV	Gender Based Violence
GOZ	Government of Zimbabwe
HIV	Human Immunodeficiency Virus
HTF	Health Transition Fund
LMICs	Low and Middle Income Countries
MDGs	Millennium Development Goals
MHS	Maternal Health Services
MIMS	Multiple Indicator Monitoring Survey
MMR	Maternal Mortality Rate
MOHCW	Ministry of Health and Child Welfare
MYGEC	Ministry of Youth, Gender and Employment Creation
PMTCT	Prevention of Mother to Child Transmission
RHC	Rural Health Committees
SBA	Skilled Birth Attendant
TBA	Traditional Birth Attendant
UNDP	United Nations Development Program
USD	United States Dollar
VCT	Voluntary Counseling and Testing
VHW	Village Health Worker
WHO	World Health Organization
ZDHS	Zimbabwe Demographic Health Survey
ZHSA	Zimbabwe Health System Assessment

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Introduction

Since the beginning of my medical study I have always been fascinated by maternal health and the processes that women have to go through to bring new life into the world. However during my study and work I began to notice some of the challenges that pregnant women face in trying to complete this act of procreation and also that women were actually dying during this process.

Globally maternal mortality has been on a downward trend since 1990 and in 2010 estimates were 287 000 women dying which was a 47% reduction from the 1990 figures however in terms of rates Sub-Saharan Africa (where Zimbabwe lies) had the highest maternal mortality rates (MMR) of 500/100 000 live births per year. In terms of burden Sub-Saharan Africa and South East Asia contributed 85% of the maternal deaths.

As for Zimbabwe the MMR has actually more than doubled since 1990 and current estimates put it 960/100 000 live births per year in rural Zimbabwe and this has prompted me work on this thesis from the point of access. Zimbabwe is a signatory to international conventions that advocate for better access to maternal health services for all women and a reduction of maternal mortality rates to no more than 174/100 000 live births but this is not the situation currently.

Leading conditions that cause deaths amongst pregnant women are sepsis, hemorrhage, obstructed labor, hypertensive disorders and HIV/AIDS related conditions are all manageable if the pregnant women are accorded timely care at health facilities. Skilled Birth Attendants at health facilities are trained in medical and emergency obstetric care and are able to assist women with these life-ending conditions.

Therefore I would like to know why pregnant women are failing to access maternal health services so as to inform policy makers to assist in improving outcomes for both mothers and their neonates in rural Zimbabwe.

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Chapter One: Zimbabwe Background Information

This opening chapter to gives a short historical background, a geophysical profile, a socio-cultural profile, presents the politico-economic situation and some background about the health care system and maternal health policy.

Brief History

Zimbabwe is a landlocked country located in southern Africa that was formerly called Rhodesia. It is bordered by South Africa to the south, Mozambique in the east, Zambia to the northwest and Botswana to the southwest. It was under British colonial rule until 1980 when it attained independence.¹

Geophysical Profile

The total surface area of the country is 390 757 square kilometers. Zimbabwe's geography varies from high veld (elevation between 1200m to 1600m) between the southwest to northwest to low veld (elevation below 900m) and this constitutes about 20% of the country.² The eastern part of the country is mountainous and is referred to as the eastern highlands. There are 3 distinct weather seasons. Rainy season runs from November to April with an average rainfall of 867mm, winter from May to July, dry from August to October³

Demographics

The total population of Zimbabwe is 12 973 808 of which 6 738 877 are females.⁴ The annual average inter-censal growth rate (2002-2012) is noted to be 1.1%⁴. The report has not given an age-breakdown that shows how many women are of child-bearing age and their distribution between rural and urban though this can be expected in future as this was the preliminary report. Life expectancy is similar for both males and females at 52 years.⁵

The total fertility rate is 4.1 for the country and disaggregated to 4.8 for rural women and 3.1 for urban women between the ages of 15-49 years.⁶ During their reproductive lives women in rural areas are likely to have almost two more children than their urban counterparts. The contraceptive

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prevalence rate (CPR) is 60% nationally and slightly lower at 57% for rural women with urban women at 62%.⁶

Socio-Cultural Profile

There are sixteen recognized languages in Zimbabwe though the main spoken languages are Shona, Ndebele and English.⁷ In regard to ethnicity 82% of the population are Shona, 14% Ndebele, 2% of other African origin, 1% white and the other 1% coloreds and Indians ⁷(Zimbabwe Diaspora 2013). Christianity is the main religion with approximately 85% of the population subscribed to it. 12% is non-religious, 3% follow African traditional beliefs and the other 1% covers Islam and other beliefs.⁸ Zimbabwean society is run along patriarchal lines where the man is seen as the head of the house, provider and main decision maker on most issues that affect the household.⁹ Educational discrepancies between rural and urban are common with urban dwellers generally having a higher level.⁶

Politico-economic situation

Zimbabwe is classified in the low income bracket of countries and has faced a lot of political and economic challenges over the last 13 years. A controversial land reform program from 2000 and disputed elections in 2000, 2005 and 2008 precipitated and compounded the situation which led to loss of investor confidence and economic sanctions. Donor partners withdrew aid and the economy which was agro-driven performed poorly. Runaway inflation during 2000-2009 made planning and progress for public programs nearly impossible and all sectors of government suffered as a consequence.¹⁰

In 2009 a Government of National Unity was formed and the United States Dollar (USD) was adopted as the official currency.¹⁰ These 2 measures served to stabilize the political landscape and guide the economy on the path to recovery but progress has been slow with a GDP 10.8 billion dollars and poverty levels for rural population at 84.3% and urban they are 46.5% with 72% of the entire population living below the poverty datum line.^{11,12,13}

Most of the rural populations' livelihood is through subsistence farming. Main crops grown are maize, sorghum and vegetables. Cattle-rearing is common practice and they can be exchanged for money and is also a source of prestige. However due to frequent droughts and the harsh economic environment people have had to lose their cattle for survival resources and

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this has left them even poorer and reduced mobility as ox-drawn scotch carts are used for transport.

Health Care System

Health care in the country is provided through various forms. There is the public sector, private for profit, private for no profit (faith-based organizations), company health facilities and medical schemes, traditional health services from traditional healers and faith healers. By law all healthcare providers need to be registered but some of the traditional healers are not registered with the state.¹⁴

The public health system is split into four levels that work synergistically namely Primary (Clinics manned by nurse/aide), Secondary (District Hospitals manned by doctors/nurses), Tertiary (Provincial Hospitals manned by specialists, doctors and nurses) and Quaternary (Central Hospital specialists, doctors, nurses).¹⁴ Patients are referred to the next level depending on need. However the public health system has not been fully functional of late and is characterized by high staff attrition, poor morale and lack of basic consumables that has made it less responsive to the needs of the population.¹⁴

Currently there is no universal insurance scheme but those who can afford, government and other employees where medical aid is offered as part of conditions of service can join several medical aid societies that offer various packages depending on premium. However with an unemployment rate estimated at 80% and 72% living below the datum line these premiums remain out of the reach of many particularly those in rural areas and out of pocket payment is how most citizens access health care often with catastrophic consequences.^{5,11,14}

Zimbabwe does not currently have a package of essential health service (PEHS) and the Government has hired The Royal Tropical Institute (KIT) as of April 2013 to carry out research and make recommendations as to what sort of services should be included in PEHS and modalities of financing to make it more financially accessible for the people ¹⁵

Health Care Financing

The Total Health Expenditure as a percentage of GDP for 2009 was noted to be 0.02% which is less than 15% of the Abuja declaration for which

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Zimbabwe is a signatory.¹⁴ Health expenditure per capita was 7 USD and which is also not near the WHO recommended 34 USD threshold to be able to attain the Millennium Development Goals (MDGs) of which 5 encompasses the theme of this analysis.¹⁴ It was also noted there was inequity in the way resources were allocated between regions, of note rural and urban, and most managers at lower levels complain of a lack transparency in budget allocations and also that their budgets were not being considered.¹⁴

Maternal Health Policy

Currently there is no definitive maternal health policy though maternal health is part of the reproductive health policy and maternal health has been identified under the National Health Strategy plan 2009-13 as a priority area as maternal mortality in Zimbabwe is going opposite to the global downward trend since 1990.³² Consequently the policy since 2011 is that all maternal health services are free of charge for pregnant women and also through the Harmonized Health Worker Retention Scheme there has been a drive to retain skilled birth attendants particularly in rural areas.⁵⁰

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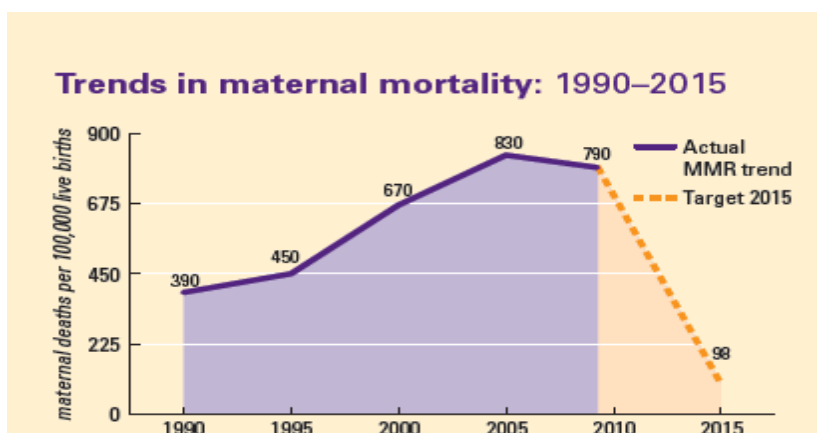
Chapter Two: Problem Statement, Justification, Objectives and Methodology

The focus of this thesis is maternal health particularly the multifactorial reasons that contribute to low access of maternal health services (MHS) amongst pregnant women and mothers in rural Zimbabwe.⁶ MHS focus for the thesis is **antenatal care and skilled birth attendant delivery** at health facilities. It is hoped that this will give an insight into what key areas need to be addressed to promote and increase access as it has a direct link to maternal outcomes. In this chapter we shall look what exactly is the problem, a justification will be presented as to why we will look at access, objectives, methods and conceptual framework used, study limitations and who shall benefit from the thesis.

