NATIONAL AUDIT OFFICE OF THE GAMBIA

PERFORMANCE AUDIT REPORT
EMERGENCY OBSTETRIC CARE IN PUBLIC HEALTH FACILITIES
MINISTRY OF HEALTH AND SOCIAL WELFARE

SEPTEMBER 2020

Table of Contents

List of Pictures

List of Tables

List of Figures

List of Appendices

LIST OF ACRONYMS

ANC	**Antenatal Care**
AVD	Assisted Vaginal Delivery
BEmOC	Basic Emergency Obstetric Care
BMCHH	Bundung Maternal and Child Health Hospital
CEmOC	Comprehensive Emergency Obstetric Care
CEO	Chief Executive Officer
CHN/M	Community Health Nurse Midwife
CRR	Central River Region
C-S	Caesarean Section
EN/M	Enrolled Nurse Midwife
EFSTH	Edward Francis Small Teaching Hospital
EmOC	Emergency Obstetric Care
HR	Human Resource
LRR	Lower River Region
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio
MOH&SW	Ministry of Health and Social Welfare
NBER	North Bank East Region
NBWR	North Bank West Region
PS	Permanent Secretary
RCH	Reproductive and Child Health
RFH	Riders For Health
RH	Reproductive Health
RHD	Regional Health Directorate
RMNCAH	Reproductive, Maternal, Neonatal, Child and Adolescent Health
RN/M	Registered Nurse Midwife
SDG	Sustainable Development Goal
UN	United Nations
UNDP	United Nation Development program
UNFPA	United Nation Fund for Population Activities
UNICEF	United Nation International Children's Emergency Fund
VHS	Village Health Service
VHW	Village Health Worker
WHO	World Health Organization
URR	Upper River Region
WHR1	Western Health Region One
WHR2	Western Health Region Two

EXECUTIVE SUMMARY

Background

Maternal health in The Gambia forms one of the key components of equitable provision of quality health care to the citizenry. This has attracted both national and international attention and in light of this, the government of the Gambia through its Ministry of Health has put in place a National Reproductive, Maternal, Neonatal, Child and Adolescent Health (RMNCAH) Policy 2017 - 2026 that targets all service delivery points of emergency obstetric care (EmOC) to ensure that they are fully equipped both in terms of human resources and the necessary drugs and medical supplies to enable them to provide quality emergency maternal health services.

EmOC comprise all the set of interventions that are used to treat complications that arise during pregnancy or childbirth. This is amplified by the UN Sustainable Development Goal 3 (SDG 3) which target global and national efforts to improve women's health and tackle maternal deaths to which the Government of the Gambia is committed to as enshrine in the National Develop plan 2018-2012.

Motivation

The audit is initiated as a result of the failure of the Ministry of Health and Social Welfare to meet MMR targets over the years. The key factor contributing to this is inadequate access to EmOC services[1].

In addition, the WHO reported that there is vast majority of maternal deaths are caused by preventable and/or treatable obstetric complications[2]. Similarly the Gambia National Health Strategic Plan (2014-2020) also states that there is a gross unmet need (79%) for emergency obstetric care in facilities in The Gambia which was revealed by the survey on the availability, utilization, and quality of EmOC services in The Gambia carried out in 2003.

Furthermore, there is a public outcry, especially in the rural areas of the country regarding poor obstetric care provided to pregnant women and new mothers. Women are greatly concerned about the poor infrastructures at health facilities, difficulties in getting to the facilities, inadequacy of drugs, and poor service delivery to patients[3].
Design of the audit (scope and methodology)

The audit focused on Emergency Obstetric Care in Public Health Facilities in The Gambia provided by the Ministry of Health and Social Welfare. It also covers antenatal care as these interventions help in preventing maternal emergencies. The audit covered the period 01 January 2017 to 31 December 2019.

As part of this audit we conducted site visit to selected health facilities were EmOC services were offered. We also reviewed documents relating to EmOc and we conducted interview with selected staff of the Ministry.

[1] National Reproductive, Maternal, neonatal, Child and Adolescent Health policy, 2017-2026
[2] WHO handbook on Monitoring Emergency Care, 2009
[3] Foroyaa Newspaper (when action contradicts policy: horrific healthcare services in the rural Gambia), 05 December 2018

Key Finding

Functionality of EmOC centres in The Gambia

The Gambia meets the acceptable level of the CEmOC centres in number, but there are still gaps as to the distribution of these centres. LRR and NBWR have no facility providing full sets of comprehensive EmOC functions. Based on the size of our sample (more than half of the minor health centres) there is strong indications that the recommended number of functioning BEmOC centres is not met in the country as per the WHO recommendations.

Blood transfusion service is not performed in 29% of the designated CEmOC facilities due to the unavailability of blood bank facilities. In addition, C-S is not being provided in half of the mandated CEmOC facilities due to lack of human capacity, even though there were theatres available and equipped in two of the facilities visited. This function is not provided as a result of the unavailability of the personnel to deliver this service.

Non-performance of AVD was the main reason why most of the facilities failed to operate as BEmOC centres. Out of the 22 health facilities that did not provide AVD in the last three months, 95% has no vacuum equipment and human capacity, and only 5% reported not to have any case for its provision.

Midwifery workforce management

Seventeen (17) of the sampled facilities (representing 45%) have failed to meet the minimum mix of midwifery requirements. Furthermore, there is geographic variation in the extent of staffing shortfalls. All three general hospitals in the rural areas fell below the minimum staffing norms while the two in the urban areas have gone above it. The biggest difference occurred in the RN/Ms, which is the highest level of midwifery in the country. This level of the staffing gaps between rural and urban facilities is not limited to the general hospitals. A similar pattern is observed across all the health facility levels.

Monitoring EmOC Services

There is no monitoring mechanism to ascertain the functionality of EmOC centres in the country. Adequate data is not collected on the utilization of the EmOC services to be able to know whether facilities have provided the signal functions in the last three months or not. The monitoring checklist use by the RHDs and RMNCAH unit is not extensive enough to know whether obstetric emergency functions are performed or not and why they were not performed if so. The checklist cannot measure the availability of EmOC services due to its design.

Prevention of emergency obstetric cases

We noted that in all the health facilities visited, anaemia testing was carried out except in Foday Kunda were the service is not available. However, such laboratory diagnostic services are largely unavailable in RCH trekking stations. These subjected antenatal mothers to travel reasonable distance for appointments which may cause some women missing out on this vital service.

In addition we noted some of the women were not offered or do not performed the ultrasound scan as required by the WHO recommendations. This is mainly due to the non-availability of these machines especially in the rural Gambia were for example in one of the region there is only one machine in the entire Upper River Region. Some of these machines that were in some of the facilities were broken down and were yet to be replaced or maintenance. The maintenance for these complicated machines

are done centrally by a team of Biomedical Engineers which limits and causes delay in the maintenance process.

Availability of medical equipment

We noted that some key Medical tools or certain important maternal and neonatal assessment equipment are not adequately available in some of the facilities visited. These include Suctioning machines, Oxygen cylinders and dopplers. Furthermore, 58% of the facilities go for outreach programs without portable haemoglobin-meter (HB meters) at the trekking stations for testing HB. It should be noted that these are crucial to saving a person's life or performing any procedure, detect and diagnose the problem/disease at a very early stage that aids the health facilities to provide prompt care and treatment.

Conclusion

Functionality of EmOC centres in The Gambia

The Ministry although has ensured that the country meets the minimum acceptable level of CEmOC centres, it has failed to achieve the recommended aggregate number of EmOC centres. More than half of the mandated CEmOC centres are not providing either blood transfusion or both blood transfusion and C-S. LRR and NBWR have no CEmOC centres, thus delaying access to comprehensive EmOC for women in those regions.

Midwifery workforce management

The goal of the staffing norms was to realise shortages and surpluses and effectively regulate the imbalance. The Ministry has the required number of midwives to effectively implement the minimum staffing norms. However, the existing allocation mechanisms are not effective in ensuring that all the facilities, especially rural facilities, have the minimum required midwifery staff to provide the full set of quality EmOC. Furthermore, there are health facility and regional imbalances in midwifery shortfalls partly caused by institutional frameworks used in staff allocations. This has led to some facilities experiencing shortages and others going above the minimum norms, thereby creating a difference in the quality of care provided in the different facilities and regions.

Monitoring EmOC services

The monitoring plan implemented by the RHDs and RMNCAH unit has not ensured that EmOC services are adequately and effectively monitored. This is due to the weakness in the design of the monitoring checklist for health facilities. The monitoring reports focus on the indications of readiness and capacity to respond to maternal emergencies, and not on the actual evaluation of whether those capacities are efficiently and effectively used.

Prevention of emergency obstetric cases

There is an inadequate level of quality ANC services in the country to significantly reduce emergency obstetric cases to meet the SDG MMR targets by 2030. This conclusion is based on the fact that there is inadequate access to quality antenatal cares, especially in the rural areas, as all the 2016 WHO ANC recommended interventions are not adequately provided to pregnant women. As a result, pregnancy anomalies can go undetected until visible life-threatening complications occur and with limited access to EmOC services in the rural areas, these complications claim the lives of many

women. This problem is compounded by the fact that there is no effective system for following up on patients who miss their ANC contacts and are at risk of developing life-threatening obstetric complications.

Availability of medical equipment

The inadequacy of this equipment affected comprehensive and the quality of diagnosis of care given to patients. This inadequacy of equipment has led to some women not doing some of the necessary tests needed during ANC services. This has further led to an increase in the number of referrals to major health centres and hospitals for complications that could have been managed at lower-level facilities.

RECOMMENDATIONS

Functionality of EmOC centres in The Gambia

The ministry should ensure that these Health centres are strengthened both in terms of human capacity, theatre infrastructure and equipment to better manage obstetric emergencies before and during referrals. In addition, the monitoring team from the RHDs must ensure that all the health facilities have the first-line usable drugs for EmOC signal functions.

Midwifery workforce management

The Ministry should include the availability of an RN/M in the minimum staffing norms for a minor health centre. In addition, there should be more clarity about the allocation above the minimum norms. The Ministry should ensure that the existing midwifery staff is efficiently allocated based on clear guidance above the minimum norms. The minimum staffing norm should be revisited and be adjusted to the realities on the ground. Postings should also be enforced so that all facilities have the midwifery skills to provide quality EmOC services.

Furthermore, The Ministry should consider the possibility of training other cadre of the midwifery other than the RN/Ms on AVD so that the quality of the care provided can be enhanced, especially that RN/Ms are not available in all the facilities mandated to provide the services.

Monitoring EmOC services

The RHDs should incorporate monitoring the functionality of EmOC facilities in their checklist by collecting and analyzing data and reporting on the performance of the signal functions. In addition to verifying the availability of elements for responding to maternal emergencies, the signal functions that defined facilities as either EmOC centres or not should be monitored in each monitoring visit. The monitoring team should also establish why certain signal functions are not provided.

Furthermore, it may be fruitful if such data is provided to the RMNCAH unit or Directorate of Health Services, and any other relevant units so that it guides the efficient allocation of resources for proper and equitable distribution of EmOC services.

Prevention of emergency obstetric cases

The Ministry should consider making available feasible diagnostic methods for testing for anaemia, and other necessary investigations, at the trekking stations to improve the detection of anomalies at that level without the need for traveling to health facilities for such examinations. This is essential for

effective implementation of the policy to test for anaemia in all the eight (8) contacts with the pregnant women. Furthermore, The Ministry should put in place an effective mechanism for follow up on missed contacts, especially on patients with a history of obstetric complications or diagnosed with one.

Availability of medical equipment

The Ministry should ensure facilities are well equipped to provide efficient and effective services for patients. Furthermore, the Ministry should ensure there is always timely availability or replacement of medical equipment in facilities.

CHAPTER ONE: INTRODUCTION

1.1 Background to the audit

Maternal health in The Gambia forms one of the key components of equitable provision of quality health care to the citizenry. Maternal health has attracted both national and international attention and in light of this, National Reproductive, Maternal, Neonatal, Child and Adolescent Health (RMNCAH) Policy 2017 - 2026 targets all service delivery points of emergency obstetric care (EmOC) to be fully equipped, have the required human resources as per the staffing norms, have the necessary drugs and medical supplies to provide quality emergency maternal health services to help in achieving the national target of 50% reduction (from 433 to 215 per 100,000 live births) in Maternal Mortality Ratio (MMR) by 2026.

A set of interventions that are used to treat complications that arise during pregnancy or childbirth are collectively called EmOC[4]. Most pregnant and healthy women experience a normal physiologic process and deliver healthy live babies. However, when that process does not follow a normal course, timely access to quality EmOC can become a matter of life and death.

The UN Sustainable Development Goal 3 (SDG 3) has ushered in a new era of global and national efforts to improve women's health and tackle maternal deaths and the rigorous participation of the government is a principal driver of efforts in achieving this goal. The government of the Gambia has shown renewed commitment to reducing maternal mortality as enshrined in the National Development Plan 2018 - 2021. The Ministry of Health and Social Welfare (MOH&SW) is entrusted with the task of ensuring that this renewed commitment is transformed into actions.

1.2 Motivation

The United Nations (UN) Millennium Development Goal (MDG) era ended in 2015 and countries looked back on the progress made in achieving the goals. Goal 5 of MDGs was to improve maternal health. The maternal mortality ratio is a key performance indicator measuring progress in maternal health.

Despite the number of global and national efforts to improve women's health, maternal mortality remains a formidable challenge of the health sector in The Gambia[5]. The WHO statistics estimate maternal mortality ratio in The Gambia at 625 in 2015[6] as against the goal of 150 and there is little progress since then to ending preventable maternal mortality, as can be seen in Table 1. The Gambia fell more than four times short of this target with a variance of 475 deaths per 100,000 live births.

[4] WHO handbook on Monitoring Emergency Obstetric Care, 2009
[5] The Gambian National Development Plan 2012-2020
[6] Trends in Maternal Mortality: 1990-2015. Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division, 2015

Table 1: showing Trends in Maternal Mortality Ratio (MMR) between 2000 and 2019[7]

Year	2000	2005	2010	2015	2017
MMR	932	756	661	625	597

Despite some progress being made over the years, maternal deaths continue to be a challenge in The Gambia. SDG 3.1 target is to reduce the global maternal mortality ratio to less than 70 per 100,000 live births by 2030. To achieve this, no country should have an MMR higher than 140 deaths per 100, 000 live births.

The Gambia's overall reduction rate in MMR between the year 2000 and 2017 is 36%[8]. For The Gambia to achieve the target of having less than 140 deaths per 100,000 live births in MMR by 2030 (SDG 3), it needs to achieve an overall reduction rate of 77% from the 2017 figure, more than twice the current reduction rate.

The audit is initiated as a result of the failure of the Ministry of Health and Social Welfare to meet MMR targets over the years. The key factor contributing to this is inadequate access to EmOC services[9].

As reported by the WHO, the vast majority of maternal deaths are caused by preventable and/or treatable obstetric complications[10], thus the inadequacy of EmOC services in a country will inevitably lead to high maternal mortality as seen in The Gambia.

The Gambia National Health Strategic Plan (2014-2020) states that there is a gross unmet need (79%) for emergency obstetric care in facilities in The Gambia as revealed by the survey on the availability, utilization, and quality of EmOC services in The Gambia carried out in 2003.

Furthermore, there is a public outcry, especially in the rural areas of the country regarding poor obstetric care provided to pregnant women and new mothers. Women are greatly concerned about the poor infrastructures at health facilities, difficulties in getting to the facilities, inadequacy of drugs, and poor service delivery to patients[11].

The factors highlighted above indicate that there are lapses in the emergency obstetric care services in The Gambia. As a result, most of the maternal deaths in the Gambia are caused by direct causes[12] that could have been prevented with the availability of the right quality of interventions (EmOC services). In other words, most of the maternal deaths are largely due to limited access to EmOC services.

[7] Extracted from Trends in Maternal Mortality: 2000-2019. Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division; 2019.
[8] Trends in Maternal Mortality: 2000-2017. Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division; 2019
[9] National Reproductive, Maternal, neonatal, Child and Adolescent Health policy, 2017-2026
[10] WHO handbook on Monitoring Emergency Care, 2009
[11] Foroyaa Newspaper (when action contradicts policy: horrific healthcare services in the rural Gambia), 05 December 2018
[12] National Reproductive, Maternal, neonatal, Child and Adolescent Health policy, 2017-2026

1.3 Audit objective

The overall objective of the audit was to assess the measures put in place by the Ministry of Health and Social Welfare in ensuring that there is adequate quality EmOC in the country with the view to reducing the maternal mortality ratio to 140 deaths per 100,000 live births by 2030 as in line with the UN SDG 3.

1.4 Audit questions

The audit questions used in this audit to conclude against the audit objective are:

a) To what extent has the Ministry ensured that the provision of EmOC is adequate, geographically, and equitably distributed?
b) To what extent do public health facilities provide quality EmOC?
c) How effective are measures put in place by the Ministry to prevent emergency obstetric cases?
d) How effectively is the Ministry monitoring the provision of EmOC in public health facilities?

1.5 Assessment criteria

In order to address the above audit questions in assessing the performance of the Ministry in providing emergency obstetric care, we used the audit criteria from the Ministry's policy and strategic documents and WHO recommendations.

Adequacy, and geographic and equitable distribution of EmOC centres

- "The National Health Policy 2012-2020" states that all health facilities in the secondary and tertiary tiers should provide EmOC services. The minor health centres are mandated to provide basic EmOC services while the major health centres and the hospitals are mandated to provide comprehensive EmOC services. Functions of basic and comprehensive EmOC services are outlined in the table below:

Table 2: showing the availability of what emergency interventions (signal functions) are used to identify basic and comprehensive EmOC facility

Basic Services	Comprehensive Services
(1) Administer parenteral antibiotics	Perform signal functions 1–7, plus:
(2) Administer uterotonic drugs (i.e. parenteral oxytocin)	(8) Perform (e.g. caesarean section)
(3) Administer parenteral anticonvulsants for Pre-eclampsia and eclampsia (i.e. Magnesium sulphate).	(9) Perform blood transfusion
(4) Manually remove the placenta	
(5) Remove retained products (e.g. manual vacuum extraction, dilation, and curettage)	
(6) Perform assisted vaginal delivery (e.g. vacuum extraction, forceps delivery)	
(7) Perform basic neonatal resuscitation (e.g. with bag and mask)	

Source: Monitoring Emergency Obstetric Care, world Health Organization 2009

- According to the "WHO Handbook on Monitoring Emergency Obstetric Care 2009" a health facility is classified as basic EmOC centre if it performs functions 1 to 7, and as comprehensive EmOC centre if it performs functions 1 to 9; in the last three (3) months prior to assessment.

