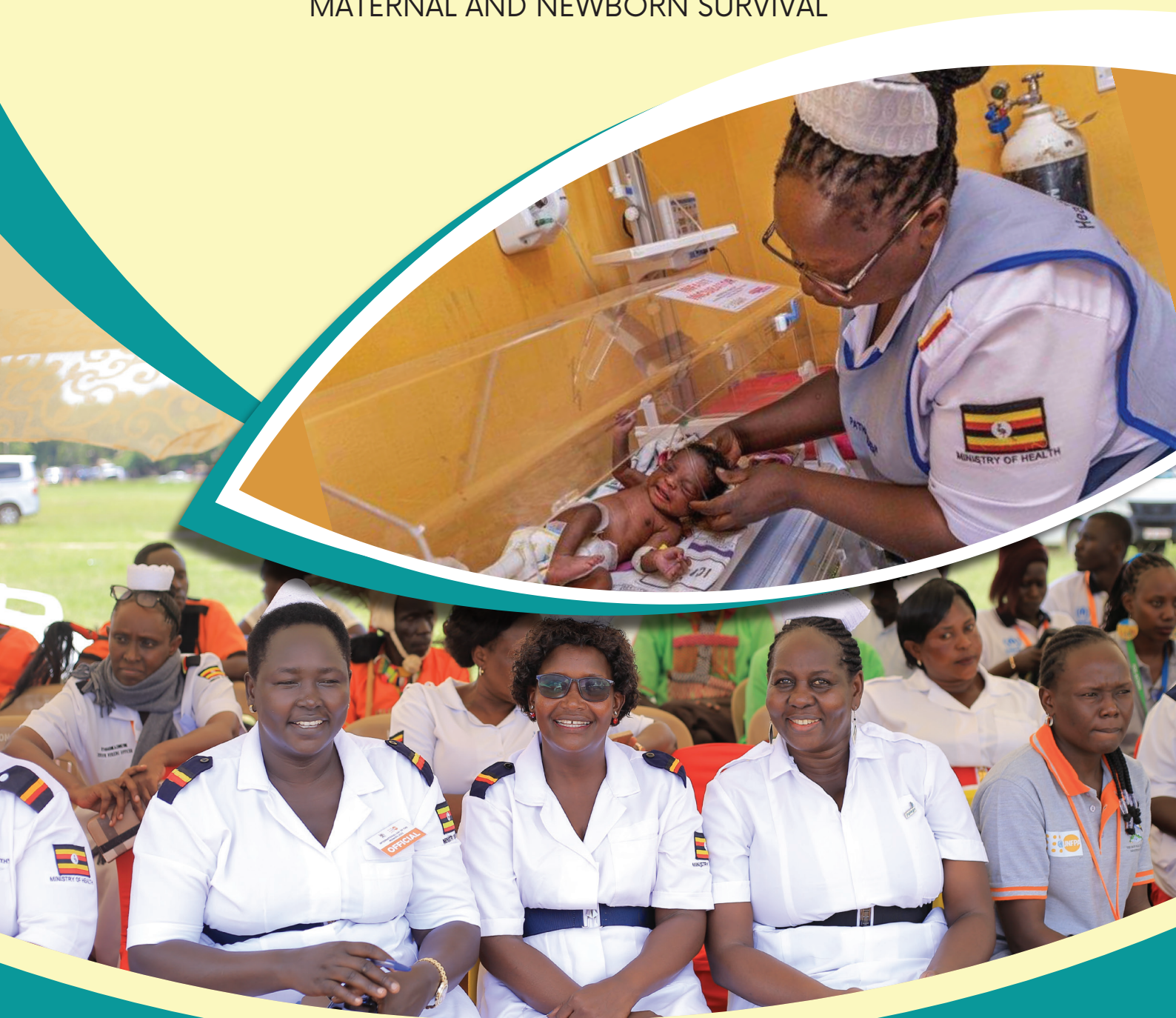




THE REPUBLIC OF UGANDA
MINISTRY OF HEALTH

ACCOUNTING FOR EVERY INSTITUTIONAL MATERNAL AND PERINATAL DEATH

ADDRESSING DELAYS IN CARE TO IMPROVE
MATERNAL AND NEWBORN SURVIVAL



The National FY2023/2024 Annual Maternal and Perinatal
Death Surveillance and Response (MPDSR) Report



Any part of this document may be freely quoted, reproduced, or translated in full or in part, provided the source is acknowledged. It should not be sold or used for commercial purposes or profit.

Government of Uganda, Ministry of Health: The National FY 2023/2024 Annual Maternal and Perinatal Death Surveillance and Response (MPDSR) Report.