Problem Statement

According to United Nations Development Program report 50 % of rural mothers give birth at home and the Ministry of Health concurs that numbers of mothers delivering at home without skilled birth attendants (SBAs) needs to be reduced.^{16,17} Due to high home deliveries mothers in rural areas are more exposed to the complications of pregnancy such as sepsis, hemorrhage, obstructed labor, hypertensive disorders and these result in a high Maternal Mortality Rate (MMR) which currently is 960/100 000 live births.¹⁸ Zimbabwe is a signatory to the Millennium Development Goals whose target MMR is 174/100 000 live births and the current figure is 5 times greater.¹⁹ The graph below shows continual rise of MMR since 1990

Graph 1: Graph showing trend in Maternal Mortality 1990-2015 in Zimbabwe

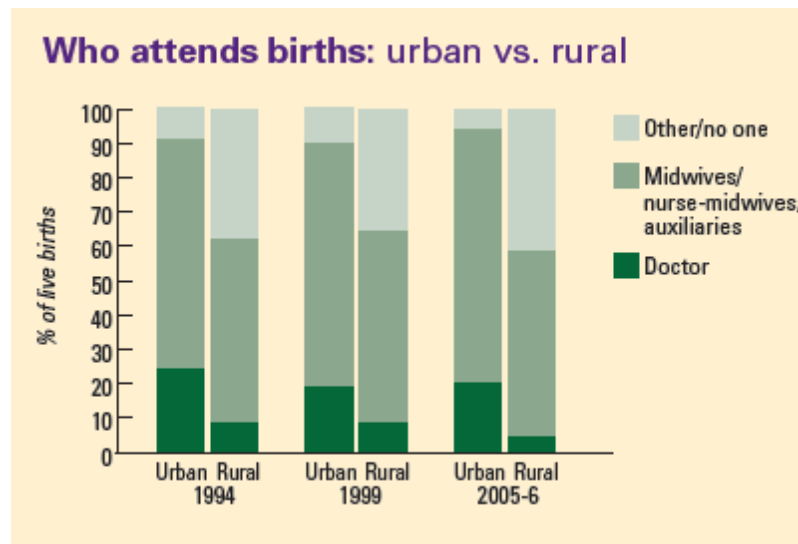


Source: United Nations Population Fund Zimbabwe Profile 2010

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In rural areas there is reduced access to MHS than in urban areas (56.6 % versus 85.5 %) and there are more maternal deaths in rural areas than urban areas.⁶ This suggests that mother's in rural areas are not seeking care as much as those in the urban areas. The quality of care at rural health facilities could also contribute to the higher maternal deaths and quality has been neglected in favor of coverage and is a contributor to MMR.²⁰ We also see that in the rural areas the percentage of births attended to by SBAs is 57.9 % versus 86 % in the urban areas which is not in line with the MDG 5 which aims for universal coverage.^{19,21} Some authors suggest that providing SBAs during the intra-partum period is the most effective tool to tackle MMR.²² It was noted that lack of staff at health facilities had reduced public confidence and could have contributed to mothers not seeking care.²¹ The disparities in attendance to deliveries are highlighted in table 2 below

Table 2: Disparities in delivery attendance between rural and urban



Source: United Nations Population Fund Zimbabwe Profile 2010

Antenatal care (ANCs) has also lagged behind with women in rural areas not having as much access as urban areas.⁶ Studies show that in rural areas 56 % of pregnant women had received the recommended 4 antenatal visits as opposed to 60 % in urban areas and WHO recommends a minimum of 4 visits for all pregnant mothers and both these figures are lower than the recommended levels for antenatal care access.^{6,19,21}

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Justification

Access which is defined as individuals or communities using health care in a timely manner based on their need is central to pregnancy outcomes for potential mothers.^{21,22} It is crucial that pregnant women attend ANC because this is when vital information about pregnancy, HIV counseling and testing, danger warning signs and potential risks of delivering without SBAs is disseminated.²¹ They will also receive necessary treatment (such as anti-retroviral, anti-hypertensive) and vaccinations for example tetanus, to protect themselves and their unborn child so as to increase the child's survival chances.^{23,24} Studies have shown also that 25.5 % of maternal deaths are due to HIV/AIDS complications in Zimbabwe and this is a very significant contributor to MMR.¹⁶

Increased access to MHS means complications that can be remedied such as hemorrhage, obstructed labor and sepsis can be managed and fatalities avoided.²¹ The maternal mortality could be higher due to under reporting.¹⁷ Three quarters of all maternal deaths occur where deliveries are not assisted by SBAs and this figure represents 12 % of all deaths amongst the 15-49 age group leaving behind a growing number of orphan.^{16,17,22}

Besides increasing maternal mortality, low access to health services also results in women having to live with the consequences of complicated labor such as vesico-vaginal fistulas.²⁵ Fistulas have been noted to be on the increase in rural Zimbabwe and they result in women being discriminated against in society and consequently breakdowns in their marriages.²⁵

We have seen that maternal mortal mortality is high, use of MHS is low in rural Zimbabwe and therefore the thrust of this thesis is to look at the factors that influence access to antenatal care and facility delivery services in rural Zimbabwe. The following study objectives will be used as a guide to aid achieve this:

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Objectives

General Objective

To describe the factors influencing access to maternal health services so as to inform policy and practice related to maternal and child health to help improve outcomes for pregnant women in rural Zimbabwe.

Specific Objectives

1. To describe health service related factors that influence access to MHS amongst expectant mothers in rural areas
2. To describe how socio-cultural and economic factors contribute to access of MHS by pregnant women
3. To review proven approaches and strategies instituted in other countries to increase access to MHS by pregnant women and mothers in rural areas
4. To make recommendations to all relevant stakeholders looking at ways to improve access to MHS and health seeking behavior amongst pregnant mothers in rural Zimbabwe

Beneficiaries of this thesis:

- Ministry of Health Zimbabwe
- Parliament of Zimbabwe
- General Public of Zimbabwe particularly women of the age group 15-49
- Research Institutes in Zimbabwe

Methodology

The study is a literature review of all relevant published and grey literature on maternal health. Descriptive and exploratory components will both be found in the study. Literature was accessed from, but not limited to, the internet from search engines such as Pubmed, Science Direct, Google Scholar, KIT library, VU University, Lancet, BMJ and Cochrane Library. Key search words used were Maternal, Health, Access, Zimbabwe, Behavior, Antenatal, Mortality, Culture, Education, Poverty, Access, Skilled Delivery, health seeking behavior, Utilization. These words are used alone or in unison with others to filter as much literature as possible.

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Conceptual Framework

For the analysis the David Peters model of 2008 has been adopted and looks at demand and supply factors from a point of access namely: geographic access, financial access, availability and acceptability. It was selected as it provides a platform to show how factors are interrelated between supply and demand also because it has an undertone of poverty which is prevalent currently in Zimbabwe. Other determinants of access like policy and macro-environment, individual and household characteristics, poverty and vulnerability are also considered. The model also looks at factors through the lens of poverty.²⁶ However it has some weakness in that it does not fully cater for organizational deficiencies of the health system that may precipitate low access. The same can be said for demand side barriers such as demographics and therefore it was modified to include these components in analysis.²⁶ **See figure 1 below for the framework.**

Study Limitations

Literature on maternal health in Zimbabwe is very scarce and the realm of access is an area that has not been looked at extensively. The limited literature from Zimbabwe, Sub-Saharan Africa and other Low to Middle Income Countries (LMICs) was used to triangulate the situation in Zimbabwe. Reference to grey literature was at times necessary and personal observations were used though it must be stated and noted that this may not be the representative for the whole country.