- The adequacy of EmOC centres in a country is measured by the number of facilities that perform the complete set of signal functions in relation to the size of the population. The 2009 WHO Handbook on monitoring EMOC recommends that a country should have at least five (5) EmOC centres, including at least one comprehensive facility, for every 500,000 populations at any given time and that these facilities should be geographically and equitably distributed.

- The population of the Gambia in 2018 was estimated at 2,335,504[13]. Based on the WHO guidelines stated above, The Gambia should have twenty-four (24) EmOC centres: a mix of at least five (5) CEmOC centres and nineteen (19) BEmOC centres and these centres should geographically and equitably be distributed.

For quality EmOC services to be provided in a health facility, the prerequisite conditions must be in place. These are as follows:

a) Skilled human capacity

- In August 2014 The Ministry reviewed its staffing norms for health care facilities, including the EmOC facilities. Below are the minimum staffing norms for the EmOC centres.

Table 3: showing the minimum midwifery norms for EmOC centres

Midwifery Cadres	Minor Health Centre	Major Health Centre and District Hospital	General Hospital	Teaching Hospital
RN/M	Not specified	2	5	20
EN/M		3	6	25
CHN/M		3	0	0
Total	**2**	**8**	**11**	**45**

Source: The Ministry of Health and Social Welfare, August 2014

- Considering the gross shortage of health care workers, the goal of the staffing norms was to realize shortages and surpluses of staff at the various levels, thereby enabling efficient distribution of the existing skilled health care professionals[14].

- The staffing norms represent the minimum requirement at each level of health care delivery, not necessarily being specific on the limit of staffing at a facility. The staffing level above the minimum

[13] The Gambia Bureau of Statistics: The Gambia 2018 Statistical Abstract
[14] Minimum staffing norms for different levels of health care delivery: The Ministry of Health and Social Welfare, August 2014

requirement is determined by the workload indicators such as the number of deliveries and ANC consultations[15].

b) Drugs and supplies

- The Central Medical Stores (CMS) of MOH&SW is responsible for the procurement and distribution of medicines and other medical supplies to the public health facilities including government hospitals[16]. Specific recommended drugs for EmOC services are covered in the relevant sections of the report.

c) Infrastructure and equipment

- The mission of the MOH&SW is to promote and protect the health of the population through equitable provision of quality health care within the context of Primary Health Care[17]. To this end, the Ministry through its strategic plan 2014-2020 undertakes to procure adequate equipment and supplies for Emergency Obstetric and Neonatal Care (EmONC) services for its health facilities.

Quality of EmOC services

Because of the critical role quality care at antenatal periods and during obstetric emergencies can play in reducing maternal mortality, the National Maternal and Neonatal Care Guidelines and Service Delivery Standards April 2017 states that antenatal care should be provided by a skilled and professional midwife[18] for effective delivery of the 2016 WHO ANC model. Therefore, ensuring there is enough mix of midwifery workforce with the right skills to meet the demand for high-quality ANC and EmOC services are essential to the operation of the Ministry in accelerating the reduction of maternal mortality as in line with SDG 3.

Preventions of emergency obstetric cases

- While it is important that facilities are ready to provide appropriate interventions in cases of obstetric emergencies, it is more cost-effective[19] to engage in programs and strategies to limit the prevalence of complications. Therefore, national and international stakeholders put in place programs so that EmOC centres would have the minimum obstetric emergency cases.

- One of such programs is the 2016 WHO ANC Model, which recommends a minimum of eight (8) ANC contacts for each pregnant woman after it was found that the previous focused four-visit ANC model does not offer pregnant women adequate contact with health-care practitioners and was no

[15] Minimum staffing norms for different levels of health care delivery: The Ministry of Health and Social Welfare, August 2014
[16] The Gambia National Health Strategic Plan 2014-2020.
[17] The national health policy 2012-2020
[18] This report generally uses the term 'midwife' to mean those health care professionals who meet the academic and professional qualifications of the three cadres of the midwifery (registered midwife, enrolled midwife and community health nurse midwife) as defined by the MOH&SW
[19] The State of the World's Midwifery, WHO 2014

longer recommended. Health care system planners should operationalize the recommended eight ANC contacts in ways that are feasible in the local context. Through the National Maternal and Neonatal Care Guidelines April 2017, the MOH&SW adopted both the timing and content of each of the ANC contacts recommended by 2016 WHO ANC Model. The model is delivered in the Gambia within the context of health facility visits and RCH clinics in rural and hard-to-reach settings for effective implementation of the model. This is intended for each pregnant woman to have at least eight (8) ANC contacts with healthcare providers during her pregnancy to improve maternal and newborn outcomes.

Table 4: showing a comparison between the number and timing of Focus ANC and 2016 WHO ANC Model

WHO Focused ANC Model	2016 WHO ANC Model
First trimester	
Visit 1: 8-12 weeks	Contact 1: up to 12 weeks
Second trimester	
Visit 2: 24-26 weeks	Contact 2: 20 weeks contact 3: 26 weeks
Third trimester	
Visit 3: 32 weeks Visit 4: 36-38 weeks	Contact 4: 30 weeks Contact 5: 34 weeks Contact 6: 36 weeks Contact 7: 38 weeks Contact 8: 40 weeks
Return for delivery at 41 weeks if not given birth.	

Source: 2016 WHO recommendations on antenatal care for a positive pregnancy experience

- Reproductive and Child Health (RCH) base clinics are supposed to be held at secondary tier facilities at least once per week. In addition, trekking teams from these facilities should visit a set schedule of outreach clinics at least once a month in each health facility's catchments area[20] to deliver a set of recommended interventions mapped to the eight contacts.

- These interventions help in ensuring continuity of maternal care and in promoting other maternal health behaviours and self-care across the country with the aim of improving maternal outcomes.

Monitoring EmOC functions

- One of the priorities of The National Monitoring and Evaluation Plan for the National Health Strategic Plan (NHSP), 2014-2020 is to strengthen surveillance, monitoring, and evaluation at all levels so that key indicators are routinely monitored and used for decision making.

- One such key indicator is the performance of the signal functions that are used in defining the EmOC status of a health facility.

[20] The Gambia National Health Strategic Plan 2014-2020

CHAPTER TWO: DESIGN OF THE AUDIT

2.1 Audit scope

The audit focused on Emergency Obstetric Care in Public Health Facilities in The Gambia provided by the Ministry of Health and Social Welfare. It also covers antenatal care as these interventions help in preventing maternal emergencies. The audit covered the period 01 January 2017 to 31 December 2019.

2.2 Audit methodology

In conducting this audit, we used the following methods of gathering data and information.

2.2.1 Document review

Relevant documents were reviewed in order to get comprehensive, relevant, and reliable information on emergency obstetric care in The Gambia. The table below shows documents reviewed and the purposes for which they were reviewed.

Table 5: showing some of the key documents we reviewed

Documents reviewed	Purpose for review
Health sector policy 2012-2020	To know the policy objectives that are to be met by the Ministry.
Health sector strategic plan 2014-2020	To obtain knowledge on the strategic objectives and actions for health sector
RMNCAH policy 2017-2026	To obtain knowledge on the policy objectives that are to be met in the obstetric care service delivery.
National Maternal & Neonatal Care Guidelines and Service Delivery Standards	To obtain knowledge of the guidelines for service delivery procedures to obstetric patients.
WHO Handbook on Monitoring emergency obstetric care	To obtain knowledge on the guidelines for monitoring the availability and use of obstetric services To understand the indicators for EmOC services
The state of the World Midwifery, WHO 2014	To obtain knowledge on best practices in term of midwifery services
2016 WHO recommendations on antenatal care for positive pregnancy experience	To understand the recommendation for the provision of ANC services
Maternal death forms and reports	To obtain knowledge on causes for maternal mortalities in the country
Monitoring reports by RHDs	To obtain knowledge on the challenges in the provision of EmOC services in health facilities
Maternal death reports	To understand the circumstances surrounding maternal deaths
RMNCAH strategic plan 2017-2021	To know the strategic targets and interventions of RMNCAH

2.2.2 Interview

Seventy-four (74) interviews were conducted during the audit in order to:

a. Understand the operations of MOH&SW relating to emergency obstetric care;
b. Confirm/corroborate or to receive further information from the documents reviewed;
c. Give additional relevant information in cases where information in the formal documents was lacking or insufficient;
d. Ascertain whether the signal functions are performed in the last three months or not.

The officials interviewed are detailed in **APPENDIX 2.**

In addition, one hundred and five (105) questionnaires and sixty-nine (69) questionnaires were administered to the care providers and postpartum patients respectively at the facilities visited to understand the quality and experiences in the provision of EmOC services.

2.2.3 Site visits and physical verification

The Gambia has seven (7) health regions, with fourteen designated CEmOC and forty-five BEmOc facilities. We visited all the fourteen (14) designated CEmOC facilities (major health centres and hospitals) and twenty-four (24) designated BEmOC facilities out of forty-five (45)[21] minor health centres across the seven regions.

We visited all the designated CEmOC facilities, because of their limited number and the critical role they play in the provision of EmOC services as they provide all the key interventions for responding to obstetric emergencies. A number of designated BEmOC facilities are randomly sampled from each region to present a fair representation of BEmOC services across the country.

APPENDIX 8 details the facilities visited.

The purposes of these visits were as follows:

- Interview/discuss with relevant health workers in the maternity wards and other departments.
- Administration of questionnaires to midwives/nurses and patients.
- Review of facility registers (admission registers, antenatal registers, referral-in, and referral-out registers, etc.) in the maternity ward
- For assessing facility readiness, an inspection of relevant facilities and infrastructures were carried out in:
  - Blood banks – to see the availability of blood (readiness) for performing the blood transfusion functions;
  - Drug stores / Pharmacies - to see the availability of requisite drugs and supplies for performing the EmOC signal functions;
  - Maternity wards - to see if the requisite equipment for performing the EmOC signal functions are available.

[21] The Gambia 2018 Statistical Abstract, the Gambia Bureau of Statistics

CHAPTER THREE: DESCRIPTION OF THE AUDIT AREA

3.1 Background of the auditee

The Ministry of Health and Social Welfare (MOH&SW) is responsible for overall policy formulation, planning, organisation, coordination, and evaluation of the health sector[22]. The Ministry is tasked with the responsibility of promoting and protecting maternal health of the population through the equitable provision of affordable and quality health care.

The Ministry is headed by a Minister who is assisted by a Permanent Secretary. The Permanent Secretary serves as the Chief Administrator of the Ministry assisted by two deputy permanent secretaries (PS technical and PS, administration and finance).

There are two departments namely; the Department of Medical and Health and the Department of Social Welfare.

The Department of Medical and Health is responsible for planning, policy formulation, and implementation of health programs and evaluation of health sector performance and indicators. The department has different directorates each responsible for specific functions as described in **APPENDIX 3**.

The National Reproductive, Maternal, Neonatal, Child and Adolescent Health (RMNCAH) is the program unit, under the Directorate of Health Service, that manages and coordinates the Ministry's activities for maternal health.

3.2 System description

3.2.1 The tiers of the Gambia national health system

Generally, the healthcare service delivery system in the Gambia is organized into three tiers, namely: primary, secondary, and tertiary tiers[23]. EmOC is delivered through these tiers of the health system.

a. The primary tier/village health service

The primary tier, also called the Village Health Service (VHS), consists of the Community Birth Companions (CBC) and Village Health Workers (VHW). The CBCs and VHWs function as birth companions to patients, antenatal and postnatal advisers, family planning distributors, and health educators. VHS refers obstetric complications to the local health facility as they are not authorised to provide EmOC services.

b. The secondary tier

This tier consists of district hospitals, minor and major health centres. These health facilities are crucial in obstetric service delivery as it is the first point of contact for pregnant women in the EmOC service delivery. The health policy underscores the importance of pregnant women visiting the

[22] National health policy 2012-2020
[23] The Gambia National Health Policy 2012-2020

health centres in the early stages of their pregnancy, because the earlier a woman has contacted with a healthcare provider the better the pregnancy outcome.

Minor health centres provide Basic Emergency Obstetric Care (BEmOC) and district hospitals and major health centres provide Comprehensive Emergency Obstetric Care (CEmOC)[24].

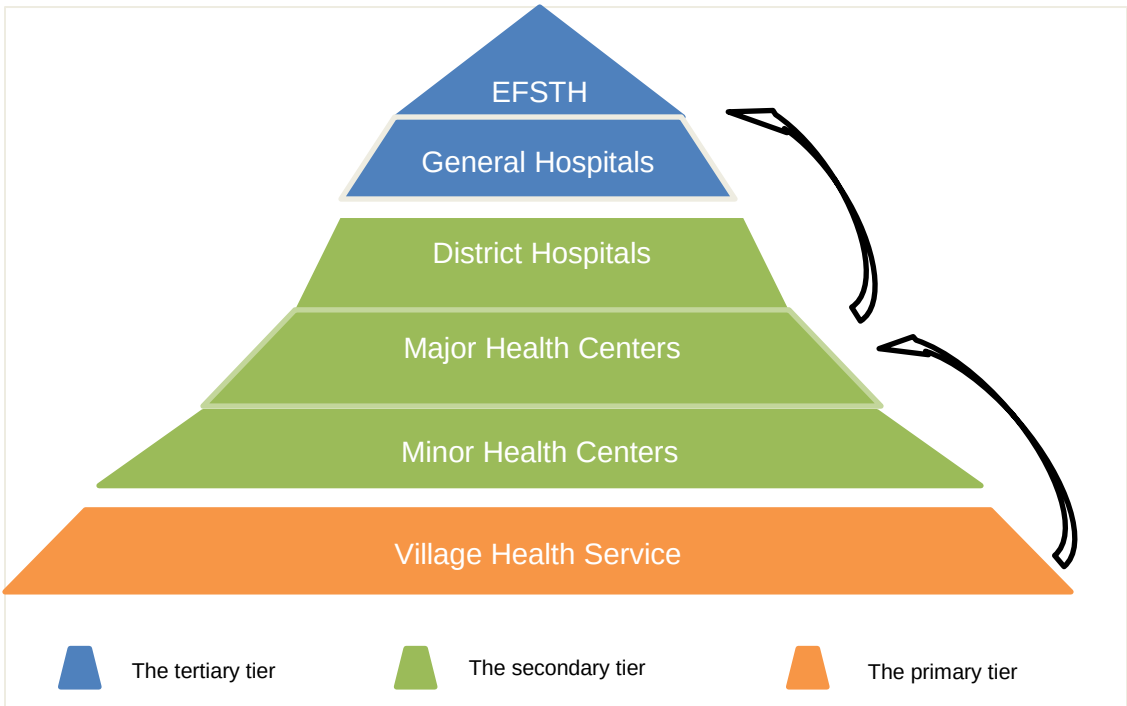
If a major health facility does not have the required capacity to provide comprehensive care at any time, a patient is referred to the nearest general hospital to be carried by an ambulance of the facility. Where possible, her condition is stabilized by giving necessary antibiotics before referrals.

c. The tertiary tier

This tier comprises the general and teaching hospitals. They provide CEmOC services. The general hospitals serve as the referral points for the major health facilities.

The country has five general hospitals and one teaching hospital. Where complications cannot be managed at the general hospitals, referrals are made to the teaching hospital (Edward Francis Small Teaching Hospital), which is the last referral point in the healthcare system.

Diagram 1: showing the three-tier healthcare system in the Gambia



Source: Audit team, based on the documentary review

[24] The Gambia National Health Policy 2012-2020

Table 6: Roles and Responsibilities of Key Stakeholders

Key Players	Roles/Responsibilities
Senior Management at Central Level	• Takes care of policy issues and overall coordination of the ministry
Regional Health Teams	• Responsible for the overall administration and monitoring of all health activities in their respective regions
Hospitals and Health centres	• Provision of care services to obstetric patients
The Community	• Access and use obstetric care health service. • Leverage community resources for timely referral of obstetric patients to health facilities.
Riders for Health (RFH)	• Supply and fuelling of ambulances to health facilities • Fuelling of generators in health centres and district hospitals
The International community (UNICEF, UNDP, UNFPA, WHO, World Bank etc)	• Funding support to reproductive health programs. • Donation of equipment and drugs • Technical support to development and publication of reproductive health care documents (guidelines and policies)

3.2.2 Vision[25]

The vision of the MOH&SW is "*to provide quality and affordable health services for all by 2020"* in which obstetric care is incorporated.

3.2.3 Mission[26]

The mission of the MOH&SW is *"to promote and protect the health of the population through the equitable provision of quality health care"*.

3.2.4 The specific objectives of the Ministry[27]

The specific objectives of the Ministry of Health and Social Welfare relevant to EmOC are:

- Reduce maternal mortality ratio to 315 and 215 per 100,000 live births by 2020 and 2026 respectively.
- As per SDG 3, reduce maternal mortality ratio to less than 140 per 100 000 live births by 2030 and end preventable maternal mortality by that time.
- Ensure access to basic and comprehensive EmOC for all
- Improve timely collection of health data and availability of reliable health information by 2020
- Improved access to referral services for obstetric services, especially at the community level

[25] National health policy 2012-2020
[26] The Gambia National Health Policy 2012-2020
[27] The Gambia National Health Policy 2012-2020; The Gambia National Health Strategic Plan 2014-2020; National Reproductive, Maternal, Neonatal, Child and Adolescent Health Policy 2017-2026

3.2.5 The Activities carried out by the Ministry of Health and Social Welfare in relation to EmOC[28]

- Provision of obstetric medical care services.
- Sensitization of adolescent and adult women of reproductive age on reproductive health.
- Deployment of the necessary human capacity to health facilities for EmOC services.
- Provision of the necessary infrastructure, equipment, drugs, and supplies for obstetric care.
- Collection of relevant maternal health indicators/information such as maternal and neonatal deaths.
- Monitoring of maternal health care services.

3.2.6 Funding for the provision of emergency obstetric care

The government allocation to the health sector between 2017 and 2019 is approximately 10% of the national budget. The table below shows the budget estimates and actual expenditures of the Ministry of Health and Social Welfare during the periods under audit.

Table 7: showing the funding of the MOH&SW

Years	Estimates	Approved Estimates	Actual Expenditure
2017	742,966,090	742,966,909	779,967,159
2018	824,529,063	824,529,063	816,564,835
2019	1,037,567,500	1,037,567,500	**[29]

Source: estimates of revenue and expenditures 2017,2018 and 2019

The table below shows the budget estimates and actual spending on activities related to maternal and child health during the periods under audit.