Published by: Ministry of Health
P.O. Box 7272
Kampala, Uganda
Email: info@health.go.ug
Website: www.health.go.ug





FOREWORD

Uganda has made significant progress in improving maternal and newborn health, as evidenced by the decreasing trends in mortality rates. The institutional maternal mortality rate has decreased by 17.4% over the last five years, and the institutional perinatal mortality rate has reduced by 30% during the same period. This achievement underscores the positive impact of targeted interventions and improved healthcare systems in Uganda.

Despite this progress, challenges remain in reducing maternal and newborn mortality. Persistent causes such as postpartum haemorrhage (PPH), hypertensive disorders, and sepsis continue to contribute to maternal deaths, while birth asphyxia, complications of prematurity, and septicaemia remain significant causes of newborn mortality.

In response to these challenges, the Ministry of Health has continued to provide leadership and coordination in implementing the Maternal and Perinatal Death Surveillance and Response (MPDSR) program. The focus in 2023/24 was on strengthening health systems and further operationalizing the Local Maternity and Neonatal Systems (LMNS) to improve regional accountability for maternal and newborn health.

The MPDSR program is an essential tool for

improving the quality of care for women and newborns. By tracking and reviewing maternal and perinatal deaths, we can identify the causes and contributing factors and develop strategies to address them.

This year's MPDSR report focuses on "Addressing Delays in Care to Improve Maternal and Newborn Survival." It highlights the importance of timely access to quality care for women and newborns, and the need to address the three delays that can lead to poor maternal and perinatal outcomes: 1. Delay in deciding to seek care, 2. Delay in reaching a health facility, and 3. Delay in receiving adequate care at the health facility.

The report also highlights the importance of multi-sectoral collaboration and community engagement in improving maternal and newborn health outcomes. By working together, we can ensure that every woman and newborn have access to the care they need to survive and thrive.

I urge all stakeholders to use this report to inform their efforts to reduce maternal and perinatal mortality in Uganda.

Dr. Henry G. Mwebesa
DIRECTOR GENERAL HEALTH SERVICES



ACKNOWLEDGEMENT

The Ministry of Health sincerely acknowledges the dedicated efforts of districts and health facilities in conducting maternal and perinatal death reviews and for consistently submitting their findings to the ministry headquarters. Maternal and Perinatal Death Surveillance and Response (MPDSR) is a critical tool for quality improvement, and we are proud to highlight its central role in our ongoing efforts to reduce maternal and newborn mortality. We greatly appreciate the invaluable support provided by the National MPDSR Committee, which has been instrumental in this process.

We also extend our heartfelt thanks to the following individuals for their significant contributions to the development of this report: Dr. Henry G Mwebesa, Dr. Paul Isabirye, Mr. Bruno Ssemwanga, Mr. Ssensalire Rajab, Dr. Deogratias Migadde, Mr. Nathan Lubowa, Dr. Allan Katamba, Dr. Arnold Muwonge, Sr. Maria Najjemba, Mr. Phillip Aleu, Ms. Clara Kokunda, Dr. Brenda Kharono, Dr. Victoria Nakibuuka, Dr. Ebong Chris, Dr. Bonnie Wandera, Dr. Olive Sentumbwe Mugisa, Dr. Imelda Namagembe, Dr. Dan Murokora, Mr.

John Vianney Owayezu, Dr. Allan Kasozi, Mr. Brian Ngobya, Mr. Ahabwe Timothy, and Ms. Hadijja Nakatudde.

The Ministry deeply appreciates the collaborative support and technical expertise of our development and implementing partners, especially USAID, and their partners: SITES, MCHN-Activity, and UHA, WHO, UNFPA, the World Bank/URMCHIP, UNICEF, BAMA, ENABEL, and all other organizations that have consistently supported the institutionalization of MPDSR. Furthermore, we recognize the key contributions of the National Safe Motherhood Experts Committee (NASMEC), the Local Maternity and Neonatal System (LMNS), the Association of Obstetricians and Gynaecologists of Uganda (AOGU), and the Uganda Paediatric Association (UPA) for their unwavering support throughout this important journey.