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Figure 1: David Peters 2008 framework for assessing access to health services

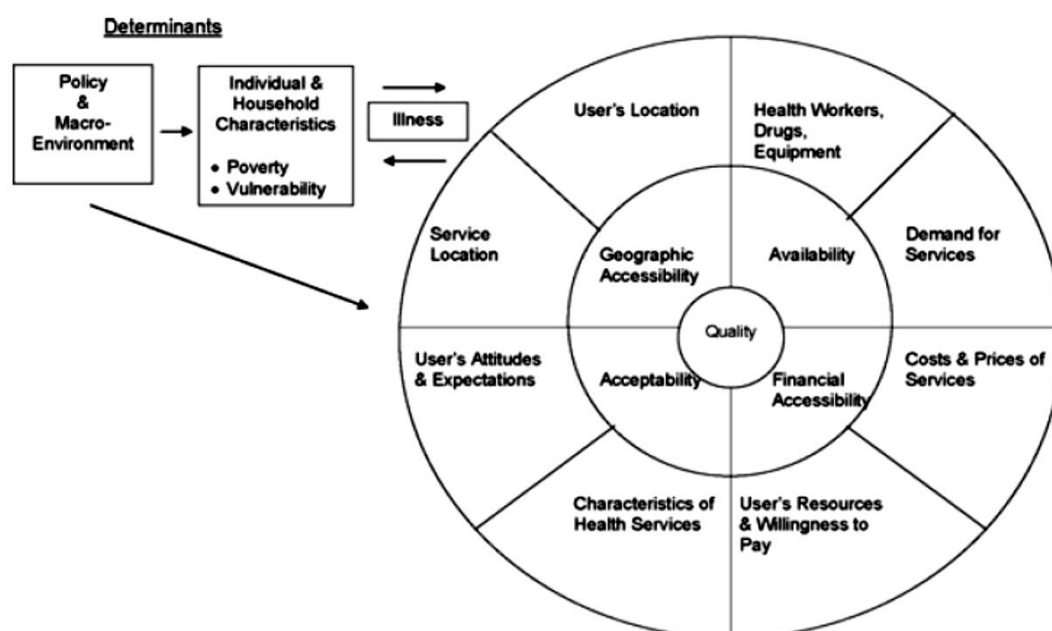


FIGURE 1. Conceptual framework for assessing access to health services.

Table 2 Overview of identified access barriers along supply and demand sides and four dimensions of access

Supply-side barriers	Demand-side barriers
Geographic accessibility <ul style="list-style-type: none"> • Service location 	<ul style="list-style-type: none"> • Indirect costs to household (transport) • Means of transport available
Availability <ul style="list-style-type: none"> • Unqualified health workers, staff absenteeism, opening hours • Waiting time • Motivation of staff • Drugs and other consumable • Non-integration of health services • Lack of opportunity (exclusion from services) • Late or no referral 	<ul style="list-style-type: none"> • Information on health care services/providers • Education
Affordability <ul style="list-style-type: none"> • Costs and prices of services, including informal payments • Private-public dual practices 	<ul style="list-style-type: none"> • Household resources and willingness to pay • Opportunity costs • Cash flow within society
Acceptability <ul style="list-style-type: none"> • Complexity of billing system and inability for patients to know prices beforehand • Staff interpersonal skills, including trust 	<ul style="list-style-type: none"> • Households' expectations • Low self-esteem and little assertiveness • Community and cultural preferences • Stigma • Lack of health awareness

Source: Poverty and Access to Health Care in Developing Countries, David H Peters et al 2008

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Chapter Three: Health Service factors that influence access to Maternal Health Services (MHS) in rural Zimbabwe

This chapter reviews literature highlighting supply side factors that influence women's access to use MHS. Access is a concept related to utilization as you cannot have utilization without access²⁷. The David Peter model was employed to make this analysis under the subheadings: availability of services, financial accessibility, geographical accessibility, acceptability of services, initial access, continuous access which have been factored in for analysis²⁶.

Availability of Services (Health Workers, Drugs and Equipment)

Health workers working in the field of maternal health services in rural Zimbabwe include doctors, midwives, nurses, clinical officers, nurse aides and human resource managers.¹⁴ Claeson M states that health workers bring a technical component that is paramount to the functioning of a health system²⁸. Availability of SBAs has a very significant effect on maternal outcomes and improves accessibility of maternal health facilities for pregnant mothers^{29,30}.

According to ZHSA 2011 the public health system is operating with a 57% staff complement with over 6940 vacancies and most of these are in rural areas where there is more poverty¹⁴. Nurses and mid-wives who usually are the first port of call for rural mothers, constitute 65% of this workforce. Consequently rural maternal health services have lower levels of SBAs available highlighting the inequities in distribution between rural and urban. The recommended rate of trained health workers per 1000 population is 2.3 and the current level in rural Zimbabwe is 0.58^{14,19}. **See table 1 below** for the extent of disaggregated shortages of health staff according to specific cadres.

The 2.3 rate is the level that potentially provides 80% coverage of SBAs and facilitates best outcomes prenatally, during delivery²². The high maternal mortality and low antenatal visits (56%) has been linked to this limited access to SBAs.⁶ Lack of staff and reduced competency have an impact on pregnant women's perception on maternal health facilities and reduces their health seeking behavior.^{28,31}

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In Zimbabwe training of health personnel has reduced since 1999 with health training institutions countrywide affected¹⁴. The Government has attempted to open a second medical school and increase the training of nurses and midwives but due to the prevailing economic climate and shortage of tutors was unable to achieve this^{14, 32}. The current crops of graduates from the training institutions are not considered to have adequate technical quality as before because of the lack of tutors and it(technical quality) is a constituent of access^{14,32,33}.

Table 1: Disaggregated deficiencies of health cadres in Health System

Cadre	# of Staff for Full Health System Operations	# of Staff in Place as of January 2009	Shortfall	% of Cadre Staffed
Doctor	1505	508	997	34%
Nurses (RGN)	7688	5087	2601	66%
Primary care nurse	2500	1778	722	71%
Pharmacists	132	37	95	28%
Pharmacy technician	185	90	95	49%
Laboratory scientists	385	245	140	64%
State-certified medical laboratory technician	120	31	89	26%
Environmental health officers	277	64	213	23%
Health services administrator	62	28	34	45%
Total for all cadres nationally*	16049	9109	6940	

Source: MOHCW.

* Includes cadres not mentioned in this table, such as dentists and radiographers.

Source: Zimbabwe Health System Assessment 2011

The adopted definition of technical quality is the best possible practice standard that is commensurate with current professional information and training that enhances chances of wanted health outcomes for everyone in contact with the system.³³ Supervision, in-service training and provision of guidelines are key components in the drive to attain technical quality of health services.³³

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In a their 6 country assessment Gutpal and Daz found that Zimbabwe has the most inexperienced facility based workforce with about 25% aged 30 or less and can be an indicator of apparent quality and experience present³¹. Increasing coverage in maternal health has been the area traditionally targeted but some studies have shown that access to higher quality health services has a significant contribution to improving outcomes^{22,28}.

Resource constraints, especially human and transport, within the health system have meant that supervisory visits where assessment of quality of work done, training needs identified and stocks of drugs including essential obstetric consumables are assessed have become limited.¹⁴ According to the MOHCW there are well formulated guidelines for MHS but due to logistical challenges it is unclear what percentage of rural health facilities have them.^{14,21}

Motivation and retention of health staff are key barriers to access of health services identified in a systematic review of developing countries to assess the impact of both financial and non-financial incentives on health workers³⁴. Low salaries, poor working conditions (lack of essential drugs and equipment) and failure of superiors to acknowledge efforts of subordinates in the public health services have contributed to outmigration of staff to neighboring and overseas countries where incentives are significantly higher^{14,34}. It has also been challenging to deploy and retain health workers due to poor infrastructure, lack of housing and remoteness in some of the rural areas^{14,32}.

Improving accessibility to essential drugs was identified as being central to improving health outcomes in a study of six LMICs³⁵. Stock outs of essential drugs including equipment used for emergencies like obstetrics were found prevalent (clarity on number of times per year is unclear) in most health facilities visited in Zimbabwe¹⁴. For the provision of effective health care to mothers it is noted that even skilled and competent health workers become redundant without a regular supply of drugs and operational equipment²⁸. Public perception of health facilities has been affected by this low access to essential commodities and people have lost confidence in government facilities⁶. The Mauritania PRSP reported drug shortages at public facilities as the most important factor leading to their low use²⁸.

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Opening times of MHS are crucial to generating sense of availability for the mothers that use them and influence their use if they are inconvenient and not consistent^{27,28,36}. Most rural health facilities open from 8am to 5pm on weekdays and depending on whether staff is available provide limited services after hours and weekends^{14,37}. Moreover some facilities have been closed and others may have to be closed where they are staffed by one health worker when they go on leave or for a workshop¹⁴. Although the exact scale nationwide is unclear absenteeism by staff was found in some health facilities and some authors have identified it is a barrier to access of maternal health services³². Maternal health services should be available on demand says Campbell O but in low income countries like Zimbabwe it is not yet practical due the human resources situation highlighted earlier²².

Another component that influences access to maternal health services is waiting times at health facilities^{28,38}. In rural Zimbabwe staff shortages at facilities has meant that patients including pregnant women have to endure long waiting times because the health worker is usually overwhelmed^{6,14,32,39}. In a study in rural Bangladesh waiting times at facilities were found to inversely influence use of health facilities⁴⁰.