Table 8: showing the funding of reproductive (maternal) and child health services

Years	Funding source	Estimates	Approved Estimates	Actual Expenditure
2017	The 2017 estimates does not specify the estimates for maternal, reproductive or child health			
2018	Government	1,690,000	1,690,000	278,987
	Donors	101,000,000	101,000,000	Not available
	Total	**102,690,000**	**102,690,000**	Not available
2019	Government	3,410,000	3,410,000	Not available
	Donors	263,391,600	263,391,600	Not available
	Total	**266,801,600**	**266,801,600**	Not available

Source: estimates of revenue and expenditures 2017, 2018 and 2019

Specific donor projects are attached as **APPENDIX 7.**

[28] Interview at RMNCAH unit on 10th July 2019.
[29] The actual was not available at the time of the audit

3.3 PROCESS DESCRIPTION

3.3.1 Emergency obstetric care delivery

Following the declaration by the President of the Republic of The Gambia in 2007, the government has committed itself to make EmOC available to all Gambian citizens free of charge at all public health facilities[30].

The process of EmOC delivery is as follows:

3.3.2 Accessing EmOC facility

A patient accesses the point of care (health facility or trekking station) for routine ANC, when she notices irregularities with pregnancy, or when labour starts. Families are largely responsible for transporting their patients to health facilities to access the care. Private/commercial vehicles, donkeys, and horse carts are the most common means of transporting patients to health facilities in the country.

3.3.3 Receiving appropriate care

When a pregnant woman accesses a health facility with irregularities associated with pregnancy or childbirth, a rapid assessment of her condition is made to determine the extent of her illness. If pregnancy-related complications are identified, appropriate interventions are made to treat the complication for positive pregnancy outcomes.

The nine key interventions, defined as the EmOC signal functions and what complications they are used to treat, are briefly discussed below.

1) Administration of parenteral antibiotics

Parenteral antibiotics are administered in the context of obstetrics to prevent or treat complications of infections (sepsis), complicated abortions, rupture uterus, etc[31]. Widely used parenteral antibiotics in obstetric emergency cases are ampicillin, gentamicin, and clindamycin[32].

2) Administration of parenteral uterotonic drugs (i.e. parenteral oxytocin)

Uterotonic drugs are administered both to prevent and to treat postpartum haemorrhage (loss of too much blood i.e. bleeding). Parenteral oxytocin is identified by WHO as the recommended choice of drug for the prevention of postpartum bleeding. Oxytocin is also used for the augmentation of labour. Parenteral ergometrine (2nd line) and misoprostol (3rd line) are options that should only be used where oxytocin is not available[33].

[30] National Health Policy 2012-2020
[31] Handbook on Monitoring EmOC, WHO 2009
[32] Integrated management of pregnancy and childbirth: Pregnancy, Childbirth, Postpartum and Newborn Care, WHO 2015
[33] Handbook on Monitoring EMOC, WHO 2009

3) Administration of parenteral anticonvulsants (i.e. magnesium sulphate) for pre-eclampsia and eclampsia

Pre-eclampsia and Eclampsia are pregnancy conditions in which one or more convulsions (seizure) occur in a pregnant woman suffering from high blood pressure, often followed by a comma and posing a threat to the lives of mother and baby[34]. Magnesium sulphate is the first line of anticonvulsant drugs administered to prevent and treat pre-eclampsia and eclampsia[35].

4) Manual removal of the placenta

The placenta is delivered naturally after birth. It could also be expelled with the administration of oxytocin in combination with controlled cord traction. However, if the placenta has not expelled within thirty minutes after the birth of the baby, especially in cases of heavy bleeding, manual removal is recommended[36] for its removal.

5) Removal of retained products (e.g. manual vacuum aspiration, dilation, and curettage)

Retained products of conception (APOC) refers to placental remain and/or foetal tissue that remains in the uterus after a spontaneous pregnancy loss (miscarriage), planned pregnancy termination (abortion), or preterm/term delivery. Manual vacuum aspiration is often used to treat complications of abortion. Dilation and curettage (with use of curette) are other methods used only if manual vacuum aspiration is not available[37].

6) Assisted vaginal delivery (AVD) (e.g. vacuum extraction, forceps delivery)

Spontaneous vaginal delivery is sometimes obstructed or prolonged so AVD is performed with forceps or a vacuum device (extractor) to deliver the baby. It is an important emergency intervention because it obviates the need for C-S in some cases of prolonged or obstructed labour[38]. Only registered midwives (RN/Ms) are authorised to perform this function[39] in the Gambia health care system.

7) Basic neonatal resuscitation (e.g. with bag and mask)

If there are signs of respiratory depression in the new-born (i.e. baby not breathing/crying), resuscitation is performed to help with breathing. Bag and mask is the device used for resuscitating[40] new-borns who experience difficulty in breathing.

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[34] Handbook on Monitoring EmOC, WHO 2009

[35] Open Access Journal of reproductive and sexual disorders: The Study of Magnesium sulphate vs Diazepam in Eclampsia, December 10,2018

Cochrane Database of Systematic Reviews*:* Magnesium sulphate versus diazepam for eclampsia. 2010, Issue 12. Art. No.: CD000127

[36] Integrated management of pregnancy and childbirth: Managing complications in pregnancy and childbirth, WHO 2017

[37] Handbook on Monitoring EmOC, WHO 2009

[38] https://www.acog.org/Patients/FAQs/Assisted-Vaginal-Delivery?IsMobileSet=false; date retrieved: 19/11/19; time10:37

[39] Interview at RMNCAH unit, 13/12/2019

[40] Integrated management of pregnancy and childbirth: Managing complications in pregnancy and childbirth, WHO 2017

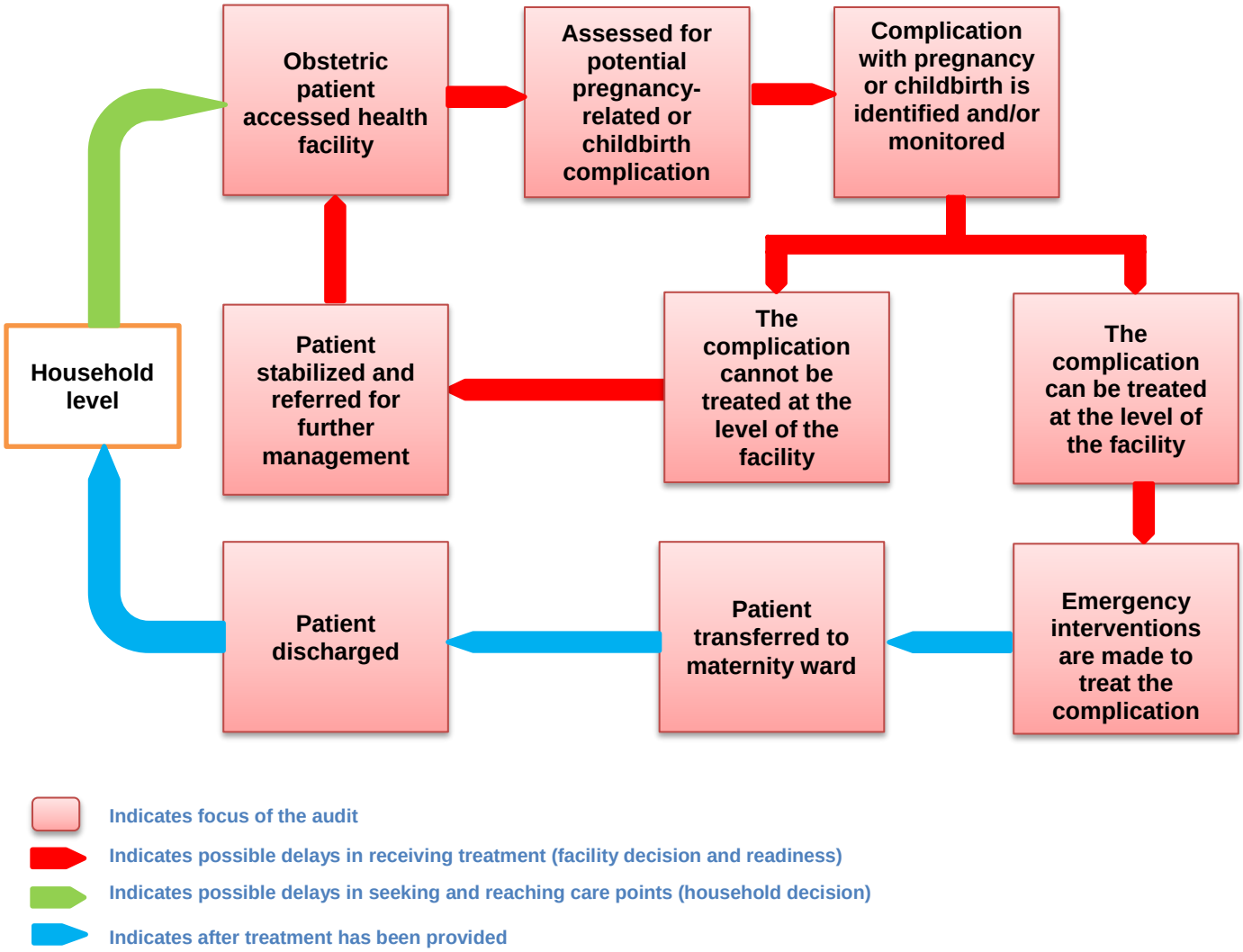
8) Caesarean section

Vaginal delivery is not always possible in childbirth. So caesarean section (C-S) is the emergency surgical intervention performed to deliver the baby. Medical doctors are the authorised[41] cadres of staff to perform this function. Furthermore, C-S is the key intervention for preventing obstetric fistula caused by prolonged or obstructed labour[42].

9) Blood transfusion

Blood transfusion is transferring donated blood or blood products into the circulatory system of a person. It is a life-saving function to save the lives of pregnant women suffering from complications like after-birth bleeding or loss of a large volume of blood at C-S and severe anaemia[43].

Diagram 2: showing ideal patient pathway through EmOC



Source: Audit team

[41] Interview at RMNCAH unit, 13/12/2019
[42] Handbook on Monitoring EmOC, WHO 2009
[43] Integrated management of pregnancy and childbirth: Managing complications in pregnancy and childbirth, WHO 2017

3.3.4 Discharge after treatment

When the woman is successfully treated of the pregnancy-related complication, she could be discharged immediately or admitted to the maternity ward until such a time she is fit to return home. Her family is responsible for transporting her back home in terms of logistics and finance.

3.3.5 Referral of patients

It is possible that a patient arrived at a facility that cannot treat the complication that has been identified. This may be because the facility is not authorised to provide the required intervention or the facility lacks readiness to intervene, i.e. the necessary drugs, human resources, and equipment are not available. In cases like this, the patient is referred to a higher-level facility with the ambulance stationed at the facility for further management.

3.3.6 Monitoring EmOC

The Regional Health Directorates conduct quarterly monitoring of maternal health care services in the district, minor, and major health centres. The RHDs use a monitoring checklist to assess health facilities based on their minimum maternal health care package. Reports are produced for each health facility monitored in the assessment.

The RMNCAH unit also conducts quarterly monitoring of maternal health care services in the selected health care facilities and produces reports of the monitoring. The unit also started maternal death surveillance and response report in 2019. This report documents all the registered maternal deaths in the country and where they occurred and the causes of the deaths.

4 CHAPTER FOUR: Audit Findings

This chapter presents the audit findings, conclusions, and recommendations to the MOH&SW to improve efficiency and effectiveness of EmOC service delivery.

4.1 FUNCTIONALITY OF EMOC CENTRES IN THE GAMBIA

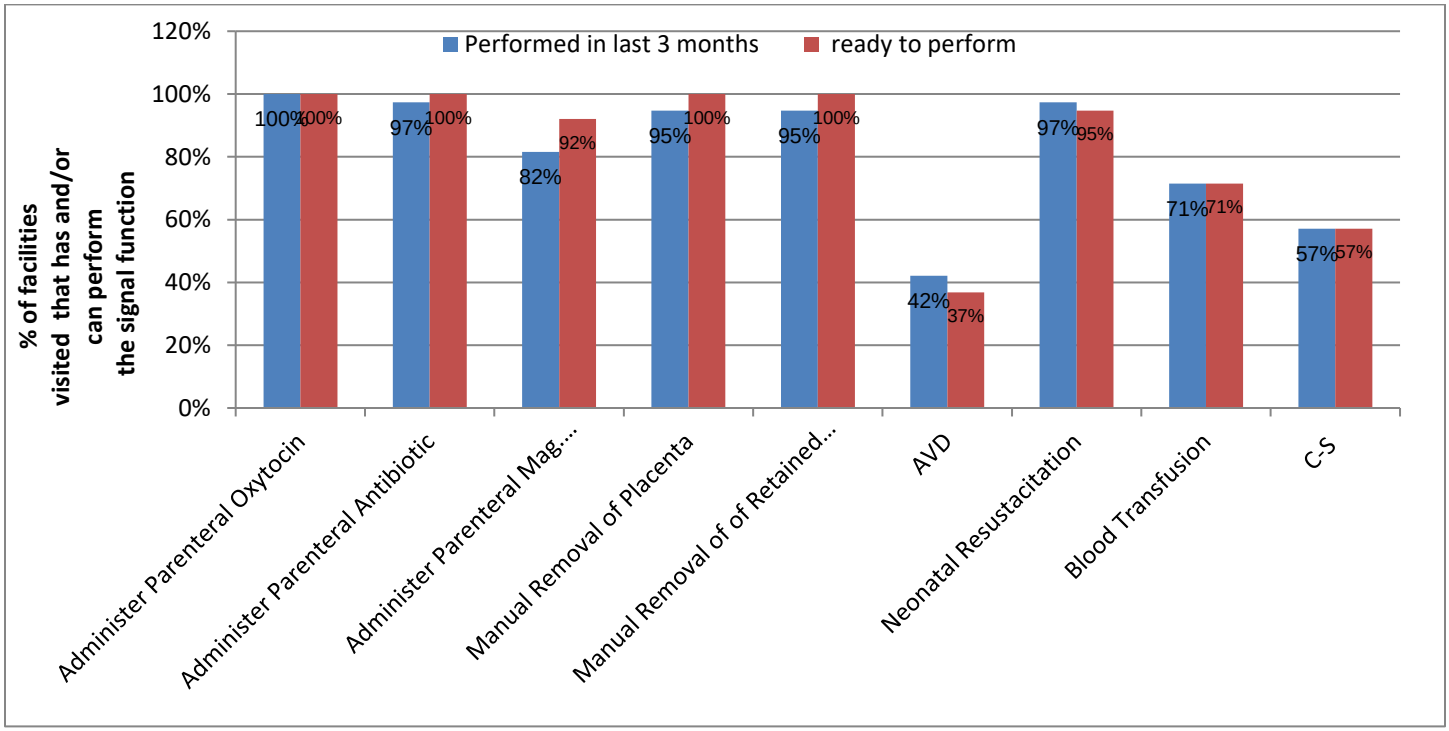
The minor health centres are mandated to provide BEmOC services and the major health centres and the hospitals are mandated to provide CEmOC services[44].

4.1.1 Provision of EmOC signal functions in the last three months

The use of the EmOC service by the pregnant women who have obstetric complications is measured by monitoring its performance in the last three months prior to assessment[45].

The figure below shows the percentage of facilities that had performed each of the signal functions in the last three months and a similar comparison in terms of readiness (capacity) to perform the functions.

Figure 1: bar chart showing the performance of the signal functions in the last three months and facilities' readiness to perform them

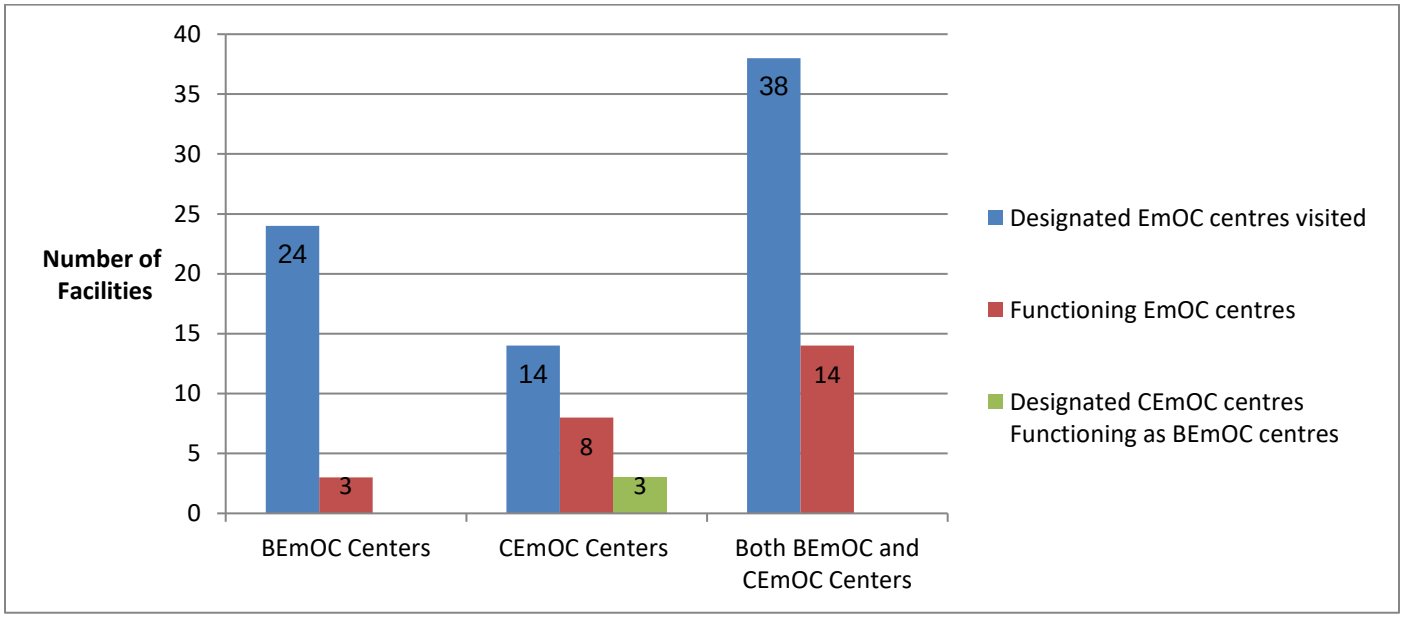


Source: Audit team
Note: The percentage of C-S and blood transfusion were based on the designated CEmOC centres

[44] The national health policy, 2012-2020
[45] WHO handbook on monitoring Emergency Obstetric Care, 2009

Based on the performance of the signal functions in the last three months prior to our facility visits, we found that out of the fourteen (14) designated CEmOC centres and twenty-four (24) sampled designated BEmOC centres visited as part of our sample, eight (8) are fully functioning CEmOC centres and six (6) fully functioned as BEmOC centres. In total, fourteen (14) facilities (representing 37%) fully functioned as EmOC centres out of the thirty-eight (38) designated EmOC facilities visited as can be seen in the chart below.