For best results in MHS the referral system from the primary level care to tertiary care should be fully functional and responsive to the needs of pregnant women.⁴¹ Strengthening referrals in a health system was also identified as a cost effective intervention that improves maternal and neonatal outcomes and improves public perception about health facilities.⁴² The referral system in Zimbabwe has been noted to be functioning without adequate ambulances and communication between health facilities is low and this has been identified in the National Health Strategy as a key area that will be improved through procurement of new ambulances, employing drivers and medics and revitalizing telephone/radio/cellphone communications between health facilities.^{14,32}

Geographic Accessibility of Services (Service Location)

Geographic accessibility cannot be viewed as distance and terrain alone but in tandem with other factors such as travel time and transport cost to and from the facility.^{28,43} However physical access remains a critical factor in use of maternal health services.⁴² The catchment population (pregnant women and mothers) determine the human and material resources that are devoted

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to MHS so the numbers of women who have access to them will ultimately influence their distribution.^{27,28}

Zimbabwe has a total of 46 District hospitals and 1118 Rural/Urban health centers/clinics but it is unclear how many are functional as they may have closed due to the current economic climate.¹⁴ To compound this it was found that the average distance to a district hospital within its catchment area is 121 kilometers (kms) and 25 kms for a rural health center.¹⁴ Functional outreach services were only found in 42% of rural health facilities and these are the facilities where MHS are accessed.¹⁴

Roads in rural Zimbabwe are not widespread and are affected by seasonality as they are mostly gravel and become difficult to traverse during rainy seasons and overall Zimbabwe needs to invest 4.2 Billion USD to rehabilitate its road network⁴⁴. This not only makes it difficult for pregnant women to reach health facilities and but for also for the distribution of essential drugs and equipment, supervisory support visits and timely referral of women for emergency obstetric care.^{14,26} All these factors could contribute in reducing access of these services by pregnant women.

Mathole's study in Gutu, a rural part of Zimbabwe found that pregnant women actually want to access antenatal care (ANC) as illustrated by the following quote "*I need to know what is going on in me, to get the assurance that the baby is growing well. It might be risky just to wait at home not knowing whether the baby is growing well.*"³⁹ But however because of the distances involved, having to traverse through difficult terrain which varies seasonally, irregularity and cost of transport services has led to women not ultimately going back to the ANC facilities and delivering at home.³⁹

In another study in Zambia's Kalabo region, which closely resembles rural Zimbabwe, the majority of the women wanted to utilize maternal health services however due to distance about 54% percent of the women ended up delivering at home.³⁸

These findings stem mainly from qualitative studies and cannot be generalized for the whole country but they give an insight into the situation in rural areas.

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Financial Accessibility (Costs and Prices of Services)

In LMICs issues surrounding ways of financing health systems and keeping them within means of the poor have been debatable themes regarding access to health services.^{26,45} The inverse care law states that the rich benefit more from public health spending and that situation is applicable to Zimbabwe as more money is spent in urban areas where the people are better off financially perpetuating inequities in access to maternal health.¹⁴

As a way of recouping costs user fees were implemented by the government in 1994 and with the documented gradual deterioration of the economy most mothers, particularly in rural areas, could not afford to pay them and this has contributed to a decline in utilization.^{14,39} A report on the Zimbabwe health system noted that escalating maternal user fees during the period 2005-2010 had given rise to low utilization of these services and had aided in the rise of maternal morbidity and mortality.⁴⁶ Lessons from Ugandan studies have shown marked improvement in utilization of health services after removal of user fees particularly among the poor and noted them as a significant barrier to access to care.^{47,48} User fees operate in conjunction with other costs such as travel costs and food whilst visiting health centers to reduce access to maternal health services.^{27,49}

However to their credit the Zimbabwean Government has realized the drawbacks of user fees for maternal health services in the current economic environment and waived them in 2012 but it is not yet clear what impact this has had on access to maternal health services.^{17,32,50}

In Niger and India there was a realized increase in utilization of services where user fees were matched with an enhancement in the quality of care at health facilities.^{51,52} However in a Zambian study they found that even though the quality improved with the user fees use of health services did not increase.⁵³ In contrast a study in South Africa found that after removal of user fees use of antenatal services steadily declined and another four nation study had unequivocal results on the impact of user fees on access to maternal health services.^{41,54}

Acceptability of Services (Characteristics of Health Services)

Acceptability of services is a term that varies from context to context but generally the attitude of providers and their interpersonal skills play a role in the access of health facilities.²⁶ Availability of human resources is key to

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access but also important is their professionalism and attitude towards pregnant women. Claeson cites disrespectful staff attitude as a factor that makes maternal health services less acceptable to pregnant women.²⁸

In rural Zimbabwe women also value polite staff attitude and this affects how they use maternal health facilities as illustrated by this quote from a study in Gutu *"if I miss a visit, I will cheat them when I make the next visit, just to convince the nurse. The nurses scold us when we miss any of our ANC visits. It makes some women disappear for good. They deliver at home"*

³⁹

A study in rural South Africa discovered that women actually began accessing a health facility more once a staff member whose attitude was deemed acceptable was transferred to that facility and it was immortalized by the following quote *"There was a clinic which was always full and another maybe seven kilometers from it which was not busy. But patients came from the empty one to the busy one. We took one nurse from the busy clinic and put her in the quiet clinic and that clinic within a short time was busy. So we could see this was an attitudes thing."*⁵⁵ D'Ambruso in Ghana found that pregnant women value polite, humane and caring treatment from staff at maternal services and this influences whether they utilize them for ANC and delivery⁵⁶. Furthermore they found women make recommendations against using a facility to other women in their communities if they experience bad or unacceptable behavior from health workers.⁵⁶

Acceptability of service also occurs when health services provided match the needs of the people particularly those disadvantaged economically and socially.²⁸ In Zimbabwe maternal health services (ANCs and Delivery) have been identified as a priority area and there are policies being developed such as the National Strategy 2009-2013 to strengthen this area. The health needs of rural women have been highlighted earlier through the maternal mortality and morbidity and low use of facilities. However the current maternal health services are not as appropriate and relevant to the needs of rural women as they are not fully functional and responsive impacting on their accessibility.¹⁴

Though these studies are qualitative it gives an insight of the effect of patient treatment on influencing health seeking behavior and could have been contributory to the low use of MHS in rural areas.

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Initial Access

Initial access is a concept that is closely related to timing of health services and determines ultimately whether or not services are effective or not.⁵⁷ For antenatal services initial access/timeliness is reporting within the first trimester and only 31.4% of the 56.8% who received the recommended four visits reported timeously in rural Zimbabwe^{19,21} In a study in Kenya timeliness of antenatal care was shown to be related to use of skilled delivery at birth though other factors such as education, age and ethnicity had a confounding effect.⁵⁸ What this infers is that most of the women did not report early or report at all during the recommended first trimester where problematic conditions like HIV/AIDS, pregnancy induced high blood pressure and anemia are discovered and managed.⁵⁷ Enrolment in the PMTCT program is currently at 53.4%.²¹

Continuous Access

Continuity of care is defined as sustained health care provision to a patient with following through all phases of care and in the case maternal health from first antenatal visit to discharge upon delivery.^{59,60} Continuum of care is not only an opportunity to provide preventive or curative services but to also reaffirm the importance of the next visit.⁵⁹ Continuity of care by a team of midwives has also been shown to generate more maternal satisfaction than routine antenatal care by a single practitioner and this facilitates bond building and trust in health facilities.⁵⁹

In rural Zimbabwe however most rural health facilities are manned by one health worker minimizing the chances for bond-building due to possible workload.¹⁴ Two other components of continuum of care namely outreach services and referral system are currently also facing challenges.^{14,59}

In essence these are some of the supply side factors found to be influencing access to maternal health services in rural Zimbabwe.

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Chapter Four: Socio-Cultural and economic factors influencing Access

This chapter aims to explore socio-cultural and economic factors and how they influence demand of professional maternal health services. These factors operate at personal, family and societal level to determine how and when pregnant women access care at health facilities but they are not stand alone as they are also influenced by supply side factors as well.^{27,49}

Availability of services (Demand for services)

Availing knowledge on maternal health, providers and benefits of utilizing the services is important in stimulating rural women to access maternal health services and the findings of a study in the southern Laos agreed with this assertion.⁶¹ Furthermore not distributing information on services tends to promote inequities in access to service provision advantaging the urban dwellers and wealthy who have relatively easier access to information.⁶²

Only 42% of outreach services are functional in rural areas in Zimbabwe and this is when community mobilization to use maternal health facilities occurs, dissemination of IEC materials and myths about health facilities are dispelled but due to staff shortages and resource limitations these are not occurring at the desired levels and this reduces the knowledge people have on the need, type and location of maternal health services available thereby affecting access.¹⁴

Closely related to knowledge on services is education. Men have a higher level of educational levels as compared to women which perpetuates gender inequality.⁶ Levels of women with secondary education or more are higher in urban areas (66%) as compared to 34% in the rural areas.²¹ A lower educational level has a multi-pronged effect on women, not only do they not understand the need to seek care timeously but it also affects their ability to assimilate health promotional information and make correct choices about providers.²⁷ Low education is also associated with inability to make healthy choices, low access to and control of household resources, reduced bargaining power in the home and when negotiating for care at facilities.⁶³ In a 21 African country survey they found that lack of education may reduce pregnant women's insight into possible obstetric complications and results in failing to recognize the need to utilize relevant health facilities.⁶⁴

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In the same survey the found that women with a completed primary education were 5 times more likely to have skilled birth attendants at delivery and 3 times more likely to have the WHO recommended 4 clinical visits.⁶³ In rural Bangladesh pregnant women's use of maternal health services increased as their level of education increased and they sought skilled care more for possible obstetric complication than for those with lower level education.⁶⁵ Studies on the effect of paternal education on women's use of facilities are scarce but it was noted that there was a positive correlation between fathers education and health seeking behavior amongst pregnant women.^{66,67}

In Zimbabwe findings are similar with percentages of women who had delivered with skilled attendants or who delivered in health facilities rose significantly as you move up the education rungs from no education (35.6%), primary (48.6%), secondary (73%) and tertiary levels (95%) and more urban women are better educated than rural women.⁶ This trend is also consistent for use antenatal services and this serves to underpin that maternal education encourages timely use of maternal health services and it would be interesting to see if paternal education would have the same effect.