Figure 2: bar chart showing comparison between the designated EmOC centres and fully functioning EmOC centres



Source: Audit team

More than three-quarters of the facilities visited had performed at least six (6) of the basic signal functions. Non-performance of AVD was the main reason why most of the facilities failed to operate as BEmOC centres.

APPENDIX 5 details the performance of the signal functions by facilities selected and reasons why they failed to perform each of the functions

Reasons why the signal functions were not performed in the three months prior to our field visits.

Except for AVD, most of the basic signal functions were not performed in the sampled facilities because, there were no patient requiring these interventions or services.

More than half of the sampled facilities failed to provide AVD as a result of not having either the equipment and/or human capacity for its performance. This function is mainly performed in designated CEmOC centres; only three designated BEmOC centres (Banjulinding, Bakau, and Brikamaba) reported to have performed the function. As a result, the service is mainly provided in WHR 1 and 2

where CEmOC centres are prevalent. Only one designated CEmOC centre (i.e. Essau) failed to perform the function due to lack of vacuum equipment.

Blood transfusion service is not performed in 29% of the designated CEmOC facilities due to the unavailability of blood bank facilities. In addition, C-S is not being provided in half of the mandated CEmOC facilities due to lack of human capacity, even though there were theatres available and equipped in two of the facilities visited. This function is not provided as a result of the unavailability of the personnel to deliver this service.

Table 9: showing the reasons for non-performance of the signal functions in the sampled health facilities

The signal functions	Number of facilities that do not perform the functions	Reason for non-performance of the signal functions
Administration of parenteral antibiotics	1	The facility does not receive any patient needing this service
Administration of magnesium sulphate	7	4 facilities do not receive any patient needing this service. 3 facilities do not have (usable) magnesium sulphate.
Manual removal of placenta	2	The two facilities do not receive any patient needing this service.
Manual removal of retained product	2	The two facilities do not receive any patient needing this service.
Assisted vaginal delivery (AVD)	22	21 of them have no vacuum equipment. 1 does not receive any patient needing the service.
Neonatal resuscitation	1	The facility does not have the equipment (bag and mask).
Blood transfusion	4	The four facilities do not have the blood transfusion equipment.
C-S	6	3 have no human capacity and equipment 3 lack only the human capacity.

Source: audit team analysis

As can be seen in **Table 9**, the facilities that failed to perform administration of parenteral antibiotic, manual removal of retained product, and manual removal of placenta had no patient needing these services in the last three months. Out of the 22 health facilities that did not provide AVD in the last three months 95% has no vacuum equipment and human capacity, and only 5% reported not to have any case for its provision. The facilities that failed to perform neonatal resuscitation and blood transfusion are as result of lack of equipment. Inadequacy of human capacity is mainly responsible for limited access to C-S.

4.1.2 The capacity of facilities to provide EmOC

Most facilities have the capacity to provide basic EmOC functions, except AVD. On the other hand, there is still a gap as to the provision of comprehensive EmOC functions, especially in the major health facilities.

Table 10: showing the level of capacity to provide the signal functions in the sampled health facilities.

The signal functions	Number of (%) facilities without the capacity to perform the signal functions	Reasons for non-performance of the signal functions			
		No equipment available	The drug is not available	No human capacity available	Both human capacity and equipment are not available
Administration of magnesium sulphate	(8%)	-	100%	-	-
Assisted vaginal delivery (AVD)	(37%)	55%	-	29%	63%
Neonatal resuscitation	(5%)	100%	-	-	-
Blood transfusion	(29%)	100%	-	-	-
C-S	(43%)	50%	-	50%	100%

The performance of the functions in the last three months similarly relates to the capacity of the facilities to provide the service. This clearly indicates that the capacity to perform the EmOC signal functions determines its usage by pregnant women.

Causes to capacity gaps in the provision of signal functions

a) Assisted vaginal delivery

Registered nurse midwives are the only cadre of the midwifery authorised to perform this function[46]. So, we assessed capacity based on the availability of at least one RN/M and functioning vacuum device in the facility at the time of our visit.

The minimum staffing norms do not specify the mix of the cadres of the midwifery for minor health centres. The absence of this specification means that a minor health facility can meet the minimum staffing norms, but with inappropriate skill mix for the implementation of the minimum care package of basic EmOC facilities.

We found that four (4) of the sampled BEmOC facilities (representing 17%)[47] have met the minimum staffing levels as stipulated in the staffing policy in midwifery, but do not have the capacity to provide AVD as they are without an RN/M. So, while RMNCAH strategic plan 2017-2021 targets that all service delivery points meet the minimum staffing norms for RMNCAH by 2021, there would still be skill gaps with the existing staffing norms in some facilities even if the staffing norms are met in all the

[46] Interview at RMNCAH unit, 13/12/2019
[47] Kaiaf, Brikamaba, Sami Karantaba and Janjanbureh Minor Health Centres.

facilities. Since the focus of the evaluation of the policy implementation is on meeting the staffing norms, the skill gaps are often overlooked.

Furthermore, due to lack of the necessary midwifery cadres at some health facilities, unauthorized midwifery and nursing cadres perform AVD in some health centres, notably Brikamaba and Kuntair health centres, where the equipment was available. The performance of this function by an unauthorized cadre is against the set standards and poses a risk of providing poor quality of the intervention as they neither have the required training (both theory and practice) to perform the function nor do they have the authority to perform.

Although 71% of the facilities have the necessary human capacity to perform the function, only 41% of them have AVD equipment to perform the function. The data supplied to us by the Central Medical Store (CMS) showed that there was no procurement of the equipment for the period under review nor did CMS receive donations of such items. The last acquisition was in 2014 when 14 pieces of vacuum extractors were received. This makes it difficult to adequately equip the facilities with the necessary human capacity to provide the care.

Reviewed of the stock distribution report from the CMS shows that only 10 pieces of vacuum extractors (acquired in 2014) were distributed to the health facilities from the Central Medical Store in the three years under audit. The extract from the stock distribution report is shown below.

Table 11: showing the distribution of vacuum extractors from the Central Medical Store between 2017 and 2019

Regions / Facilities	2017 quantity	2018 quantity	2019 quantity	Total
WHR 1 Regional Medical store	0	1	0	1
WHR 2 Regional Medical Store	0	2	0	2
CRR Regional Medical Store	0	1	0	1
URR Regional Medical Store	0	1	0	1
NBWR Regional Medical Store	0	1	0	1
NBER Regional Medical Store	0	1	0	1
Brikama District Hospital	0	3	0	3
Total	**0**	**10**	**0**	**10**

Source: The Central Medical Store

There was stock balance of 4 pieces of vacuum extractors as at the time of this audit. These could have supplied to health facilities that have the human capacity in order to make the service available in those facilities.

This number of acquired vacuum devices (14) between 2017 and 2019 cannot be adequate for the effective implementation of BEmOC in the country.

Furthermore, although a vacuum device is available at Basse District Hospital, its functionality depends on the availability of power supply. The facility uses the suction machine for AVD. This equipment at the facility is run by electricity and the area experiences daily power blackout from 3 AM – 8 AM. As a result, the hospital reported that vacuum delivery is not available during of the day. In addition,

according to the interview, the generator available at the facility is used only for caesarean section cases because fuel allocation was inadequate for it to be used for both C-S and vacuum delivery[48].

b) Administration of parenteral anticonvulsant (i.e. magnesium sulphate)

Other anticonvulsant drugs (e.g. diazepam) are used in obstetric context for eclampsia and pre-eclampsia. However, evidenced-based studies showed that magnesium sulphate was associated with more reduction in maternal death and recurrence of seizures as compared to diazepam[49].

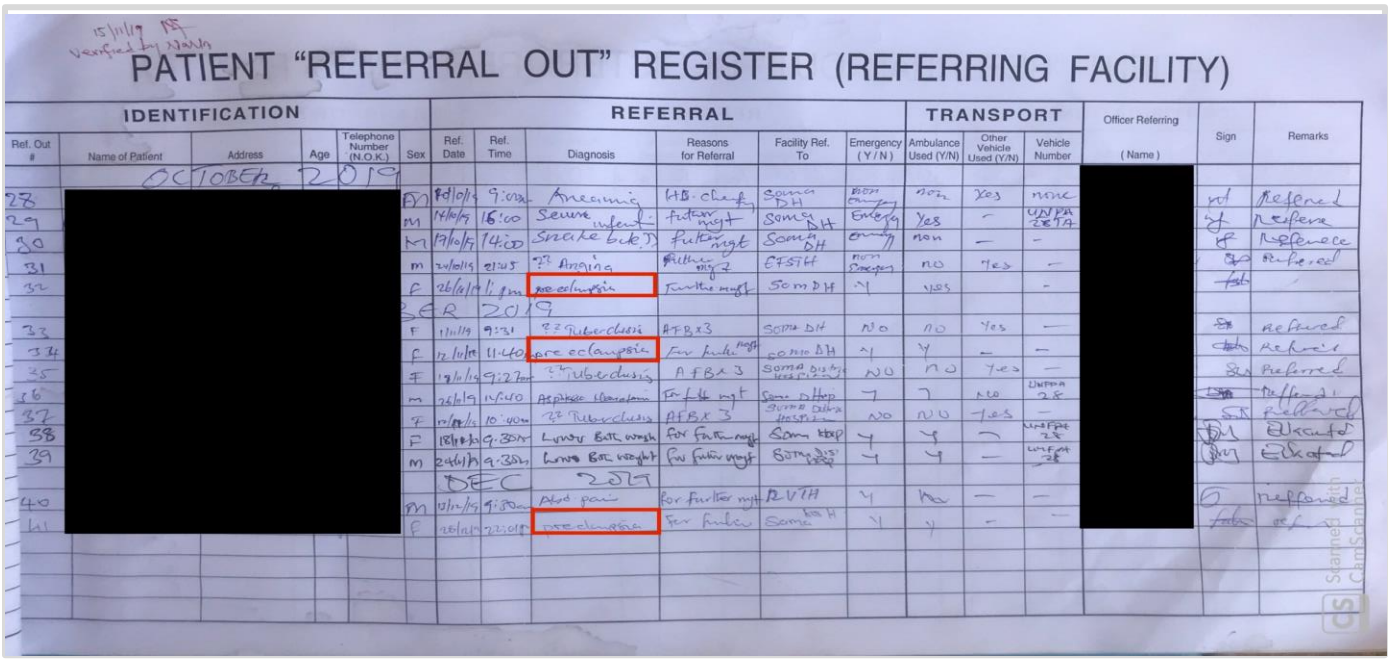
The three facilities (representing 8%) that lack the capacity to administer magnesium sulphate at the time of our visit lack the usable drug at the time of our visit.

Table 12: showing facilities that lack the readiness to perform Magnesium sulphate administration with the date of expiry of the drug.

	Health Centres	Expiry date of the drug
1	Fodaykunda	2017[50]
2	Kaiaf	May 2019
3	Sanyang	Since Sept. 2019

Furthermore, an inspection of the health facilities' referral register revealed that, these facilities had seen cases of eclampsia and pre-eclampsia. For example, three cases of pre-eclampsia were seen in the referral-out register at Kaiaf from June to December 2019 as can be seen below.

Picture 1: showing the referral of pre-eclampsia cases from Kaiaf Health Centre



Source: Audit pictures taken on 11th January 2020

[48] Interview at Basse District Hospital during site visit

[49] Open Access Journal of reproductive and sexual disorders: The Study of Magnesium sulphate vs Diazepam in Eclampsia, December 10,2018 & *Cochrane Database of Systematic Reviews:* Magnesium sulphate versus diazepam for eclampsia. 2010, Issue 12. Art. No.: CD000127

[50] This is based on testimonial evidence and we were unable to verify this because the drug was not seen.

Review of requisition and issue notebook of the health centre for the same period indicates these drugs were neither requested nor procured from the Result-Based Financing fund of the facility. The monitoring of these health facilities by RHDs also failed to ensure that these drugs are available in a usable state.

c) Caesarean section

Fajikunda, Sanyang, kuntair, Essau, Kuntaur and Soma are the designated CEmOC facilities without adequate capacity to provide the service.

There were no operating theatres in Sanyang, Fajikunda, and Kuntair to perform C-S. However, Kuntaur, Essau, and Soma have equipped theatres, but lack the human capacity to perform C-S. Theatres at kuntaur and Soma were refurbished by UNFPA Country Office to provide emergency obstetric care services to enhance maternal health in those regions, but the Ministry has failed to effectively retain or repost obstetricians to these facilities to make the theatres functional.

It is worth noting that during the period under audit, Kuntaur for instance, has recorded a total of nine (9) maternal deaths, some of which could have been averted if the theatre was functional as revealed by an interview with the maternity-in-charge.

In addition, the infrastructures and equipment are left lying idle due to the unavailability of the required personnel on the ground, and they are subjected to deterioration and loss of value, which further brings about the question of value for money as these projects are worth fortune.

Picture 2: showing the theatre at Kuntaur

Source: Audit pictures taken on 7th January 2020

We noted that the theatre at Essau District Hospital, after being non-operational for some time, was under refurbishment during the time of our visit. It was highlighted that in no time the theatre will

commence operation and be able to provide the required obstetric care that is designated for the CEmOC centres.

Picture 3: showing refurbishment and expansion of the theatre at Essau

Source: Audit pictures taken on 6th January 2020

Furthermore, we also noted Bwiam General Hospital failed to provide C-S between the last half of 2018 and first half of 2019 due to the lack of obstetricians to operate the theatre.

4.1.3 Adequacy and distribution of EmOC centres

The adequacy of EmOC services is measured by the number of facilities that perform the complete set of signal functions in relation to the size of the population. *The 2009 WHO Handbook on monitoring EmOC recommends that a country should have at least five (5) EmOC facilities, including at least one comprehensive facility, for every 500,000 populations at any given time and that these facilities should be geographically and equitably distributed.*

Based on the WHO guidelines, The Gambia should have twenty-four (24) EmOC centres: a mix of at least five (5) CEmOC centres and nineteen (19) BEmOC centres based on its population estimates of 2,335,504[51].

The recommended number of EmOC centres is expressed in half a million population being served by at least five (5) EmOC centres, including at least one (1) CEmOC centre. This gives an average of one EmOC centre for every 100,000 population. Analysis of the distribution of the functional EmOC centres showed that only CRR have met the recommendation with three fully functioning EmOC centres, including a CEmOC centre.

The Gambia meets the acceptable level of the CEmOC centres in number, but there are still gaps as to the distribution of these centres. LRR and NBWR have no facility providing full sets of comprehensive EmOC functions. This is largely due to the absence of C-S. On the other hand, WHR1 has three (3) facilities providing C-S service.

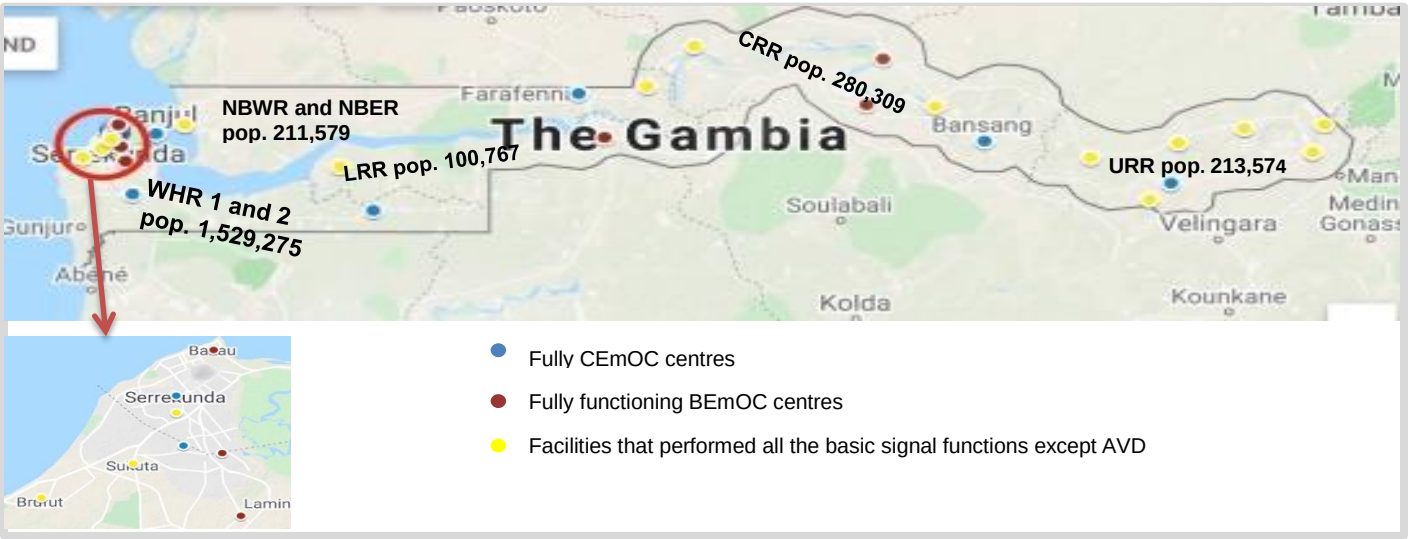
[51] The Gambia Bureau of Statistics: The Gambia 2018 Statistical Abstract

Table 13: showing the number of CEmOC centres in each health region

Health regions	Population[52]	Number of CEmOC centres
WHR 1	478,554	3
WHR 2	1,050,721	2
LRR	100,767	0
CRR	280,309	1
URR	213,574	1
NBER and NBWR	211,578	1
Total	**2,335,504**	**8**

We cannot say the shortfall in number of the WHO recommended BEmOC centres for The Gambia, because all the designated BEmOC facilities were not visited. However, based on the size of our sample (more than half of the minor health centres) there is strong indications that the recommended number of functioning BEmOC centres is not met in the country. Only 3 of the twenty-four (24) sampled minor health centres (representing 12.5%) visited had been fully functioning as BEmOC centres.

Figure 3: map showing the geographical distribution of EmOC Centres and population density



Source: Audit team
Source of the population (pop.) data: The 2018 Gambia statistical Abstract: The Gambia Bureau of Statistics

Because the EmOC coverage is based on population estimates, the WHO guidelines recommend the inclusion of private clinics in determining the overall levels of availability EmOC services in a country. Although The Gambia has a mix of public and private facilities providing EmOC services, the vast majority of these centres are concentrated in WHR1 and 2[53]. Furthermore, only 7%[54] of the population seek care at these private facilities, because of their relatively high cost. So, the available number of the functioning public EmOC centres would still be inadequate for 93% of the population that seek care from these public health facilities.

[52] The Gambia Bureau of Statistics: The Gambia 2018 Statistical Abstract
[53] The 2018 Gambia Statistical Abstract, The Gambia Bureau of Statistics
[54] National Development Plan 2018-2021

Effects of limited capacity and inequitable distribution of EmOC centres

a) Delayed in accessing care

The designated facilities not functioning effectively have had several consequences. This means that some life-saving services are not timely provided to the women who experience complications related to pregnancy or childbirth. As a result, referrals are necessitated to save the lives of such patients and their foetus. This delay access to care risk the lives of such patients. For example, in 2018 when C-S was unavailable at Bwiam, a patient diagnosed with prolonged labour at Soma District Hospital could take up to 2 hours 30 minutes to reach EFSTH which is 180 km away.

Furthermore, other designated CEmOC facilities made a high number of obstructed labour referrals that could have been avoided if they have the capacity to manage such cases. Examples of these cases between 2017 and 2019 are:

Health facilities	Number of referrals of obstructed/prolong labour cases
Essau	152
Bwiam	75
kuntair	39

These numbers of obstructed labour cases could have been significantly reduced if the C-S service was available at these facilities. On the other hand, hospitals that have the capacity to provide C-S experience far fewer referrals of obstructed labour than those not providing the service. Example, compared to the above examples, Farafenni General Hospital made only 16 and 4 referrals of obstructed labour in 2017 and 2018 respectively and BMCHH has recorded only 2 obstructed labour cases referred between 2017 and 2018 with more than 230 cases admitted.

Furthermore, meeting the recommended number does not necessarily mean that the region is well off than other regions. Despite its limited size, CRR is divided by the River Gambia and this makes referral to Bansang (the CEmOC centre in the region) difficult for facilities on the other side of the river, especially during night-time when the ferry service is not available. This delay access to the needed C-S care in that region, given that Kuntaur failed to fully function as CEmOC centre as mandated.

These delays risk the lives of pregnant women. Example, Maternal Death Surveillance and Response Report 2019 reported that most of the maternal deaths registered in CEmOC facilities were referral cases.

b) Increase cost of referrals

The more referrals made, the higher the cost on the government as each kilometre covered on a referral journey cost the government 0.807 dollars (34.70 Dalasis) [55]. For instance, a referral from

[55] Transport Asset Management Agreement between the RFH and the MOH&SW of the Gambia for the period 1st July 2018 to 30th June 2023. The cost-per-kilometre (cpk) varies with inflation and therefore can be subject to review once

Bwiam General Hospital to EFSTH is 104 km[56]. A return journey would make it 208 km covered in a referral. Therefore, a single referral of obstructed labour that requires C-S would cost the government $167.86 (D7217.6). In part of 2018 and the whole of 2019 when there was no C-S service at the facility, 75 cases of obstructed labour were referred[57] to EFSTH[58]. This would have cost the government approximately D541,320.00 ($15,600). It is worth drawing attention that, this calculated amount is just the cost of referral from one health facility to the last referral centre between 2018 and 2019.

Table 14: showing the number and cost of referrals of obstructed labour cases from Bwiam General Hospital to EFSTH

Year	Number of obstructed labours referred	Cost for the referrals
2018	41	D295,921.60
2019	34	D245,398.40
Total	**75**	**D541,320.00**

Source: Audit team analysis

The cost is further increased by those referrals of other complications e.g. placenta previa, placenta abruption, foetal distress and abnormal positioning of the foetus, that would require C-S and increases in the distance covered by referring facilities to Bwiam (e.g. Soma) as they would have to travel all the way to EFSTH in Banjul.

c) Pressure on functioning CEmOC centres

These referrals further put added pressure on higher-level facilities, both on the available midwifery workforce and infrastructure. Furthermore, households may choose to have their deliveries in the higher-level facilities due to unpleasant previous experiences. As a result, functioning EmOC centres ended up with the greater share of institutional deliveries in the country. We relate the number of ANC patients booked and the number of deliveries a facility registered between 2017 and 2019 and found that the functioning EmOC centres registered a better delivery rate. For example, 80% of the CEmOC centres registered delivery rate of more than 95% of their registered ANC patients. On the other hand, almost 90% of the non-EmOC centres have less than half of their registered ANC patients delivered at the facility.

Table 15: showing the rate of institutional delivery in the different facility types.

Facility types	Number of sampled facilities	Range of % of registered ANC patients to number of deliveries registered	Mean average delivery rate
Non EmOC centres	9	20% - 78%	35%
Fully functioning BEmOC centres	4	46% - 73%	62%
Fully functioning CEmOC centres	4	30% - 114%	89%

Data sources: RHDs for health centre and district hospitals and hospital managements

every six months at the request either party. However, analyses in this report are based on this figure at the time of the agreement.

[56] Google map estimates

[57] Data provided by the Bwiam General Hospital.

[58] This assumption is based on the fact that general hospitals should referred to EFSTH

As a result of this pressure on the functioning CEmOC centres, we noted in these facilities cases of two patients sharing a bed designed for only one patient. Interviews with the maternities-in-charge revealed that this was the order of the day. This creates discomfort and negative experience for the patients.

Picture 4: showing a case of bed-sharing of post-delivery patients in Brikama District Hospital

Source: Audit pictures taken on 24th December

Conclusion

Most of the facilities have the capacity to provide basic EmOC functions. However, there are equipment and human capacity gaps in the provision of assisted vaginal delivery to complete the set of basic EmOC functions.

Furthermore, there are gaps in the provision of comprehensive EmOC services as more than half of the mandated CEmOC centres are not providing either blood transfusion or both blood transfusion and C-S.

Although the Ministry has ensured that the country meets the minimum acceptable level of CEmOC centres, it has failed to achieve the recommended aggregate number of EmOC centres. Furthermore, LRR and NBWR have no CEmOC centres, delaying access to comprehensive EmOC for women in those regions.

The National Development Plan 2018-2021 states that the Gambia fell short of the WHO recommended number of EmOC centres by at least nine (9) facilities, wholly due to the inadequate number of BEmOC facilities. After identifying this gap, The Ministry has failed to put in place enough measures to ensure that the recommended number of BEmOC centres is met to adequately serve the population of The Gambia.

Furthermore, NBWR and LRR have no functioning CEmOC centre, thereby posing challenges of delayed access to C-S.

Recommendation

The Ministry should ensure that all the designated EmOC centres are fully functional by doing the following:

- Make available obstetricians (surgeons) in facilities with available theatre infrastructure and equipment with sustainable incentive schemes for retention.

- The monitoring team from the RHDs must ensure that all the health facilities have the first-line usable drugs for EmOC signal functions.

- Health centres should be strengthened in terms of human capacity and equipment to better manage obstetric emergencies before and during referrals.

4.2 MIDWIFERY WORKFORCE MANAGEMENT

The National Maternal and Neonatal Care Guidelines and Service Delivery Standards April 2017 states that antenatal care should be provided by a skilled and professional midwife[59] *for effective delivery of the 2016 WHO ANC model.* Therefore, ensuring there are enough mix of midwifery workforce with the right skills to meet the demand for high-quality ANC and EmOC services is essential to the operation of the Ministry in accelerating the reduction of maternal mortality as in line with SDG 3.

Given the gross shortage of midwives[60], The Ministry reviewed its staffing norms in August 2014 for health care facilities, including the EmOC facilities to improve efficiency in the distribution of health care professionals for quality maternal health care delivery across the country.

[59] This report generally uses the term 'midwife' to mean those health care professionals who meet the academic and professional qualifications of the three cadres of the midwifery (registered midwife, enrolled midwife and community health nurse midwife) as defined by the MOH&SW

[60] The minimum staffing norm for health facilities, The Ministry of Health and Social Welfare, August 2014

Table 16: showing the minimum midwifery norms for EmOC centres

Midwifery Cadres	Minor Health Centre	Major Health Centre and District Hospital	General Hospital	Teaching Hospital
RN/M	Not specified	2	5	20
EN/M		3	6	25
CHN/M		3	0	0
Total	**2**	**8**	**11**	**45**

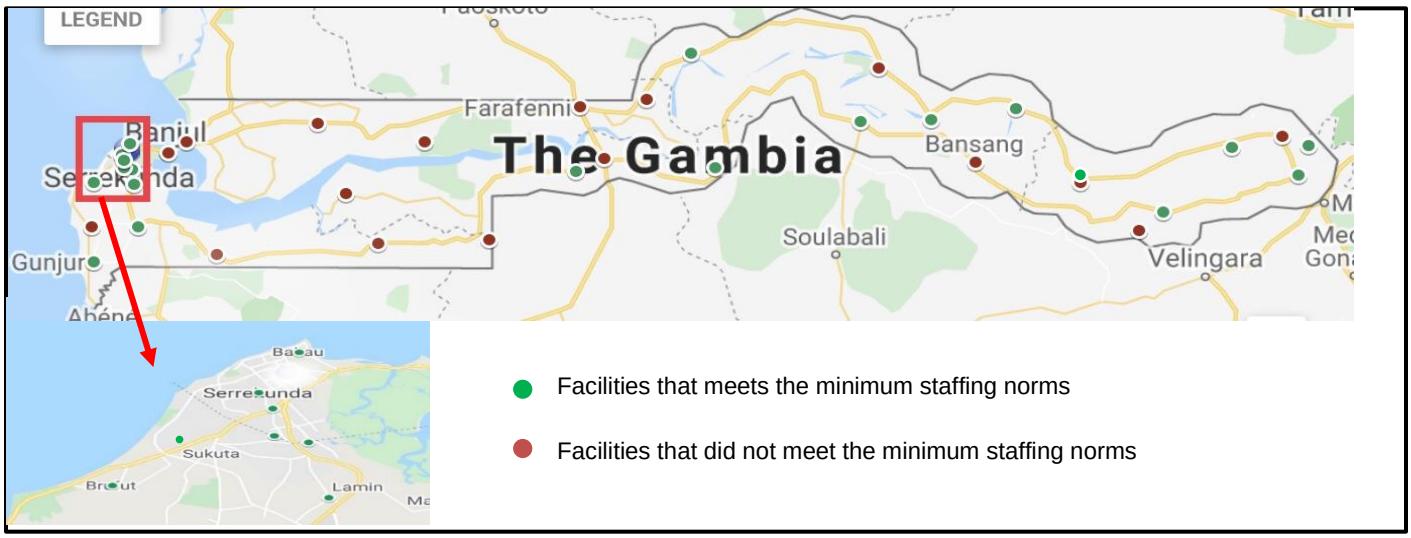
Source: The Ministry of Health and Social Welfare, August 2014

We found that seventeen (17) of the sampled facilities (representing 45%) have failed to meet the minimum mix of midwifery requirements. Furthermore, there is geographic variation in the extent of staffing shortfalls. For example, the three (3) general hospitals in rural areas have 38% fewer midwives than the two (2) general hospitals in the urban areas. All three general hospitals in the rural areas fell below the minimum staffing norms while the two in the urban areas have gone above it.

Furthermore, the difference varied between different midwifery cadres. The biggest difference occurred in the RN/Ms, which is the highest level of midwifery in the country. The three rural general hospitals have 85% fever RN/Ms than the two urban facilities. BMCHH has more than 50% of the total RN/Ms working at the five general hospitals.

This level of the staffing gaps between rural and urban facilities is not limited to the general hospitals. A similar pattern is observed across all the health facility levels.

Figure 4: A map showing the level of midwifery staffing as compared to the minimum staffing norms at facilities visited

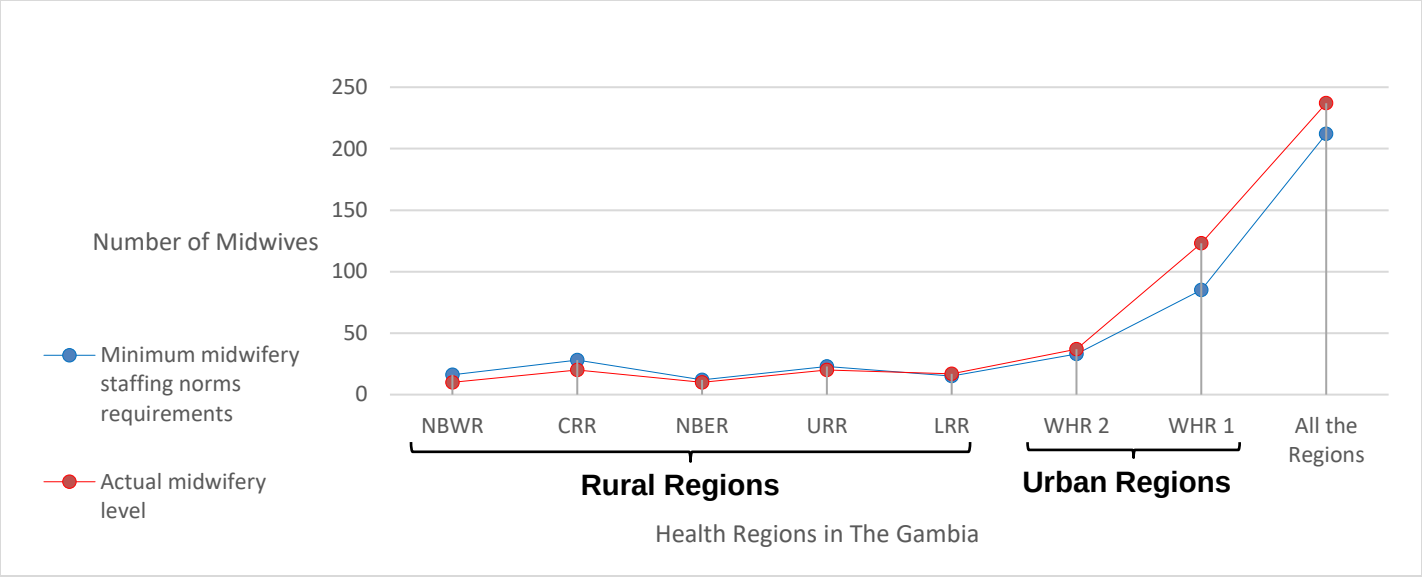


Source: Audit team

Except for Sanyang Major Health Centre and EFSTH, all the urban health facilities, defined here as WHR1 region and part of WHR 2[61], have met the minimum midwifery requirements with some as having 80% above the minimum norms. In contrast, eleven (11) of the rural facilities (representing 44%) have not met the minimum staffing norms. The situation of the actual midwifery as compared to minimum norms in the different regions can be seen below.

[61] Kafuta to Kanlaji are taken as provincial areas of the WHR 2

Figure 5: A graph showing the actual level of the midwifery as compared to the minimum staffing norms in the health regions of The Gambia (only facilities visited are calculated)



Source: Audit team

APPENDIX 4 details the midwifery level at the sampled health facilities.

Causes of the variation in the midwifery staffing

The HRH assessment report, 2018, commissioned by the MOH&SW and the WHO found that one of the notable HRH challenges is weak institutional and the human capacity for HRH planning and management leading to uneven distribution of health workers in the country.

We found that the design and implementation of the staffing norms creates a challenge for efficient and effective midwifery allocation. The staffing level above the minimum norms is determined by the degree of available statistics on workload indicators in a year. However, the level of the midwifery staffing gaps indicates that the system is not in balance.

While the staffing norms guides in the distribution of midwives, the ultimate determinant of the staffing level above the minimum norms is the workload indicators in a year. According to the interview at the HRH Directorate, these workload indicators for the distribution of midwives are mainly the number of ANC consultations and deliveries registered in a facility.

Although it makes sense to employ such flexible planning norms in order to efficiently offer the best possible balance of availability and quality care in each area at any time. However, such policies must be implemented with utmost care as its ambiguity can lead to imbalance in the distribution of the human resources. We noted that there is no specific model of how midwives should be distributed based on these workloads. In other words, there is no guidelines or model explicitly indicating the ratio of midwife to such workloads.

This distribution model is not clear enough to adequately guide HRH planners at both the central and the regional levels in the distribution of the available midwifery. This highly subjects the allocation of midwives above the minimum norms to the judgment of planners at both the central and regional

levels. This does not ensure an efficient allocation of the existing midwifery workforce. As a result, since more professional midwives would prefer to work in the urban areas, HRH planners would tend to give in to their request to be posted to the urban facilities.

We examined the available data of deliveries conducted in health facilities in 2018 (one of the key workload indicators) and found that there was no clear pattern to indicate that this staff distribution model is effectively implemented. It further shows that urban facilities are comparatively better staffed relative to workload indicators.

Table 17: indicating the average workload to a professional midwife in the different health regions[62].

Name of regions	Number of sampled facilities	Range of facility average delivery by a professional midwife	Regional average mean delivery to a professional midwife
WHR 1	4	149 - 323	192
WHR 2	4	84 - 351	248
URR	4	290 - 697	349
NBER	2	158 - 768	219
LRR	2	97 - 142	104

Delivery data source: RHDs: Number of midwives is collected from health facilities during the site visits.
**We could not get the delivery data from the remaining RHDs.*

The table above shows that the system of distribution of the midwives is not in balance. Urban areas relatively experience more midwifery staffing than rural facilities. This is also a disparity between facilities in the same regions.

In other words, considering the workload indicator of facility deliveries, in the urban facilities relatively fewer midwives are posted to the higher-level facilities while relatively less is posted to lower-level facilities in the rural areas. This further demonstrates that the loophole in the model affects its effective implementations as HRH planners cannot accurately determine the most efficient staff allocations.

Another weakness in the design of the staffing norms that caused disparity in the distribution of the different cadres of the midwifery among facilities is further ambiguity in the mix of professional midwifery in the minor health centres. Although the staffing norms state the minimum midwifery requirement for minor health centres as can be seen in Table 16, it does not specify the mix of this midwifery requirement. The National Health Policy 2012 – 2020 includes BEmOC in the minimum health care package of minor health centres. For effective implementation of this policy, RN/Ms must form part of the staffing at a minor health centre, since they are the only cadre of the midwifery authorised to perform assisted vaginal delivery, which is one of the seven signal functions of the BEmOC services. The absence of this specification has led to such facilities meeting the minimum staffing norms, but with inappropriate skill mix in the delivery of EmOC services.