Geographical Accessibility (Users Location)

Distance is not the only aspect that hinders geographic access but also transport costs ²⁷(Ensor and Cooper 2004). Opportunity costs such as that for transport and child care have been estimated to be nearly 50% of the delivery cost in some studies in Tanzania and Nepal interact with other factors like distance to dampen access to MHS.⁴⁹

The average distance to health facilities is 25km in rural areas and since the popular means of transport, the ox-drawn cart, is no longer widely available pregnant women have to seek alternate modes of transport.¹⁴ In Zimbabwe it costs on average 3-4 USD to travel a distance of 25 km meaning on average mothers would have to pay 7 USD to access care at health centers and combined with health facility costs this makes it tough for pregnant women to use facilities.^{10,14} Where roads are available public transport services are erratic and often not readily available and this increases the time it takes for pregnant women getting to maternal health services.^{6,14} From personal experience I have witnessed that when in labor or there are complications during home deliveries people have to approach community

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members with private vehicles who charge depending on severity of problem (desperation of customer) between 50 and 100 USD for a 25km distance and these are usually prohibitive costs.⁹⁸ My personal observation is not necessarily representative of the entire country.

Financial Accessibility (Users resources and willingness to pay)

Costs of accessing care such as transport cost, food, user fees (worse if there are complications like surgery) pose a significant barrier to use of MHS particularly among the poor and can lead to catastrophic consequences for households.^{19,68} Affordability is now viewed as a cornerstone factor influencing access to health services particularly due to its strong links to poverty.²⁶ The amount of disposable family income that is available to spend health care is an important barrier to access to health services.²⁷ Some authors have also found that higher household wealth, particularly if women have more control of it, is associated with higher access to skilled delivery and antenatal care services.⁶⁴

The Total Consumption Poverty Line (TCPL), which is defined as “*the minimum monthly expenditure necessary to ensure that each household member can consume a minimum basket of 2100 calories inclusive of an allowance for minimum none-food requirements such as health, housing, education, clothing and transportation*”, for rural Zimbabwe is pegged at 65.3 USD however the rural median per capita consumption expenditure per month is 47 USD.¹³ This highlights the little disposable income that filters to households and decisions need to be made about priority spending and health care and associated expenditure (transport, food, drugs) generally falls down the pecking order of priorities reducing access to MHS for rural mothers.^{5,6,11,13,14}

Opportunity cost is defined as the worth of the next best substitute that must be lost in order to partake in a certain action.⁶⁹ Opportunity cost has been identified as a barrier of access to MHS because the pregnant woman has to stop a potentially income generating activity and since pregnant women do not generally travel alone to the health center the same can be said of their companion.^{26,27} In rural Zimbabwe the women have to forego subsistence farming to travel long distances, pay for transport to health facilities and facility costs and since this results in high expenditure they

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weigh how much work and potential income they forfeit to seek care and women end up not accessing health facilities.^{14,27}

Another dimension of cost that has risen to prominence is catastrophic expenditure as it often pushes families into poverty and its influence on access and willingness to pay.^{26,70} Most households in the poorer communities of LMICs like Zimbabwe, pay a significant proportion household earning on maternal health and this inhibits them from seeking care.⁴⁹ When maternal health complicates it gives rise to the need for medications (like high blood pressure) and procedures (like caesarian sections) and these are costly and consume significant amounts of household incomes inducing a fear to use maternal health facilities.⁷⁰

The challenges being encountered in removal of user fees for MHS in Zimbabwe have meant that in some areas pregnant women have had to pay varying amounts ranging up to 50 USD for a delivery (including drugs, toiletries, admission) which is a third of the 150 USD an average rural woman earns per year making accessing MHS a perpetuator of poverty.^{50, 71} For caesarian sections and other complications it is unclear how much pregnant women are being charged in some of the areas that have not implemented the policy but it could be more than 50 USD.^{50,70}

Acceptability of Services (Users Attitudes and Expectations)

Patient's perception about quality has been linked to utilization via personal or social relations' experiences at health facilities and can be an equal or stronger determinant of access compared to cost and others variables of access.^{63,72} Unfortunately however the area of women's perception about quality of health services has not been studied extensively.⁵⁶ In rural Zimbabwe a study highlighted issues of perceived poor staff attitudes, not engaging in an anticipated ANC's routine (like weighing) as poor quality of care and consequently women would discourage each other from visiting such facilities reducing access maternal health services.³⁹ A study in Ghana found that poor technical quality (which is related to desired health outcomes) was related to maintaining of ANC's appointments and good outcomes of MHS and subsequently reducing demand in pregnant mothers.⁵⁶ In a Cambodian study they found that pregnant women's attitude towards Traditional Birth Attendants (TBAs) was that of contentment resulting in them not realizing the need to go to SBAs and the same scenario was found

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in rural Zimbabwe where some pregnant women had good experiences in previous pregnancies with TBAs and saw them as better than SBAs.^{39,73}

Acceptability is also linked to convenient opening times and traditional healers, who conveniently stay close to the women, do not make women wait for long before seeing them, usually have an open door policy and treat the women with respect and also have established relationships with the women making them an option for care.²⁶ Some health workers ill-treat pregnant women and their facilities are far, not open always, women have to endure long waiting times and these could be a factor in the high percentage of home deliveries in rural Zimbabwe.^{14,39}

Acceptability of MHS, utilization and outcomes can also be improved via strengthening community participation in district level planning.⁷⁴ Only 50% of rural health committees (RHCs) are functional in Zimbabwe and these have been mandated as the voice of the community in governance.¹⁴ Pregnant women have often complained about the bad treatment by the nurses at facilities and lack of quality health care but no one has addressed this problem.³⁹ The dysfunctionality of RHCs means social accountability is poor and the community women could be demotivated to use the facilities as the system is not responsive to their needs.

Cultural beliefs and practices often make people seek alternative forms of care traditional and/or self-medicate. They can supersede other dimensions of access such as education, availability and acceptability of services and also alter peoples' perception of illness.³⁶ The early stages of pregnancy were perceived crucial and most prone to witchcraft hence women sought care from TBAs to "protect" their unborn child instead of using antenatal services and witchcraft is a genuine fear amongst pregnant couples in rural Gutu (south-eastern Zimbabwe) therefore the need to keep the pregnancy secret and this influence access to maternal health services.³⁹ About 43% of people surveyed during MIMS 2009 expressed some form of stigma for people infected with HIV and this was associated with low ANC access as some pregnant women feared being offered voluntary counseling and testing.²¹

In rural Uganda a study elicited that pregnancy was viewed by the community as a natural process and that delivering without assistance was a sign of a woman's ability to endure and if a woman dies because of

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pregnancy related experiences it is unfortunate but acceptable.⁷⁵ In Tanzania there is a belief that labor should be easy for the pregnant woman and if there is any sign of a complication then it is an indication the woman was adulterous and this results in labor being kept secret.⁷⁶ Studies in Ethiopia and Pakistan found that pregnant women who are not married tend to be discriminated against as they have engaged in culturally unacceptable sexual encounters and this form of stigma discourages the women from using MHS.^{36,77} It would be interesting to establish if these views are also prevalent in rural Zimbabwe.

Some studies used in the assessment above are qualitative and might not be generalizable but the scenario in most LMICs particularly in Sub-Saharan Africa tend to be similar and can relate to Zimbabwe.

Household Characteristics

Zimbabwean society is mainly male dominated and this is a tradition that has long been enshrined in family structure and led to gender inequalities as men usually make all important household decisions about when and where to seek healthcare.^{6,9}

Women's autonomy which increased their decision-making power in households was found to be related to increased use of skilled attendants during pregnancy in an 80 paper analysis of determinants of MHS utilization.⁶³ In Zimbabwe women's autonomy is not widespread particularly in the rural areas and they have to consult their husbands prior to making important household decisions including decisions about their health could be linked to the low access to MHS.^{6,9} The more educated (secondary, tertiary level) a woman the better the association with gainful employment (empowerment) which was found to increase women's autonomy and say in how family income was spent and invariably led to higher use of maternal health services.⁶⁴ Lack of control over family resources was found to be associated with lower access to skilled delivery in rural Nepal.⁷⁸

Gender based violence is still tolerated in some sections of society and with some women (particularly rural ones with less education and are poor) condoning it for some actions such as leaving the house to seek care without consulting the husband though it is unclear to what extent this influences health seeking behavior in rural Zimbabwe.²¹

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Individual Characteristics

There are varying reports on the influence of maternal age as a determinant of access to maternal health services. In Zimbabwe the findings were that pregnant women in the 20-34 age group utilize maternal health services more (64.8%) than those older than 35 years (60.3%) for both ANCs and skilled attendant/facility deliveries.⁶ In rural Gutu (a part of Zimbabwe) younger women (<35 years) wanted to access ANCs often even monthly but the older women (>35 years) preferred not to use MHS as illustrated by this quote *"I never had problems with any of my pregnancies and I delivered all my babies well. I can handle it. I do not have to go to the clinic. I delivered all my babies here at home; it is not a problem."*³⁹

In rural Tanzania pregnant women in the age group 20-34 were found to have higher access to antenatal and skilled delivery (64%) as compared to those older than 35 years (13%).⁷⁹ Younger women especially when having their first children are highly conscientized of how risky their pregnancies are and use MHS whereas older women who have given birth more than once believe they have the experience and they end up delivering at home.^{39,76,79} Contrary to this assertion in Botswana younger women with less children were found to have lower use of maternal health facilities.⁸⁰

Increasing parity and age were also found to be associated with not utilizing SBAs.^{64,79} In rural Zimbabwe the total fertility rate is 4.8 (urban 3.1) which illustrates that rural older women probably have more children and are prone to this higher parity predicament.⁶ Though not representative for the whole country the study gives some credence to the ZDHS findings.