For example, four (4) of the sampled BEmOC facilities (representing 17%)[63] have met the minimum staffing norms as stipulated in the staffing policy in midwifery ,but do not have the capacity to provide the full set of quality BEmOC services as they are without an RN/M to perform AVD.

Since HRH planners are not under any obligation for deploying RN/Ms to such facilities, imbalance in the distribution of such a cadre, as revealed by the audit, is further exacerbated.

[62] Since the workload data should inform the following year HRH planning, the midwifery level is as at 2019 and the number of deliveries registered was the ones registered in 2018.
[63] Kaiaf, Brikamaba, Sami Karantaba and Janjanbureh Minor Health Centres.

Other factors contributing to understaffing in rural health facilities is the inability of rural facilities to attract and retain midwives. This is due to the following key factors[64]:

- Availability of more job opportunities in the urban centres where a health professional can easily find one or more job opportunities from the private sector than one fixed public sector job in rural locations.

- In addition to flexible job opportunities, urban centres have many quality educational and other social services for families with young children; this provides suitable options that fit such families' ability to pay for the needed services.

- A few (about 10%) of the Focus Group Discussion participants in the HRH assessment attributed preference of working in urban health facilities by healthcare professionals to poor management of career progression of health professionals by MOHSW; this has resulted into staff enrolling en mass into the Universities and other higher health training institutions.

However, the noted loopholes in the staffing norms weaken the ability of the HRH at the Ministry to efficiently and equitably allocate the existing midwifery workforce.

Effects of this disparity in staffing (workload) among regions and facility types

The inequitable distribution of midwives has created a gap between rural and urban facilities in the quality of ANC and EmOC services provided to the people. The implications of 24-hour services, requiring shifts and rotation of the midwifery workforce, and system of conducting outreach RCH services mean that rural facilities are not consistently and reliably ready to provide high quality EmOC services given the level of the staffing shortfalls in the area. For example, rural facilities with only one midwife to provide all antenatal care, outreach RCH services, attend to all deliveries are impossible. So, other clinical staff (i.e. RN, EN and CHN general nurses), as we found during field visits, are called upon to fill the gaps. Since the general nurses are not specially trained in midwifery, the quality of care they provide is compromised.

Conclusion

The goal of the staffing norms was to realise shortages and surpluses and effectively regulate the imbalance. The Ministry has the required number of midwives to effectively implement the minimum staffing norms. However, the existing allocation mechanisms are not effective in ensuring that all the facilities, especially rural facilities, have the minimum required midwifery staff to provide the full set of quality EmOC. Furthermore, there are health facility and regional imbalances in midwifery shortfalls partly caused by institutional frameworks used in staff allocations. This has led to some facilities experiencing shortages and others going above the minimum norms, thereby creating a difference in the quality of care provided in the different facilities and regions.

Recommendation

- The Ministry should include the availability of an RN/M in the minimum staffing norms for a minor health centre. In addition, there should be more clarity about the allocation above the minimum norms.

[64] Assessment of the Functionality of the Health Workforce Building Block, MOH&SW & WHO, 2018.

The Ministry should ensure that the existing midwifery staff is efficiently allocated based on clear guidance above the minimum norms. The minimum staffing norm should be revisited and be adjusted to the realities on the ground.

- Postings should also be enforced so that all facilities have the midwifery skills to provide quality EmOC services.

- Furthermore, The Ministry should consider the possibility of training other cadre of the midwifery other than the RN/Ms on AVD so that the quality of the care provided can be enhanced, especially that RN/Ms are not available in all the facilities mandated to provide the services.

4.3 MONITORING EmOC SERVICES

Designation of health facilities as either BEmOC or CEmOC can be used as a policy tool to effectively plan resource allocation, consistent with minimum health care packages and coverage needs. However, health facilities are classified as EmOC centres based on the performance of the signal functions in the last three months prior to assessment. *Therefore, international standards and best practices would require that the readiness of designated EmoC centres to adequately respond to emergency needs and be actively managed by continuously ensuring that health workers, equipment, drugs, and supplies are all available and functioning*[65]*. Furthermore, it is necessary to determine the number of functional EmOC centres serving a specific population in the country at any given time. These can only be ensured if data is collected on the performance of the signal functions that are used to classify health facilities as either EmOC centre or not.*

All the Regional Health Directorates currently implement a monitoring plan called “quarterly quality checklist monitoring”. The monitoring is a periodic management tool that enables the RHDs to evaluate the extent to which minimum health care packages are implemented in the secondary tier health facilities. The checklist covers issues such as the availability of human resources, drugs, equipment, and the necessary infrastructure. Reports are written for each monitoring activity and sent to the Directorate of Health Service. It helps in identifying gaps so that timely action can be taken to correct deficiencies detected.

Some key components of EmOC are included in the checklist such as drugs (oxytocin, magnesium sulphate, and ampicillin), equipment (bag and mask, and vacuum extractor), functional theatre and blood transfusion equipment and supplies. Facilities are scored based on the availability and functionality of those resources.

However, our review of the checklist revealed that it is not extensive enough to cover whether obstetric emergency functions are performed or not and why they were not performed if so. The checklist can measure the availability of EmOC services, but due to its design, it cannot measure the usage of those services by the population it serves. It is noteworthy that these facilities are classified as EmOC

[65] The state of the world’s midwifery, WHO 2014

centres based on the usage of the emergency interventions (signal functions) by pregnant women who experience pregnancy-related or childbirth complications.

EmOC availability in designated centres to some extent can be determined by focusing on the availability of relevant drugs, supplies, equipment, and personnel. However, verifying that these elements are available, and functioning in a facility does not necessarily mean that the pregnant women with obstetric complications are adequately using the services. So, it is by collecting data on the use of the services that the Ministry can determine the extent to which those services are used by the catchment population. Cases of low usage of a signal function may indicate a need to initiate a further research to understand why fewer women seek the care in a facility.

According to the interviews with the RHDs' officials, it was further acknowledged that the monitoring is not specifically designed to conclude whether facilities are functional EmOC centres or not. It was just a quality monitoring checklist in which maternal emergency is one of the items.

Furthermore, RMNCAH unit conducts quarterly monitoring of selected health facilities across all tiers. The contents of these quarterly monitoring reports are not much different from that of the RHDs. They do not conclude whether the visited facilities are functional EmOC centres as designated or not. Adequate data is not collected on the utilization of the EmOC services to be able to know whether facilities have provided the signal functions in the last three months or not.

Consequently, both the RHDs and the RMNCAH unit were not able to provide the number and/or names of fully functioning EmOC centres in each region or the country at large. In effect, The Ministry, through its RHDs cannot determine the usage of EmOC services in the public health facilities. As a result, trend analysis as to the usage of the EmOC signal functions in different regions, demographics, types of facility and factors explaining the variances cannot be successfully carried out. For example, this audit and other studies cannot successfully study the trend of use of the various signal functions and possible reasons explaining the patterns over time.

Another effect is that the current monitoring system cannot conclude on whether facilities are fully functioning EmOC centres or not, since data is not collected on the usage of all EmOC services. Therefore, The Ministry cannot know the number of fully functioning EmOC centres serving a specified population and the country at large. As a result, EmOC planning within the broader aspect of maternal health care will not be informed by an evidence-based assessment.

Conclusion

The monitoring plan implemented by the RHDs and RMNCAH unit has not ensured that EmOC services are adequately and effectively monitored. This is due to the weakness in the design of the monitoring checklist for health facilities. The monitoring reports focus on the indications of readiness and capacity to respond to maternal emergencies, and not on the actual evaluation of whether those capacities are efficiently and effectively used.

EmOC availability in designated centres to some extent can be determined by focusing on the availability of relevant drugs, supplies, equipment, and personnel. However, verifying that these elements are available, and functioning does not necessarily mean that the facility is performing the indicators that defined it as a functioning EmOC centre. The RHDs and RMNCAH unit did not adequately monitor and report on indicators that define facilities as either EmOC or otherwise and, therefore, could not determine the number of functioning EmOC centres serving The Gambia at any given time.

Recommendation

The RHDs should incorporate monitoring the functionality of EmOC facilities in their checklist by collecting and analyzing data and reporting on the performance of the signal functions. In addition to verifying the availability of elements for responding to maternal emergencies, the signal functions that defined facilities as either EmOC centres or not should be monitored in each monitoring visit. The monitoring team should also establish why certain signal functions are not provided.

Furthermore, it may be fruitful if such data is provided to the RMNCAH unit or Directorate of Health Services, and any other relevant units so that it guides the efficient allocation of resources for proper and equitable distribution of EmOC services.

RMNCAH should collate the date from the different RHDs to be able to inform on the functioning EmOC centres in each quarter.

4.4 PREVENTION OF EMERGENCY OBSTETRIC CASES

According to the State of the World's Midwifery, WHO 2014, whiles it is important that facilities are ready to provide appropriate interventions in cases of obstetric emergencies, it is more cost-effective to engage in programs and strategies to limit the prevalence of complications.

The 2016 WHO ANC model *mapped key ANC interventions to 8 ANC contacts of pregnant women with healthcare providers, based on the optimal timing of delivery of each recommended intervention to achieve maximal impact*[66].

The model is delivered in the Gambia within the context of health facility visits and RCH clinics in rural and hard-to-reach settings for effective implementation of the model. Trekking teams from the rural and some urban secondary tier facilities visit a set schedule of outreach clinics at least once a month in each health facility's catchments area[67].

We found that all health centres visited that are mandated to carry out outreach RCH clinics have set schedules of outreach clinics where they visit communities to provide the routine ANC to pregnant women. Although substantial progress could be made in increasing ANC utilisation and coverage through RCH trekking stations, not enough has been done to significantly improve the quality of care

[66] 2016 WHO recommendations on antenatal care for a positive pregnancy experience
[67] The Gambia National Health Strategic Plan 2014-2020

in those stations. We found that ANC at these trekking stations is not providing adequate maternal assessment to significantly reduce obstetric emergencies. This is based on the following noted weaknesses.

4.4.1 Testing for anaemia

The National Maternal and Child Care Guidelines and Delivery Standards, April 2017 states that all pregnant women should be screened for anaemia at every ANC contact.

Anaemia is a condition in whereby a person lacks enough healthy red blood cells to carry adequate oxygen to your body's tissues. If left undetected or inappropriately managed, it can lead to serious maternal complications and death. It is an important national health problem with the national prevalence of anaemia among pregnant women at about 65.7% and it accounts for up to 39% of maternal deaths in the Gambia[68].

The 2016 WHO ANC model recommends full blood count testing for diagnosing anaemia during pregnancy. However, due to concerns over the cost of full blood testing, WHO therefore developed the haemoglobin colour scale, a low-cost method for diagnosing anaemia in pregnancy in places with no or limited access to laboratory services.

We found that laboratory services are available and functional in all the health facilities visited for diagnosing anaemia in pregnancy except for Fodaykunda Health Centre. However, such laboratory diagnostic services are largely unavailable in RCH trekking stations. As a result, patients are therefore given appointments to visit the health facilities for assessments requiring laboratory investigations including testing for anaemia. It is unlikely that pregnant women will do at least eight visits to a health facility to do the test for anaemia because of the related cost and time to get there.

We noted that the unavailability of laboratory services for testing for anaemia at these trekking stations is as a result of the inadequate equipment such as portable haemoglobin metres and haemoglobin colour scale that could have been taken along during trekking days to facilitate such services on the ground. Many of the facilities are with limited quantities of such devices and can only be used at the health facilities as other laboratory services depend on the same equipment.

With an ineffective follow up system for ANC patients, this increases the risks of patients not being tested for anaemia, especially in rural areas. The 2018 maternal death reviews by RMNCAH unit in which 12 maternal death cases were reviewed found a high prevalence of anaemia among pregnant women[69]. It also accounts for 13% of maternal deaths in 2019 in The Gambia[70].

Furthermore, the unavailability of these testing services at the trekking stations creates a burden on antenatal mothers, requiring them to travel long distances to health facilities and which are sometimes not feasible due to resource and time constraints. This poses a risk of antenatal mothers missing out

[68] National Maternal and Child Care Guidelines and Delivery Standards, April 2017
[69] 2018 RMNCAH annual report
[70] Maternal Death Surveillance and Response Report 2019

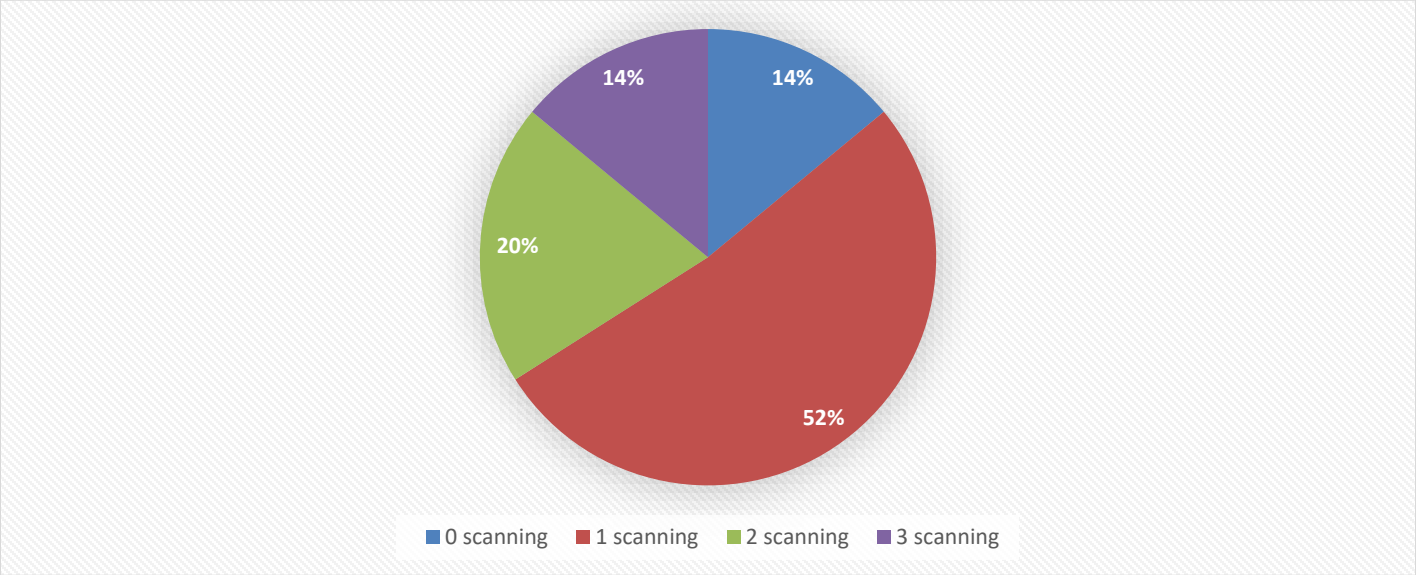
on this vital service and further creates a negative impact on the women's experience of the ANC. As a result, if the quality of ANC is poor and women's experience of it is negative, evidence shows that women may not attend ANC, irrespective of the number of recommended contacts in the ANC model[71].

4.4.2 Ultrasound scan

The 2016 WHO ANC model recommends at least one ultrasound scan before 24 weeks of gestation (early ultrasound) for pregnant women to estimate gestational age, improve detection of foetal anomalies and multiple pregnancies. However, for pregnant women who have not had an early ultrasound scan, a late ultrasound scan should be offered for the purposes of identifying the number of foetuses, presentation and placental location.

We interviewed sixty-five (65) post-delivery patients about their use of ultrasound scans during their antenatal care periods. The result showed that 14% of the patients interviewed were not offered any scanning during their pregnancy period.

Figure 6: pie chart showing the use of ultrasound scan by interviewed pregnant women



Source: Audit team interviews with patients

The patients who failed to do any ultrasound scan expressed that the difficulty in accessing the service prevented them from doing an ultrasound scan when advised to do so by care providers.

Ultrasound scan equipment is mainly available in designated CEmOC facilities. Only 1 designated BEmOC facility has the equipment. Furthermore, out of the twelve (12) facilities visited that have the equipment, five (5) of those facilities are in WHR1, two (2) are in WHR 2 and the rest of the health regions have only one facility providing the service.

[71] 2016 WHO recommendations on antenatal care for a positive pregnancy experience

We relate the distribution of ultrasound equipment to the use of the intervention in Table 18 and found that all the patients interviewed who have not done any ultrasound scan are residing in regions where the service is geographically skewed.

Table 18: showing the use of ultrasound scanning among pregnant women in the different health regions

Health Regions	Number of sampled interviewed women	Number of sampled pregnant women reported not to have done any ultrasound scan during pregnancy
WHR 1	21	0
WHR2	11	0
LRR	3	0
NBWR	7	1
CRR	7	1
NBER	6	2
URR	10	5

Given that only twelve (12) of the facilities visited have functioning ultrasound equipment means that most of the patients are referred to the nearest public health facility or private clinics providing the service for the scan. This puts the rural health regions at a disadvantage given that the entire region has only one public facility with the scanning equipment. As a result, the cost and time of having to travel long distances and service cost (ultrasound scan in private clinics or some public facilities) limit the effectiveness of the recommendation in The Gambia for every pregnant woman to do at least one ultrasound scan before the 24 weeks of gestation or late ultrasound scan.

Furthermore, this service is expected to be provided at no cost to the patients following the 2007 declaration by the President of the Gambia to provide free maternal care at all points of access, i.e. public health facilities. However, facilities in WHR 1 and WHR 2 (except Bwiam) provide the service at a cost of 150 to 300 dalasi. According to interviewees at these health facilities, they use these monies for sundry expenses (e.g. stationery and printing, repairs of equipment etc.) at the facilities.

Although Fajikunda has the equipment functioning, according to the interview it is only used in obstetric emergencies and not for routine ANC assessment, because the facility could not afford the cost associated with operating the machine (printing, maintenance, repairs) for ANC assessment and funding for such cost are not provided by the RHD. We found that Bajakunda and Kiang Karantaba Minor Health Centres (designated BEmOC centres) have the equipment but were not functional at the time of our visit. The one in Bajakunda was said to have broken down in January 2019 and the RHD was notified. On the other hand, the equipment in Kiang Karantaba was said to have been supplied some six (6) months prior to our visit. However, it was not installed as there was no personnel to operate it.

It is worth noting that most, if not all the ultrasound machines, found at the health facilities are donations from NGOs, philanthropists, and social organizations. The Central Medical Store supplied

only three ultrasound machines from 2017 to 2019[72] to health facilities. Those machines were acquired in 2016.

Furthermore, maintenance of these machines is carried at by a team of Biomedical Engineers at the central level. This is limited and causes delayed, hence defective equipment lay in facilities for a long-time awaiting repair[73]. For example, it has been up to one year since the ultrasound machine in Bajakunda got broken and still not repaired at the time of our visit.

This greatly affects the rural areas as they are highly limited in accessing ultrasound scan because only one public facility serves the entire health region during the time of this audit.

It is essential to highlight that, ultrasound scan offers health care providers the means to accurately estimate gestational age, improve detection of multiple pregnancies, and other foetal anomalies that are not so obvious. Lack of ultrasound scan compromises the diagnosis and/or management of multiple pregnancies, mal-presentation, and other complications. We noted two cases of multiple pregnancies being misdiagnosed where one of the patients lost her life, as revealed by the maternal death audit report.

Therefore, if multiple pregnancies of this magnitude are not detected during antenatal contacts, it becomes impossible to adequately prepare the expectant mother for safe institutional delivery.

4.4.3 Management of hypertensive disorders in RCH clinics

Pre-eclampsia, eclampsia, and pregnancy-induced hypertension (hypertensive disorders) are causes of maternal and perinatal morbidity and mortality, with 25.9% of maternal deaths and near misses estimated to be due to pre-eclampsia and eclampsia[74].

Antenatal screening for pre-eclampsia is an essential part of good ANC. It is routinely performed by measuring maternal blood pressure and checking for proteinuria at each ANC contact and, upon detection of pre-eclampsia, specific management is required to prevent eclampsia and other poor maternal and perinatal outcomes[75].

A review of 10 maternal death audit reports in 2019 at Basse District Hospital showed that adequate and/or necessary interventions were not made to treat complications of hypertensive disorders identified at RCH trekking stations. For instance, seven (7) maternal death reports in 2019 showed that no anti-hypertensive drug was administered or prescribed for patients diagnosed with hypertensive disorders. One of the reports dated 12/09/2019 indicates that anti-hypertensive drugs were not taken to the RCH trekking stations. Furthermore, referrals of such cases were also not facilitated to high-level facilities for adequate and proper management. Nationally, eclampsia is the

[72] Data provided to the audit by the CMS
[73] The Gambia Health Services Assessment Report, 2019
[74] Moving Beyond Essential Interventions for Reduction of Maternal Mortality (The WHO Multicountry Survey on Maternal and Newborn Health), May 2013.
[75] 2016 WHO recommendations on antenatal care for a positive pregnancy experience

biggest direct cause of maternal deaths in 2019, accounting for 18% of the 137 maternal deaths registered in The Gambia[76].

The reviewed maternal death reports recommended that the blood pressure of pregnant women should be carefully monitored and when hypertensive disorder is detected, it should be treated or referred for further management. These recommendations seem not to be adhered to and deaths continued to happen because of poor management of hypertensive disorders.

If healthcare providers conducting RCH clinics fail to appropriately diagnose and manage cases of hypertensive disorders, this defeats the fundamental purpose of the ANC programs. If this is not addressed with rigor, the fight to end maternal mortality in the country will remain a constant struggle.

4.4.4 Follow up on missed ANC contacts

According to the interview with RMNCAH unit that follow up on a missed contact is the best practice for effective implementation of such programs.

By virtue of the health care setup in The Gambia, follow up should have been the responsibility of the CHNs[77].Therefore, the CHNs are essential for the successful and effective implementation in following up on patients who miss their routine contacts.

We found that the facilities visited had no systematic follow-up system for missed ANC contacts. Therefore, no effective system of follow up is in place to ensure that pregnant women have a minimum of 8 contacts for ANC care.

However, according to interviews at RBF project facilities, selective cases of pregnant women identified with complications are followed. They further claimed that missed contacts are usually followed. This we could not confirm as there were no evidence to substantiate the claim. Since an effective system or mechanism for follow-ups on missed ANC contacts existed, they claimed to have used their private telephones and credit for the follow-ups. This is because facilities in RBF project regions are financially rewarded for the number of ANC bookings and contacts. They are therefore motivated to increase their number of ANC contacts. However, the RBF project is expected to face out at the end of the first quarter in 2020[78], this could further affect the effective implementation of the 2016 WHO ANC model of at least 8 ANC contacts.

One of the overarching aims of the 2016 WHO ANC model is to provide pregnant women with individualized care and support. In the absence of a systematic and effective follow-up system, certain pregnant women with a history of obstetric complications or being diagnosed with hypertensive disorders or other complications, may not receive adequate care and support. This can lead to more maternal deaths.

[76] Maternal Death Surveillance and Response Report 2019, RMNCAH unit, MOH&SW
[77] Interview at RMNCAH unit; date 13/12/2019
[78] Interview at the CRR RHD

4.4.5 Antenatal care health education and promotion

Health education and promotion form one of the key components of ANC service[79]. *Pregnant women should be sensitized on danger signs, importance of facility delivery, or dangers of home delivery and other healthy lifestyles during pregnancy[80].* This health promotions and educations are aimed at promoting positive pregnancy outcomes for the mother and the foetus. Improving pregnancy outcomes require, among other things, meeting the recommended ANC contacts and skilled deliveries at facilities.

According to interviews with post-delivery patients, all the interviewees acknowledged that they were counselled during the ANC contacts on the following: danger signs of pregnancy; nutrition; the importance of ANC and facility delivery, and; birth-preparedness. The uptake of the counselling lies with the women. However, male participation affects their ability to seek and access skilled care at birth.

Husbands are crucial for efforts aim at increasing facility delivery in the Gambia. This is because women have less autonomy in decision making to seek ANC care, especially during emergencies due to limited financing capabilities, religious and cultural beliefs in The Gambia. Furthermore, referrals from the communities are largely facilitated by men.

Recognizing this fact, *The National Reproductive, Maternal, Neonatal, Child and Adolescent Health strategic Plan 2017-2021 outlined the key strategic interventions for greater male participation in RMNCAH matters. Among the interventions are:*

a) Organise and deliver community sensitization sessions targeting men, religious leaders and community leaders.
b) Conduct interactive community dialogues with religious and community leaders on RMNCAH services
c) Promote couple counselling, discussions and mutual decisions concerning RMNCAH matters.

Through these interventions, RMNCAH unit aims to achieve 50% of husband companionship and support RMNCAH use of their wives during ANC and labour[81].

We found that RMNCAH activities towards greater male participation are community-oriented and couple counselling is largely not implemented in health facilities. The interventions aimed to have husbands participate in RMNCAH services are not health facility-centred. Rather, they are community-centred.

According to interviews at RHDs, facilities are encouraged to sensitize males about ANC in RCH clinics. However, visits to these facilities revealed that there are no specific ANC education and promotion programs for husbands or couple counselling in the facilities, except for Bundung Maternal and Child Health Hospital. Only about a quarter of the post-delivery women interviewed said that

[79] 2016 WHO recommendations on antenatal care for a positive pregnancy experience
[80] National Maternal and Neonatal Care Guidelines and Delivery Service Standards, April 2017.
[81] RMNCAH strategic plan 2017-2021

they were counselled to bring their husbands to attend at least one ANC clinic for healthy pregnancy education and what they were expected to do to support their wives during ANC and labour.

Through "Kabilo Baama Initiative" RMNCAH conducts training of community participants in some parts of Lower River Region[82]. The initiative is a pilot intervention that trains women and male action groups on the promotion of sexual and reproductive health. The trainees are expected to sensitize their communities about the sexual and reproductive health. The training between 2017 to 2019 are as follows:

Year	Number of total participants	Number of male participants
2017	120	Not specified
2018	61	20
2019	155	Not specified
Total	**336**	

Source: RMNCAH annual reports 2017, 2018, and 2019.

The annual RMNCAH reports stated that the intervention has led to increase in uptake of services (institutional delivery, early ANC attendance etc.).

However, these interventions are not effective in meeting the key performance targets of having at least 50% of husbands accompany their wives during labour and/or ANC contacts. We found that most of the post-delivery women interviewed have not had their husbands directly involved in the ANC or labour companionship even in the pilot region (LRR) of the Kabilo Baama Initiative. Although these Social Behavioural Change Campaigns (SBCC) may reach males/husbands, promoting couple counselling concerning RMNCAH matters may be the most effective strategic intervention for increasing institutional delivery and early ANC booking.

Furthermore, there is no monitoring for the effectiveness of these interventions for greater male participation. RMNCAH unit do not conduct follow ups to determine whether the trainees are effectively sensitizing their communities about the lessons learnt from the trainings so that more males can directly participate in maternal issues.

In addition, health facilities, except Bundung Hospital, do not collect data on male companionship during ANC and labour. So, while interventions are implemented to achieve at least 50% male companionship in labour or ANC by 2021, the extent to which those performance indicators are met is not monitored and evaluated. This is because health facilities are not even aware that they should collect data on the number of labouring women being accompanied by their husbands.

We found that Bundung Hospital has a weekly male clinic specifically designed to educate husbands about ANC and the role they were expected to play in promoting positive pregnancy outcomes. Furthermore, they monitor the participation of husbands in delivery services by collecting data on the

[82] Interview at RMNCAH unit, 13/12/2019

male companionship during labour. According to their annual presentation for maternity unit, the percentage of women in labour who were accompanied by their husbands were as follows:

Year	% of women accompanied by husbands during labour
2017	27%
2018	22%
2019	32%

Source: Bundung Hospital annual presentations for 2017, 2018 and 2019.

Other sampled health facilities were not monitoring male participation in ANC and delivery services.

Bleeding is one of the most common causes of maternal deaths. For example, of the twenty-three maternal deaths registered in 2018, 82% are due to bleeding[83]. The 2018 RMNCAH Annual Report highlighted that late ANC registration and lack of potential blood donors that accompanied emergencies are some of the constraints of maternal health care. This can partly be attributed to husbands not directly participating in ANC and delivery of their wives. Interviews at health facilities providing blood transfusion services revealed that voluntary blood donation is the biggest challenge they face in blood transfusion service. So, to compensate for the shortfall, relatives are counselled to donate blood for their patients, and pregnant women are mostly accompanied by elderly women who would not be able to timely arrange for such donations from relatives. In such instances, the lives of such patients are lost due to the loss of blood from bleeding.

Furthermore, there is a great challenge in referrals from the community level[84]. Husbands usually control the means of transportation, so their inadequate participation contributes to late referrals from the community.

Conclusion

There is an inadequate level of quality ANC services in the country to significantly reduce emergency obstetric cases to meet the SDG MMR targets by 2030. This conclusion is based on the fact that there is inadequate access to quality antenatal cares, especially in the rural areas, as all the 2016 WHO ANC recommended interventions are not adequately provided to pregnant women. As a result, pregnancy anomalies can go undetected until visible life-threatening complications occur, and with limited access to EmOC services in the rural areas, these complications claim the lives of many women. This problem is compounded by the fact that there is no effective system for following up on patients who miss their ANC contacts and are at risk of developing life-threatening obstetric complications.

Furthermore, because of the quality of the antenatal care at some RCH trekking stations, deaths that could have been prevented, continue to happen as a result of poor management of the hypertensive disorders that had been identified.

[83] 2018 RMNCAH annual reports
[84] The Gambia National Health Policy 2012-2020.

Recommendation

- The Ministry should consider making available feasible diagnostic methods for testing for anaemia, and other necessary investigations, at the trekking stations to improve the detection of anomalies at that level without the need for traveling to health facilities for such examinations. This is essential for effective implementation of the policy to test for anaemia in all the eight (8) contacts with the pregnant women.

- The Ministry should put in place an effective mechanism for follow up on missed contacts, especially on patients with a history of obstetric complications or diagnosed with one.

- The Ministry should emphasis the detection and management of hypertensive disorders that have been identified during the antenatal periods.

- ANC and delivery services are delivered in the context of health facilities. So, successful interventions to increase male participation that leads to increased health facility delivery and early ANC bookings would have to be delivered in the health-facility context. The RMNCAH unit should engage health facilities on the implementation of facility-centred couple counselling or organize sensitization clinics for the husbands of the ANC patients. Also, data should be collected by the facilities on the number of deliveries that are accompanied by their husbands for the purpose of monitoring and evaluating the effectiveness of such strategies.

4.5 AVAILABILITY OF MEDICAL EQUIPMENT

The Gambia National Health Strategic Plan states that the government through the MOHSW will strengthen health centers to provide basic and comprehensive EmONC services and the Procurement of adequate equipment and supplies for EmONC services.

Medical equipment and tools are crucial to saving a person's life or performing any procedure, detect and diagnose the problem/disease at a very early stage that aids the health facilities to provide prompt care and treatment. The availability of equipment in the health facilities will help care providers in giving comprehensive and quality treatment to patients and monitor and measure patient's vital signs, identify any abnormalities and keep accurate track of patient's condition and state of health.

We found that certain important maternal and neonatal assessment equipment are not adequately available in some of the facilities visited. This equipment are:

Suctioning machine: appliances that are used to remove substances such as blood, saliva, mucus, and vomit from a person's airway). A portable suction unit can prevent pulmonary aspiration and facilitate breathing.

Oxygen cylinders: used for new-born resuscitation and in the theatre during operations.

Doppler: used in pregnancy to study blood circulation in the baby, uterus, and placenta and used to detect the foetal heartbeat for prenatal care. Using it in high- risk pregnancies, where there is concern about the baby's condition, shows benefits.

Furthermore, 58% of the facilities go for outreach programs without portable haemoglobin-meter (HB meters) at the trekking stations for testing HB.

Table 19: showing the unavailability of key maternal and neonatal assessment equipment during the site visits.

Item of equipment	% of health facilities that did not have the equipment at the time of our visit
Ultrasound scan equipment	68%
Vacuum extractors	55%
glucometers	24%
Suctioning machine	11%
Oxygen cylinder	24%
doppler	24%

Source: audit team during site visits

Maternal mortality could have been reduced if adequate and quality of care is provided in these facilities as this equipment is of great importance in the provision of maternal services. In addition, 58% of the health facilities visited are with small autoclaves to sterilize their delivery sets which are usually not spacious enough. For instance, Brikama which is a district hospital that records 6,665 deliveries in a year has only 5 complete delivery sets for both patients with HIV and those that are not infected with one autoclave to sterilize a delivery set for an hour and at times has to refer patients to EFSTH due to inadequate delivery sets.

Conclusion

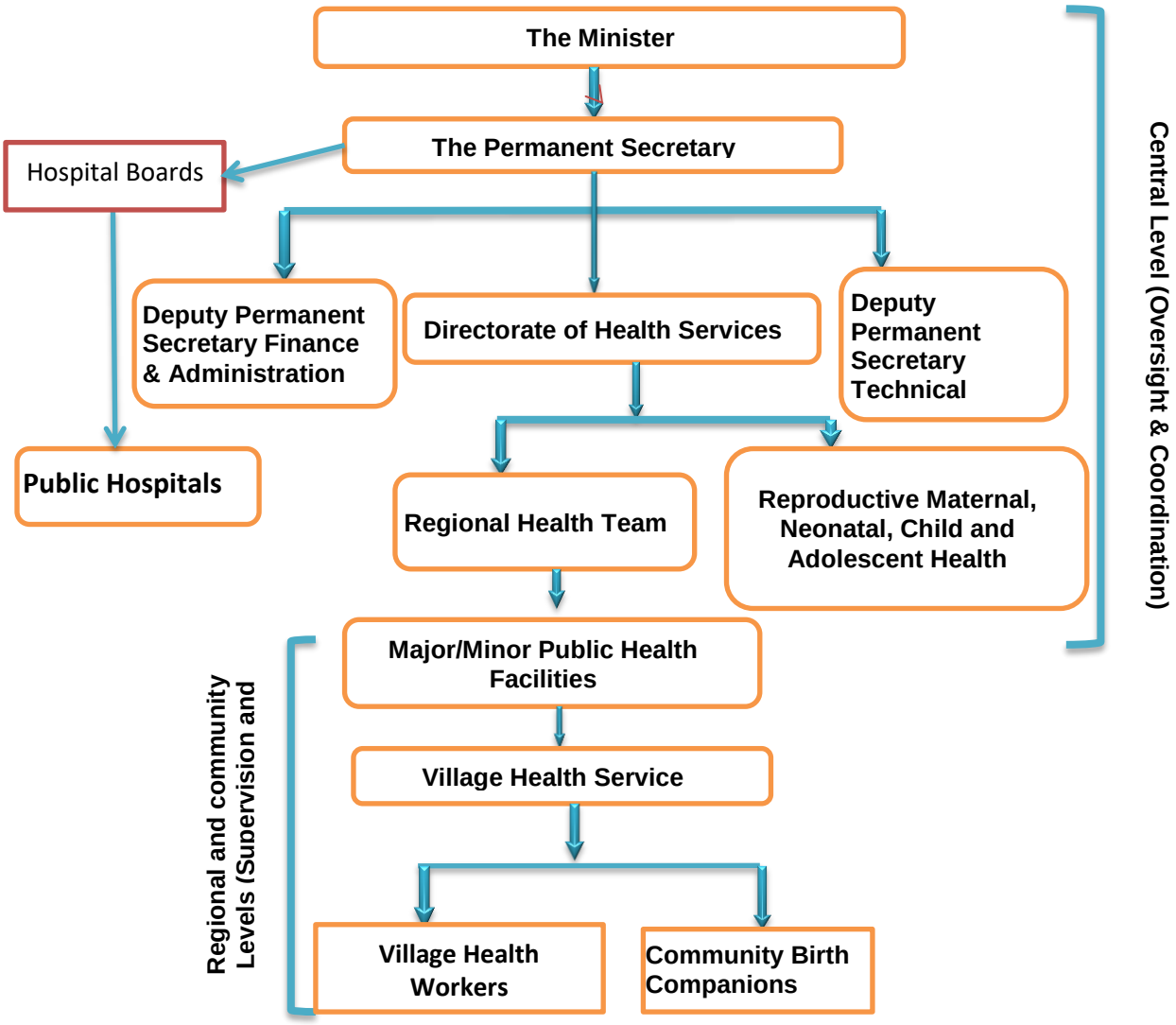
The absence of this equipment affected comprehensive and the quality of diagnosis of care given to patients. Inadequate comprehensive and quality treatment will affect patient, and as such reduce the trust and confidence they will have in the health care system.