Policy and Macro-environment

Zimbabwe is a signatory to host of international treaties such as the Alma Ata Convention, Safe Motherhood Initiative, Abuja declaration, Millennium Development Goals, International Convention for Population Development and it would have been ideal to explain each in detail however here we state that these make governments duty bound to finance and implement programs that improve access to MHS for all.¹⁷ However currently in Zimbabwe resource allocation in the health sector is unclear and the national health accounts are in the process of being finalized therefore it is unclear how much MHS receive but overall the sums are small and cannot maintain the system at optimal levels that could increase demand.¹⁴ The macro-

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social, macro-political and macroeconomic environment currently prevailing is one of poverty and uncertainty and this ultimately influences pregnant women's decisions not to access maternal health services.^{10,14}

Chapter Five: Review of proven approaches and strategies that increase access to Maternal Health Services

Literature that looks at proven strategies and approaches that have been employed in Zimbabwe and other countries that can be adapted to the Zimbabwean context was reviewed. Interventions in Zimbabwe are not abundant and will be looked at first. Outcomes from these literature reviews could be negative or positive and the areas to be looked at under geographic accessibility (service location) maternity waiting homes, availability (health workers) skilled birth attendants, financial accessibility (cost and prices of services, user's resources and willingness to pay) community loan funds to pay for transport, pay for performance, and abolishment of user fees, acceptability (user's attitudes and expectations, characteristics of health services) community participation, maternal education, (Women empowerment) these have been chosen because of their potential to influence both the demand and supply side to increase access. It must be noted that the issue of causation will always remain a contentious issue for the interventions suggested below.²⁷ Some of the references used particularly for Zimbabwe could be not recent but literature on Zimbabwe is scarce.

Current strategies and approaches in Zimbabwe

After realizing the downward spiral of the health sector government came up with the National Health Strategy 2009-2013 to try and address this and MHS is one of the key areas.³²

As part of the NHS 2013 and with the support of the HTF 2011 user fees for maternal health services were scrapped in public facilities in 2011 to stimulate demand. Although there are no published results some challenges for implementation have been already been identified such as lack of knowledge amongst women about this development, variable implementation between levels of care and lack of capacity by ministries responsible for health (Health and Local Government) to monitor implementation of the policy.⁵⁰

Arresting the brain drain of skilled personnel from the health system was also prioritized in Zimbabwe and a motivational and retention project, Harmonized Health Worker Retention Scheme (HHWRS), was launched with the help of donors in 2009. It is administered by the MOHCW and is in the

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form of salary top-ups and results showed a reduction in nursing vacancies to 14%, doctors 53% and pharmacists 25%. It noted though that the density of doctors and nurses still remains low compared to regional and WHO standards of 2.3 per 1000. Proxies to assess changes in access used were skilled attendance at delivery which increased from 53% to 76%, Outpatient attendance actually fell during 2008-2011 and ART initiation rate showed minimal or no significant association with the vacancies health workers.⁸¹ This showed that ensuring physical presence of health workers alone would not increase access to health services albeit in part for delivery services.⁸¹

Training of middle level cadres to alleviate shortages in rural areas and enable task shifting of Emergency Obstetric Care (EmOC) procedures such as caesarian sections is currently ongoing within Zimbabwe.¹⁷ Clinical Officers (COs) are being trained but only at a rate of 10 per year and now through the assistance of the ARK funded project this is being scaled up to train 80 in the next 2 years to try and avail a COs for each of the 67 district hospitals^{17,82}

Users location

Maternal Waiting Homes (MWHs)

This is a facility/shelter that is erected close to a health facility providing (EmOC) where women can stay in their last week of pregnancy prior to labor that provides women with more timely access to SBAs in a bid to improve maternal and neonatal outcomes.⁸³

They are encouraged especially for those with high risk pregnancies and those staying furthest from facilities.

A study in Gutu district (Zimbabwe) found that use of MWHs increased the likelihood of institutional delivery six times and a study 5 years earlier in the same area found that 65% of the mothers utilized them or wanted to if they were present.⁸² Of the 1335 facilities in Zimbabwe 255 had MWH but however now it is unclear how many are functional or the quality of care.^{21,82}

In a rural part of Ghana 90% of the 83% women who attended ANCs agreed to stay in MWHs and this increased the numbers of facility deliveries though some women complained about the poor state of toilets.⁸⁴ In rural Ethiopia

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women's increased access to MWH was associated with better maternal and neonatal outcomes compared to those not from the MWH and a substantial saving in transport costs.⁸⁵ Contrary to these findings in Laos they found that utilization of the MWHs was low as locals valued privacy during delivery and the delivery position recommended was deemed "*abnormal*."⁸⁶ In Kenya a new MWH was used by less than 10% of the women who delivered in the health facility and they cited lack of information, poor staff attitudes and lack of permission from husbands as reasons.⁸⁷

The studies show that MWHs improve access to SBAs, improve maternal outcomes, lower household expenditures, but issues like costs for use, sanitation, information, local acceptability, numbers of midwives and their attitudes clearly affect impact of this intervention and these need to be addressed to increase access.⁸²

Availability

Skilled Birth Attendants (SBAs)

The recommended coverage to achieve MDGs is 80% of all births.¹⁹ SBAs should be provided though in unison with a functioning referral system so that patients can go to higher level care in line with their need.³⁰

In LMICs the challenge to increase access to SBAs at health facilities is prevalent and can be overcome through increasing and empowering (task shifting to) nurse aides who are abundant particularly in rural areas through training them in midwifery practices (BemOC, EmOC) and in Zimbabwe a study showed improved maternal and neonatal outcomes for deliveries conducted by nurse-aides and stimulated demand for MHS.⁸²

The concept of delegation for EmOC procedures like caesarian sections to medical surgical assistants (Clinical Officers) has been relatively successful in pilot studies done in Mozambique to increase access and results (maternal and neonatal) have been comparatively good to work done by doctors/obstetricians.⁸⁸ Results in Malawi show that with training Clinical Officers are capable of performing emergency operations and they are cheaper to train and retain than medical doctors.⁸⁹ See table below for comparative analysis of outcomes between Clinical Officers and Medical Doctors from Malawi.

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Table 4: Immediate post-operative maternal general condition in relation to category of surgeon

Condition	Clinical officer	Medical officers	Total
Fair	1700 (90.7%)	235 (91.8%)	1935 (90.8%)
Sick	105 (5.6%)	17 (6.6%)	122 (5.7%)
Very sick	27 (1.4%)	3 (1.2%)	30 (1.4%)
No information	43 (2.3%)	1 (0.4%)	44 (2.1%)
Total	1875 (100.0%)	256 (100.0%)	2131 (100.0%)

Difference not statistically significant, $p = 0.786$

Source: Chilopora G et al 2007 Post-operative outcomes of caesarian sections and other emergency obstetric surgery by clinical and medical officers in Malawi

After assessing deficiencies needs based in-service training in EmOC for current facilities cadres is important to bring them up to date with current practices and refresh their knowledge and a study in 2 South African districts showed that midwifery skills improved by 36.6% and enhanced case management of the health workers after a course.⁹⁰ In Zimbabwe the ARK project is currently working in rural 24 districts to provide 4 day refresher training courses in EmOC for serving health workers.⁸¹

Users attitudes and expectations

Community Participation and Maternal Education

The traditional passive community involvement where health workers just go to communities to hand out pamphlets and preach awareness is being challenged by emerging proof that participatory community involvement in maternal health issues better improves access to health service.^{91,92} Participation addresses societal norms and beliefs adverse to use of health services and involves communities in formulating solutions in line with their norms and values which consequently improves maternal health outcomes^{90,91} In a randomized cluster trial (RCT) in Nepal a locally sourced female enabler led women's groups in discussions about maternal and

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neonatal health issues, formulated strategies to tackle them and implemented them with the aid of local leaders, men and health personnel. Women in the intervention cluster were more likely to access antenatal care, deliver at health institutions and maternal mortality was 2/2899 as compared to 11/3226 in the control group.⁹³

In another RCT in rural Pakistan community health committees were established and these together with Lady Health Workers (LHW) and government health workers embarked mainly on maternal and neonatal health promotion with community members. The results included a 12% increase in SBAs deliveries at facilities, 14% decline in home deliveries and a 57.3 to 41.3/1000 reduction in neonatal mortality but no changes were noted in the control clusters.⁹⁴

In rural Zimbabwe community participation was noted as crucial in the past and there already are CHWs, TBAs and Rural Health Committees but are not currently fully functional.¹⁴ CHWs and TBAs are involved in maternal outreach programs and provide the linkage between SBAs and the pregnant women.¹⁴

Increased levels of education (secondary, tertiary) also works at community level to increase empowerment, initiatives for health choices, demanding for better services and influencing policy and practice.⁶³ Influencing educational policy might be beyond the scope of this paper but increasing community education can improve community participation initiatives.

Users resources and willingness to pay

Community Loan Funds

From literature we see that providing funds to subsidize costs associated with use of MHS increases access and also bridges the equity gap between the rich and poor.²⁷

In a district in Sierra Leone after doing preliminary analysis, costs associated with using MHS were identified as the prime barrier to access and consequently community loan funds (CLFs) were mobilized successfully in 2 chiefdoms and men were levied 20 US cents and females 10 US cents raising a total of approximately 300 USD.⁹⁵ The fund was administered by the village development committee and could cater for several women's costs

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associated with MHS. The total cost would have to be repaid back over a period of time and the chiefs were involved to ensure repayment. When compared to other chiefdoms those with (CLFs) showed significant improvement in access to maternal health services. The chiefdoms with and without CLFs all used the same health facilities that were staffed with workers trained in emergency obstetric care (Emoc) and well stocked with medical consumables.⁹⁴

In Makarfi Nigeria the Prevention of Maternal Mortality Network (PMMN) with the aid of government officials and traditional leaders set up a revolving community loan fund with funds raised from the community and managed by committees appointed by traditional leaders. A total of 20 492 USD was raised and 18 loans were made to pregnant women who wanted to access EmOc services. This also covered transport costs to and fro the hospital. Prior to the start of the loan fund it was noted that utilization of services had been decreasing however despite the initial improvement in access subsequent finds were not conclusive and this stress the need to maintain strong leadership continued community motivation.⁹⁶

In Ghana between 2003 and 2008 user fees were removed for MHS and resulted in increases in facility deliveries. The total cost of access on the household decreased and benefitted the poor more. In Senegal in 2005 user fees for deliveries and caesarian sections were removed and there was a significant 40-44% increase in facility deliveries and 5.6% for caesarian sections. Impact on cost for households was unclear as patients had to pay for other components of care such as drugs and gloves.⁹⁷ User fees for maternal health have been removed officially in Zimbabwe but there is no official assessment of impact yet.

So we see that there are cost effective interventions that can be harnessed in low resource settings to improve access to maternal health services for pregnant women and some of the interventions are already aligned to current Zimbabwean strategies.

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Chapter Six: Discussion

This chapter looks at the main findings of the literature review that influence access to MHS in rural areas and analyzes how best practices can be implemented to increase access for pregnant women. The chosen framework was also analyzed to highlight its positives and negatives

Availability of Services

As we have seen there are several factors whose availability influences access to MHS in rural Zimbabwe. Issues surrounding SBAs appear to be the most important because their presence during pregnancy and delivery facilitates risk assessment and appropriate interventional therapy for potential mothers. SBAs presence during delivery alone has been noted to reduce up to 33 % of all maternal deaths.^{14,30}

In Zimbabwe there is a dearth of SBAs as considerable numbers have left the public health system and I expected this finding because I was an economic refugee in Namibia and I know several colleagues who also left for greener pastures. The quality of care provided by SBAs has been brought into question as training standards have gone down and drug stock outs are common in facilities affecting timeliness of MHS interventions. Timely referral for pregnant women has also not been possible. These shortcomings adversely affect pregnant women's perception of MHS affecting access^{14,20,28,38}.

These factors could explain why there was high coverage of 93% for one antenatal visit but only 50% facility delivery as pregnant mothers became disillusioned with MHS that were poorly staffed and with inadequate care. Closely related to these are long waiting times that pregnant women endured at the facilities discouraged returning similar to rural Zambia and Bangladesh^{14,28,38,40}.

The framework applied anticipates a link between maternal education and access to MHS and this was the finding in Zimbabwe with MHS use going up as education levels increased for rural women and similarly in Bangladesh. A 21 country survey also ratifies this. Lack of information plays a role in reducing access as pregnant women have limited knowledge on what services are available in their surroundings.^{6,63,64,65}

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Possible explanations through which better education (and information) enhances access include, better educated women have a greater capacity to assimilate health information and can break away from traditional norms and make use of MHS to improve their and their newborns health. Better education improves empowerment leading to greater control over household resources which in turn increases their autonomy and ability to make decisions to seek modern health care. For paternal education studies are few but show a positive correlation though it would be interesting to find out the situation in Zimbabwe.^{6,21,27,63,64,65,66,67}

To increase numbers of SBAs and access to MHS Mozambique and Malawi have turned to intermediate cadres like Clinical Officers to carry out EmOC and the results have been encouraging. In Zimbabwe there is already a program running to train COs that is being supported by donors for the next 2 years and the aim is to cover all district hospitals addressing equity issues. Task shifting of midwifery duties to Nurse-aides after training was done successfully in Zimbabwe prior to the current state of maternal health services and this can be revived. These 2 approaches can work in Zimbabwe because the training is comprehensive, these cadres are more willing to work and stay in remote areas than the traditional SBAs. These will be an intermediate measure as other retention strategies of SBAs currently being instituted take shape.^{82,83,88,89}

The challenges though could come from the traditional SBAs (doctors, nurses, midwives) as they might think that their roles are being taken over and might resist the change or discourage people from using them. Another possible obstacle is the community themselves because it is unclear if these programs are/will be matched with a participatory community sensitization program because without information pregnant women might be reluctant to be attended to by these cadres. For Clinical Officers beyond the donor funds in 2015 sustainability could be a challenge and for the nurse-aides program resources will need to be raised to make it a reality and in the current environment this could be challenging. However increasing availability of health workers alone will not increase access without improvements in other areas like women's level of education and for education lobbying with the Ministry of Education is the only option currently.^{14,27,82,83,88,89}

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Geographic Accessibility

Distance is inversely related to access to maternal health services in rural areas. The concept too far to walk comes into mind with pregnant women preferring to access health facilities that they can walk to. However in rural Zimbabwe this is not the situation with average distances to facilities being 25km and this combined with transport costs ranging from 7 USD to 100 USD and this makes it difficult for pregnant women to access MHS.^{6,10,14,26,27,28,38,49,98}

As anticipated a study in rural Zimbabwe found that women were willing to use MHS but due to cost, distance and difficult terrain they ended up not going there for ANCs and consequently delivered at home and similarly in rural Zambia. So the pathway that geographic location operates to impede access is through time, cost and ease of travel and there is an inverse relationship between these and access to MHS. Poor quality care and impolite staff make enduring such challenges less appealing to pregnant women.^{6,10,14,26,27,28,49,98}

Due to financial and HR challenges building more facilities is not possible so it is better to bring pregnant women closer to facilities through Maternity Waiting Homes (MWH). In Zimbabwe they were part of a success story that increased institutional deliveries six fold during 1990-1998. They have also been used successfully in 2 Sub-Saharan African countries (SSACs) Ethiopia and Ghana. Interestingly though in Kenya and Laos they were not as successful due to lack of information and not being tailored to local norms and values.^{83,86,87}

MWHs will be successful in rural Zimbabwe because firstly there are already 255 in the country which means resources for erecting new structures are not required immediately. They have been successful in the past and in other SSACs and lessons learnt from there can be modified to suit the Zimbabwean context. Potential to save on transport cost and easy access to SBAs could encourage women to use them. Resources needed to resuscitate them could be a challenge as current state of MWHs is unclear. The other challenge will be acceptability by the community as perhaps the current state could be deplorable and also lessons learnt from other SSACs could not be applicable to rural Zimbabwe.^{21,83}

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Financial Accessibility

To bolster public expenditure on health governments from LMICs have turned to the contentious user fees which invariably affect the poor rural people more. Costs of care make poor households less willing to pay for care making them significant determinants of access to MHS. Estimates show that facility costs consist between 1 to 5% of total household spending rising to 34% if the potential mother develops difficulties during her pregnancy. These interact with other costs such as transport to reduce access to MHS.^{19,27}

The issue of user fees poses a challenge of attribution as there are contrasting findings. In rural Zimbabwe they had resulted in less access to MHS in rural Zimbabwe and their removal in Uganda increased utilization of MHS. Surprisingly however when matched with improved quality in Niger and India utilization actually increased though not in Zambia. In South Africa utilization of ANCs decreased after removal of user fees. User fees affect disproportionately the poor more. In Zimbabwe user fees were abolished for MHS in 2011 and though there are no preliminary results their removal increased utilization of MHS in Ghana and Senegal. Other initiatives such as poverty reduction and health education are necessary to synergize improvement in access.^{14,17,32,41,51,52,53,54,99}

Another approach to the challenge of financial accessibility is community loan funds which are managed at community level to pay for costs associated with accessing MHS. These were instituted successfully in Sierra Leone and Nigeria increasing use of MHS.^{50,97}

It is feasible to implement community loans in Zimbabwe as the vehicles to use for this such as the village committees, rural district committees and local governments are in place. It will be a people driven scheme and where the community will have a greater sense of ownership. The economic environment is also improving and this could enable people to participate in such schemes. Possible challenges could be the capacity of local leadership structures to manage the scheme and needs to be built up. Defaulting of repayment could be another challenge that could impact on the loan schemes. Community mobilization for these schemes also requires funding which could be a potential challenge.^{14,96,96}