The inadequate availability of equipment has led to some women not doing some of the necessary tests needed during ANC services. Furthermore, this has led to an increase in the number of referrals to major health centres and hospitals for complications that could have been managed at lower-level facilities.

Recommendation

The Ministry should ensure facilities are well equipped to provide efficient services for patients. The Ministry should ensure there is always timely availability or replacement of medical equipment in facilities.

APPENDIX 1: ORGANISATIONAL STRUCTURE OF MATERNAL CARE SERVICES



APPENDIX 2: LIST OF STAFF INTERVIEWED

Description of Directorates/Facilities	Number of Staff	Designation
Central/Regional Level		
Reproductive, Maternal, Neonatal, Child and Adolescent Health Program Unit	1	Program Manager
	4	Support staff
Human Resource Directorate	6	Relevant staff
RHD Western Region One	3	Relevant staff
RHD Western Region Two	1	Regional Health Director
	3	Support staff
RHD North Bank East Region	3	Relevant staff
RHD North Bank West Region	1	Regional Health Director
	2	Support staff
RHD Upper River Region	1	Regional Health Director
	3	Support staff
RHD Central River Region	1	Regional Health Director
	2	Support staff
Health Facility Level		
Edward Francis Small Teaching Hospital	I	Maternity-in-Charge
	1	Relevant Staff
Bwiam General Hospital	1	Relevant Staff
Bansang General Hospital	1	Relevant Staff
SerreKunda General Hospital	1	Relevant Staff
Farafenni General Hospital	1	Relevant Staff
Bundung Maternity and Child Health Hospital	1	Relevant Staff
Essau District Hospital	1	Relevant Staff
Basse District Hospital	1	Officer in Charge
Soma District Hospital	1	Officer in Charge
Brikama District Hospital	3	Relevant Staff
Sanyang Major Health Center	1	Officer in Charge
Fajikunda Major Health Center	1	Officer in Charge
Kuntaur Major Health Center	1	Officer in Charge
Kuntair Major Health Center	1	Relevant Staff
Ngayen sanjal Minor Health Center	3	Relevant Staff
Sintet Minor Health Center	1	Officer in Charge
Sukuta Minor Health Center	1	Relevant Staff
Brufut Minor Health Center	1	Officer in Charge
Banjulinding Minor Health Center	1	Officer in Charge
Serekunda Minor Health Center	1	Officer in Charge
Kafuta Minor Health Center	1	Officer in Charge
Gunjur Minor Health Center	1	Relevant Staff
Kaur Minor Health Center	1	Officer in Charge
Salikenni Minor Health Center	1	Relevant Staff

Kiang karantaba Minor Health Center	1	Relevant Staff
Sami karantaba Minor Health Center	1	Relevant Staff
Janjanbureh Minor Health Center	1	Officer in Charge
Demba kunda koto Minor Health Center	1	Relevant Staff
Diabugu Minor Health Center	1	Officer in Charge
Fatoto Minor Health Center	1	Relevant Staff
koina Minor Health Center	1	Relevant Staff
Baja Kunda Minor Health Center	1	Officer in Charge
Yorobawal Minor Health Center	1	Officer in Charge
Foday kunda Minor Health Center	1	Officer in Charge
Bureng Minor Health Center	1	Officer in Charge
Brikamaba Minor Health Center	1	Officer in Charge
Bakau Minor Health Center	1	Officer in Charge
Kaiaf Minor Health Center	1	Relevant Staff
Questionnaire Administered to Midwives and Nurse Attendance		
Number of questionnaires administered	105	
Questionnaire Administered to postpartum Patients		
Number of questionnaires administered	69	

APPENDIX 3: DIRECTORATES UNDER THE DEPARTMENT OF MEDICAL AND HEALTH, MOH&SW

Directorates	Functions and activities
Health Services	▪ Coordination, management, monitoring, and supervision of health care services within the country. ▪ Technical advice to the Permanent Secretary and the Minister of Health and Social Welfare. ▪ Coordinates the functions of program areas such as RMNCAH unit
Planning and Information	▪ Budgeting, Health Planning ▪ Human resource management: training and development, recruitment and promotion, planning and distribution, retention & motivation, resource mobilization for HR ▪ Policy and strategy formulation, implementation, analysis, monitoring, and evaluation ▪ Health system research ▪ Registration of births and maternal and neonatal deaths ▪ Disease control ▪ Information technology and health management information system.
Food Standards, Quality and Hygiene Enforcement	▪ Responsible for assuring food hygiene, nutrition, safety and sanitation in hospitals and health facilities
National Public Health Laboratory Services	▪ Set standards, protocols, and guidelines relating to national health laboratory services for public and private. ▪ To ensure equitable distribution of laboratory infrastructure, equipment and supplies throughout the country ▪ Provision of support (technical and laboratory services) to public and private institutions ▪ To establish and enforce quality laboratory assurance mechanism for both public and private institution ▪ Monitoring and supervision of national health laboratory services in both public and private
Health Promotion and Education	▪ Planning, designing, implementing, evaluating and coordinating overall health promotion and education interventions for the Ministry ▪ Development of a comprehensive Communication strategy on reproductive health ▪ Develop, produce and distribute communication support materials on RMNCAH ▪ Build the capacities of health workers on Interpersonal Communication Skills for effective reproductive health (RH) service delivery ▪ Conduct media campaigns to create demand for RH services ▪ Community sensitization on danger signs during pregnancy, delivery and postpartum ▪ Community engagement and sensitization on the importance of early antenatal booking

Source: National Health Policy 2012-2020

APPENDIX 4: THE NUMBER OF THE MIDWIFERY WORKFORCE AT THE FACILITIES VISITED

Regions / Facilities	Registered Midwives	Enrolled Midwives	Community Health Nurse-Midwives	Total Midwifery
WHR 2	6	11	20	37
Bwiam General Hospital	1	4	3	8
Brikama District Hospital	2	5	12	19
Sanyang Major Health Centre	1	1	1	3
Gunjur Minor Health Centre	2	0	3	5
kafuta Minor Health Centre	0	0	1	1
Sintet Minor Health Centre	0	1	0	1
URR	7	6	7	20
Fatoto Minor Health Centre	1	1	0	2
Koina Minor Health Centre	1	0	1	2
Yorobawol Minor Health Centre	1	0	1	2
Diabugu Minor Health Centre	1	0	0	1
DembaKundaKoto Minor Health Centre	0	0	1	1
FodayKunda Minor Health Centre	0	0	1	1
BajaKunda Minor Health Centre	1	0	1	2
Basse District Hospital	2	5	2	9
NBWR	1	4	5	10
Essau District Hospital	1	3	5	9
Kuntair Major Health Centre	0	1	0	1
WHR 1	48	37	38	123
Brufut Minor Health Centre	1	0	3	4
Bakau Minor Health Centre	1	1	4	6
Banjulinding Minor Health Centre	2	3	5	10
Sukuta Minor Health Centre	1	3	8	12
Serekunda Minor Health Centre	1	4	5	10
EFSTH	18	10	0	28
BMCHH	16	5	5	26
Fajikunda	2	5	8	15
Serekunda General Hospital	6	6	0	12
LRR	3	5	9	17
Kaiaf Minor Health Centre	0	2	0	2
Kiang Karantaba Minor Health Centre	0	0	1	1
Soma District Hospital	2	2	7	11
Bureng Minor Health Centre	1	1	1	3
CRR	5	12	9	26
Brikamaba Minor Health Centre	0	0	3	3
Bansang General Hospital	2	8	0	10
Sami Karantaba Minor Health Centre	0	1	2	3
Kuntaur Major Health Centre	1	1	2	4
Kaur Minor Health Centre	2	0	1	3
Janjanbureh Minor Health Centre	0	2	1	3

NBER	2	5	3	10
Salikenni Minor Health Centre	0	0	1	1
Ngayen Sanjal Minor Health Centre	1	0	0	1
Farafenni General Hospital	1	5	2	8

Source: health facilities

APPENDIX 5: PERFORMANCE OF THE SIGNAL FUCNTIONS IN THE LAST THREE MONTHS BY FACILITIES VISITED

Regions / facilities	Designation	Administration of oxytocin	Administration of antibiotic	Administration of magnesium Sulphate	Manual removal of placenta	Removal of retained product	AVD	Neonatal resuscitation	C-S	Blood Transfusion	**EmOC Status**
WHR 2											**2 CEmOC**
Bwiam	CEmOC	√	√	√	√	√	√	√	√	√	**CEmOC**
Brikama	CEmOC	√	√	√	√	√	√	√	√	√	**CEmOC**
Sanyang	CEmOC	√	√	X[2]	√	√	√	√	X[2/3]	X	**Non EmOC**
Gunjur	BEmOC	√	X[1]	X[1]	√	√	X[2]	√	N/A	N/A	**Non EmOC**
kafuta	BEmOC	√	√	X[1]	X[1]	√	X[2]	√	N/A	N/A	**Non EmOC**
Sintet	BEmOC	√	√	√	X[1]	√	X[1]	√	N/A	N/A	**Non EmOC**
URR											**1 CEmOC**
Fatoto	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**
Koina	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**
Yorobawol	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**
Diabugu	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**
DembaKundaKoto	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**
FodayKunda	BEmOC	√	√	X[2]	√	√	X[2]	X[2]	N/A	N/A	**Non EmOC**
BajaKunda	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**
Basse	CEmOC	√	√	√	√	√	√	√	√	√	**CEmOC**
NBWR											**0 EmOC**
Essau	CEmOC	√	√	√	√	√	X[2]	√	X[3]	√	**Non-EmOC**
Kuntair	CEmOC	√	√	X[1]	√	√	√	√	X[2/3]	X[2/3]	**Non EmOC**
WHR 1											**3 BEmOC 3 CEmOC**
Brufut	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**
Bakau	BEmOC	√	√	√	√	√	√	√	N/A	N/A	**BEmOC**
Banjulinding	BEmOC	√	√	√	√	√	√	√	N/A	N/A	**BEmOC**
Sukuta	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**

Serekunda	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**
EFSTH	CEmOC	√	√	√	√	√	√	√	√	√	**CEmOC**
BMCHH	CEmOC	√	√	√	√	√	√	√	√	√	**CEmOC**
Fajikunda	CEmOC	√	√	√	√	√	√	√	X[2/3]	X[2/3]	**BEmOC**
Serekunda G/H	CEmOC	√	√	√	√	√	√	√	√	√	**CEmOC**
LRR											**1 BEmOC**
Kaiaf	BEmOC	√	√	X[2]	√	√	X[2]	√	N/A	N/A	**Non EmOC**
Kiang Karantaba	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**
Soma	CEmOC	√	√	√	√	√	√	√	X[3]	√	**BEmOC**
Bureng	BEmOC	√	√	√	√	X[1]	X[2]	√	N/A	N/A	**Non EmOC**
CRR											**2 BEmOC 1 CEmOC**
Brikamaba	BEmOC	√	√	√	√	√	√	√	N/A	N/A	**BEmOC**
Bansang	CEmOC	√	√	√	√	√	√	√	√	√	**CEmOC**
Sami Karantaba	BEmOC	√	√	√	√	X[1]	X[2]	√	N/A	N/A	**Non EmOC**
Kuntaur	CEmOC	√	√	√	√	√	√	√	X[3]	X[2]	**BEmOC**
Kaur	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**
Janjanbureh	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**
NBER											**1 CEmOC**
Salikenni	BEmOC	√	√	X[1]	√	√	X[2]	√	N/A	N/A	**Non EmOC**
Ngayen Sanjal	BEmOC	√	√	√	√	√	X[2]	√	N/A	N/A	**Non EmOC**
Farafenni	CEmOC	√	√	√	√	√	√	√	√	√	**CEmOC**
Total	**14 CEmOC 24 BEmOC**										**8 CEmOC 6 BEmOC**

Key:

X[1] indicates no patient needing this intervention came to the facility during the last three months

X[2] indicates that the function is not performed because supplies or equipment are not available, not functional or broken, or the needed drugs are not available

X[3] indicates that the function was not performed because the required level of staff is not posted to the facility

Note:

Performance of the signal function is based on the reporting of the maternity-in-charged interviewed

APPENDIX 6: AVAILABILITY OF DRUGS IN FACILITIES VISITED

Regions / Facilities	Magnesium Sulphate	Oxytocin	Misprostol	Ergometrine	Ampicillin	Gentamicin
WHR 2						
Bwiam	√	√	√	√	√	√
Brikama	√	√	X	√	√	√
Sanyang	X	√	√	√	√	√
Gunjur	√	√	√	√	√	√
Kafuta	√	√	X	√	√	√
Sintet	√	√	√	√	√	√
URR						
Fatoto	√	√	√	√	√	√
Koina	√	√	√	√	√	√
Yorobawol	√	√	√	√	√	√
Diabugu	√	√	√	√	√	√
DembaKundaKoto	√	√	√	√	√	√
FodayKunda	X	√	X	√	√	√
BajaKunda	√	√	√	√	√	√
Basse	√	√	√	√	√	√
NBWR						
Essau	√	√	√	√	√	√
Kuntair	√	√	√	√	√	√
WHR 1						
Brufut	√	√	√	√	√	√
Bakau	√	√	X	√	√	√
Banjulinding	√	√	√	√	√	√
Sukuta	√	√	X	√	√	√
Serekunda HC	√	√	X	√	√	√
EFSTH	√	√	√	√	√	√
BMCHH	√	√	√	√	√	√
Fajikunda	√	√	√	√	√	√
Serekunda GH	√	√	√	√	√	√
LRR						
Kaiaf	X	√	√	√	√	√
Kiang Karantaba	√	√	√	√	√	√
Soma	√	√	√	√	√	√
Bureng	√	√	√	√	√	√
CRR						
Brikamaba	√	√	√	√	√	√
Bansang	√	√	√	√	√	√
Sami Karantaba	√	√	√	√	√	√
Kuntaur	√	√	√	√	√	√

Kaur	√	√	√	√	√	√
Janjanbureh	√	√	√	√	√	√
NBER						
Salikenni	√	√	√	√	√	√
Ngayen Sanjal	√	√	√	√	√	√
Farafenni	√	√	√	√	√	√

Key

√ indicates availability of the usable drug

X indicates unavailability of the usable drug

APPENDIX 7: DONOR PROJECTS FOR MATERNAL HEALTH

Donor	2018		2019	
	Estimates (D)	Approved(D)	Estimates (D)	Approved (D)
Reproductive and Family Health Program (GLF)	500,000	500,000	1,000,000	1,000,000
Maternal Child and Health Result (IDA)	100,000,000	100,000,000	202,745,000	202,745,000
Reproductive and Family Health Program (UNFPA)	500,000	500,000	59,646,600	59,646,600
Total	**101,000,000**	**101,000,000**	**263,391,600**	**263,391,600**

APPENDIX 8: LIST OF FACILITIES VISITED

Regions	Minor Health Centers (n=24)	Major Health Centers (n=4)	District Hospitals (n=4)	Teaching/General Hospitals (n=6)
WHR1 (n=9)	Serekunda Sukuta Bakau Brufut Banjulinding	Fajikunda		EFSTH BMCHH Serekunda
WHR2 (n=6)	Gunjur Sintet Kafuta	Sanyang	Brikama	Bwiam
LRR (n=4)	Kiang karantaba Kaiaf Bureng		Soma	
NBWR (n=2)		Kuntair	Essau	
NBER (n=3)	Ngayen Sanjal Salikenni			Farafenni
URR (n=8)	FodayKunda BajaKunda DembaKundaKoto Fatoto Koina Diabugu Yorobawol		Basse	
CRR (n=6)	Sami Karanta Kaur Janajabureh Brikamaba	Kuntaur		Bansang

GLOSSARY

Antenatal care: Antenatal care (ANC) can be defined as the care provided by skilled health-care professionals to pregnant women and adolescent girls in order to ensure the best health conditions for both mother and baby during pregnancy.

Antenatal: denoting period during pregnancy, before labour.

Complication: An abnormal condition occurring during pregnancy or aggravating it.

Danger signs: Signs of life-threatening and other serious conditions that require immediate intervention. They include vaginal bleeding, convulsion, severe headaches, fever, abdominal pain, fast and/or difficulty in breathing, swelling of the fingers, face, or legs.

Emergency obstetric care (EmOC): The care or services for the treatment of complications that arise during pregnancy and childbirth.

Haemorrhage: In this report refers to severe bleeding before, during and after labour

Maternal death/mortality: The death of a woman while pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

Maternal Mortality Ratio: The number of maternal deaths during a given time period per 100,000 live births during the same time period.

Obstetric fistula: A hole between the vagina and rectum or bladder that is caused by prolonged obstructed labour, leaving a woman incontinent of urine or faeces or both.

Parenteral (drug): drugs Administered elsewhere in the body other than the mouth and alimentary canal.

Placenta: A flattened circular organ in the uterus of pregnant women. Oxygen and nutrients from the mother's blood pass by the placenta into the foetus and waste product in the reverse direction.

Postpartum sepsis: any bacterial infections of the female reproductive tract following childbirth or miscarriage.

Postpartum/postnatal: describing period after childbirth up to 42 days after childbirth.

Prolonged or obstructed labour --any of the following: The inability of a woman to proceed with childbirth upon going into labour. Typically occurs when labour lasts for approximately 20 hours or more if you are a first-time mother, and 14 hours or more if you have previously given birth.

Partograph: A composite graphical record of key data (maternal and foetal) during labour recorded against time on a single sheet of paper. Relevant measurements might include statistics such as cervical dilation, foetal heart rate, duration of labour and vital signs.

Retained products: Intrauterine tissue that develops after conception and persists after medical and surgical pregnancy termination, miscarriage, and vaginal or caesarean delivery.

Ruptured uterus: Is when the muscular wall of the **uterus** tears during pregnancy or childbirth that may result in the foetus being expelled into the peritoneal cavity.

Signal Function: These are key medical interventions that are used to treat the direct obstetric complications that cause most maternal deaths around the world.

Supplies: Non-durable disposable health care materials ordered or prescribed by a physician, which is primarily and customarily used to serve a medical purpose and includes oxygen, gloves, cord clamps, recording tools (registers, cards etc)

Uterotonic drugs: An agent used to induce contraction or greater tonicity of the uterus. **Uterotonics** are administered to induce labour, prevent and treat postpartum haemorrhage. A recent WHO technical consultation (Nov 2008) to develop guidelines for interventions for preventing postpartum haemorrhage reviewed all available evidence and identified parenteral oxytocin as the recommended choice of drug for prevention of postpartum haemorrhage.

Uterus: The organ in which the foetus lives before birth; also called the womb.