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Acceptability

The issue of acceptability remains controversial as it is not easy to draw comparisons between two areas even in the same country due to its subjectivity which is affected by local norms and values. However a recurring theme in studies is that of poor staff attitudes as a major cause of women not accepting MHS. This is factor was found to be important in rural Zimbabwe , Ghana and similarly in South Africa where women even preferred to travel longer distance to be attended to by a polite nurse. Another factor deemed important in Zimbabwe is the perceived quality of MHS and this is related but not limited to technical quality of the staff. Perception of non-SBAs as acceptable/or better is a theme picked up from Cambodia and also seen in Zimbabwe which challenges access to SBAs.^{39,55,56,63,72}

Equally important is the issue of community involvement in governance in their districts as often pregnant women have complaints or suggestions about MHS but their voice is not heard in planning perpetuating the cycle of poor acceptability and this was the finding in Zimbabwe.^{14,28,39,55,56,73}

Other themes that that influence acceptability are cultural practices and beliefs which are so varied from country to country but are however important as they often are detrimental to pregnant women's health and outcomes.^{36,39,76,77}

Participatory community involvement is the method chosen to address the problem of acceptability. It has been done successfully in Pakistan and Nepal and though the context might differ the principle can be applied successfully in Zimbabwe because it promotes a sense of ownership and facilitates the infusion of local ideas in planning. It is suggested because this can also be used as a platform to integrate and sensitize the community about other interventions such as community loans and task shifting of EmOC duties to other cadres. Individual and household factors such as early pregnancy, stigma against single and HIV/AIDS pregnant women, women's autonomy and GBV can also be addressed through community participation. Structures such as RHCs are already in place and VHWs, CHW, TBAs can be harnessed in the implementation. Possible challenges include the capacity RHCs and motivation of the VHWs, CHWs and TBAs. RHCs are not fully functional country wide and will need extra resources to be revitalized and so will

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incentivizing the other cadres. There is also the risk that these initiatives might be hijacked by certain groups to propagate political interests.^{14,91,92,93,94}

It is of paramount importance that pregnant women find maternal health services acceptable

Other Factors

Individual factors

Age as a determinant has given conflicting results from the studies assessed. For instance in rural Zimbabwe younger women have accessed MHS more than older women and in Tanzania the case was the same. This could be due to that the younger women Zimbabwe, like Tanzania are part of a new generation that has better access to education, have better knowledge and view about maternal health services and are more empowered to make better decisions about their health. In contrast younger women in Botswana utilized MHS less than the older women however this association needs further investigation.

Having a first child and being younger appeared to favor use of MHS with primigravidas utilizing them more than the older women who have one or more children in rural Zimbabwe. Higher parity offers older women false hope about current pregnancy and also works to reduce access through reducing disposable income available to the household. The more children a woman has the less time she can spare to go to a facility as she has to take care of the children and this also affects her opportunity cost as she has to work harder to feed a larger family.^{6,39,64,76,79,80}

Household Characteristics

Independence of women and standing in the household play a part in determining use of MHS and in Nepal and Zimbabwe we see this to be the case. However gauging the varied blocks of autonomy, the context-specificity and its interaction with other factors makes investigating its effect difficult. The link between autonomy and gender based violence is clear but the exact impact on access in rural Zimbabwe is unclear.^{6,9,21,63,64,78}

Policy and Macro-Environment

Despite agreeing to uphold international commitments to improve women's access to high quality MHS the public service is currently challenged to do

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so. Resource allocation to MHS is unclear and not commensurate to need and this in synergy with current adverse macro-environment is impacting negatively on pregnant women's access to MHS. New policies such as the NHS 2013 have identified MHS as a priority. Through the HHWRS more workers are being made available and HTF has led to abolishing of user fees for MHS but due to implementation challenges and unavailability of data it is unclear their true impact.^{10,14,17,32,50,81}

Framework

The David Peters model was used in this analysis which was very helpful as it looks at determinants from a poverty perspective which is prevalent in Zimbabwe currently. Some analysis points were overlapping particularly supply and demand geographic accessibility and acceptability. If I could modify it I would include more demand side factors for example occupation (both maternal and paternal), whether pregnancy was wanted or not and place more emphasis on perceived benefit/need and access to health as a right.²⁶

From the work for this thesis I realize that there is little information known in rural Zimbabwe about the actual determinants of access and more research needs to be done in this area.

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Chapter Seven: Conclusion and Recommendations

This is the final chapter of the thesis and provides final thoughts of the entire paper and also makes recommendations to various stake holders for the improvement of MHS in rural Zimbabwe.

Conclusion

Zimbabwe currently faces a challenge of high maternal mortality and despite some efforts a lot of poor people still have limited access to MHS. The current Zimbabwe situation has been documented. Rural women have a higher fertility rate than urban women but they usually have less access to MHS and this maybe in any of the forms namely: financial accessibility, geographic accessibility, availability, acceptability and quality of care.

The literature review highlighted that rural women who already have the burden of gender inequity, lower educational levels have less access to SBAs and medical consumables for EmOC and usually have to overcome great distances to access care. Costs at health facilities and also costs associated with seeking care also make accessing care nearly impossible and often may result in catastrophic expenditure. Once at the MHS they have to endure long waiting times and often staff who do not treat them with the right attitudes. All these combine to lower the perception of rural women and with the synergistic effect of culture and beliefs women end up not returning to MHS. Policies are also lagging behind in the goal to improve access to MHS for all women in Zimbabwe.

From the literature review however we have noted that this situation is one that can be improved. Central to this improvement in access seems to be the need to understand local contexts and determinants and evidence shows that involving communities, civil groups, NGOs and elected leaders at all levels of decision making, policy formulation not only increases effectiveness and social accountability but also increases responsiveness to community needs and increases access to health services.

There are cost-effective interventions to minimize financial risk such as community loan funds, MWHs for geographic access, participatory community involvement to improve acceptability and task shifting EmOC /BeMOC duties to other cadres to improve availability. Some of these are new to Zimbabwe but have been implemented successfully in other countries. Others are currently being done in the system and if all these are

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instituted will help improve access in rural areas. There is need to stress that strong political will at all levels of governance is required to ensure the success of these interventions and needs to be matched with general improvement in poverty and education levels for all particularly rural women.

Recommendations

Despite the financial, material and human resource constraints noted above, increased access to MHS can be achieved with the recommendations made below. These recommendations will be made to: the community because their involvement is vital to the success of any initiative, followed by Ministry of Health and then to Parliament. They are modeled along short and long term with results of the early stages determining the way scaling will be done.

Community Level

- Rural health committees (RHCs) and facility based health workers to spearhead mobilization women groups in the villages and districts in liaison with TBAs and CHWs This will enable integration of women into RHCs and increase women participation in planning, implementation and monitoring of all health related activities from village to provincial level. RHCs and women's groups should hold community discussions to sensitize the community about ongoing initiatives and importance of accessing MHS
- After establishing functional RHCs and women's groups then community loan funds can be started and managed by community members identified to have the capacity. Accountability and repayment need to be emphasized. Concurrently efforts to mobilize community ambulances for emergency referrals should be made. Overall RHCs need to ensure that health facilities under their mandate are responsive and accountable to the community

Ministry of Health and Child Welfare (MOHCW)

Permanent Secretary

- The secretariat needs to resuscitate and capacity build RHCs in line with community initiatives. A needs assessment for all MWHs in the country should be carried out to allow for budget planning.

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- Resource allocation to MHS should be well formulated and increased and this can be done through lobbying from the Finance ministry and seeking donor support. This will enable implementation of access increasing programs.

Then

- Utilizing past experience from Zimbabwe establish pilot training facilities in BeMOC and EmOC for nurse aides and increase their availability in health facilities. After mobilizing resources MWHs to be made functional in line with local norms and values and this needs to be done. Clinical Officers should be distributed according to need.
- The referral system should be strengthened through provision of more ambulances, communication equipment and regular needs assessments to be done for facility health workers to guide training. All these activities need to be done one province at a time and scaled up funds permitting.

Policy

- The secretariat needs to improve monitoring implementation of the removal user fees to avoid discrepancies through a taskforce and community awareness campaigns.
- The retention package for health workers should be broadened to include non-financial incentives such as career prospects, further education and accommodation. Nurse-aides and clinical officers grades need to be upgraded commensurate with their new roles and responsibilities whilst increasing the quota for rural school graduates at training institutions for nursing and medicine

Parliament

Parliamentarians as the elected leaders of communities should champion initiatives that increase access to better quality care and are encouraged to:

- Play an active role in community mobilization programs and also generate resources for MHS in their constituencies. They are encouraged to vote for a higher budgetary allocation to the Ministry of health and concurrently advocating for poverty alleviation strategies and increasing educational levels for all particularly rural women

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Monitoring and Evaluation and Research

We saw that there is limited data on access to MHS so the MOHCW are requested to:

- Improve health information management systems to ensure timely and correct data generation from facilities and develop indicators to monitor the trend in access to MHS. Supervisory supportive visits can be harnessed for this. After data generation there is need to stimulate researches of various methodologies into the field of access in rural areas.

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Annex A

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