Dr. Richard Mugahi

**COMMISSIONER HEALTH SERVICES,
REPRODUCTIVE MATERNAL AND CHILD HEALTH**

ABBREVIATIONS

APH:	ANTEPARTUM HAEMORRHAGE
BPP:	BIRTH PREPAREDNESS PLAN
DHIS:	DISTRICT HEALTH INFORMATION SYSTEM
DHO:	DISTRICT HEALTH OFFICER
EMONC:	EMERGENCY OBSTETRIC AND NEONATAL CARE
ENND:	EARLY NEONATAL DEATH
EWEC:	EVERY WOMAN EVERY CHILD
FSB:	FRESH STILLBIRTH
GH:	GENERAL HOSPITAL
HC:	HEALTH CENTER
HMIS:	HEALTH MANAGEMENT INFORMATION SYSTEM
IDSR:	INTEGRATED DISEASE SURVEILLANCE AND RESPONSE
IMMR:	INSTITUTIONAL MATERNAL MORTALITY RATIO
IPMR:	INSTITUTIONAL PERINATAL MORTALITY RATE
IPT:	INTERMITTENT PREVENTIVE TREATMENT
IRR:	IDENTIFICATION, RETENTION AND RESPONSE
LMNS:	LOCAL MATERNITY AND NEONATAL SYSTEMS
MCHN-A:	MATERNAL CHILD HEALTH AND NUTRITION ACTIVITY
MMR:	MATERNAL MORTALITY RATIO
MOH-SP:	MINISTRY OF HEALTH STRATEGIC PLAN
MPDR:	MATERNAL AND PERINATAL DEATH REVIEWS
MPDSR:	MATERNAL AND PERINATAL DEATH SURVEILLANCE AND RESPONSE

MSB:	MACERATED STILLBIRTH
NASMEC:	NATIONAL SAFE MOTHERHOOD EXPERTS COMMITTEE
NCU:	NEWBORN CARE UNIT
NDP III:	THIRD NATIONAL DEVELOPMENT PLAN
NRH:	NATIONAL REFERRAL HOSPITAL
OPD:	OUTPATIENT DEPARTMENT
PPH:	POSTPARTUM HAEMORRHAGE
QI:	QUALITY IMPROVEMENT
RMNCAH:	REPRODUCTIVE, MATERNAL, NEWBORN, CHILD, AND ADOLESCENT HEALTH
RRH:	REGIONAL REFERRAL HOSPITAL
SDG:	SUSTAINABLE DEVELOPMENT GOAL
SITES:	STRATEGIC INFORMATION TECHNICAL SUPPORT
SVD:	SPONTANEOUS VAGINAL DELIVERY
TBA:	TRADITIONAL BIRTH ATTENDANTS
UDHS:	UGANDA DEMOGRAPHIC HEALTH SURVEY
UHA:	UGANDA HEALTH ACTIVITY
UNFPA:	UNITED NATIONS POPULATION FUND
UNICEF:	UNITED NATIONS CHILDREN'S FUND
URMCHIP:	UGANDA REPRODUCTIVE MATERNAL CHILD HEALTH SERVICES IMPROVEMENT PROJECT
USAID:	UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
WHO:	WORLD HEALTH ORGANIZATION

CONTENTS

FOREWORD	III
ACKNOWLEDGEMENT	IV
ABBREVIATIONS	V

CHAPTER 01 01

INTRODUCTION	01
1.1 BACKGROUND	01
1.2 THEME, GOAL, AND OBJECTIVES OF THE REPORT	02

CHAPTER 02 03

INTRODUCTION	03
UGANDA'S PROGRESS IN MPDSR IMPLEMENTATION DURING FY2023/2024	03
2.1 SUSTAINING THE MATERNAL AND PERINATAL DEATH SURVEILLANCE AND RESPONSE EFFORTS.....	03
2.2 HEALTH SYSTEM RESPONSE TO PREVENTABLE CAUSES OF MATERNAL AND PERINATAL DEATHS	04
2.4 MPDSR ACCOMPLISHMENT BY HEALTH SYSTEM BUILDING BLOCKS AT NATIONAL AND REGIONAL LEVELS	04
2.3 OPERATIONALISATION OF NEWBORN CARE UNITS	08
2.4 COLLABORATIVE LEARNING AND ADAPTATION	09
2.5 LEARNING FROM THE NEAR-MISSES	13

CHAPTER 03 16

3.0 ANALYSIS OF THE REPORTED AND REVIEWED MATERNAL AND PERINATAL DEATHS.....	16
3.1 INTRODUCTION	16
3.2 INSTITUTIONAL MATERNAL DEATHS	16
3.2.1 INTRODUCTION	16
3.3 INSTITUTIONAL PERINATAL DEATHS	43
3.3.1 PERINATAL DEATH REVIEWS BY DISTRICT.....	50

CHAPTER 04 75

RECOMMENDATIONS 75

APPENDICES..... 78

APPENDIX 1: CASE STUDIES 78

LIST OF FIGURES

FIGURE 1: SHOWING NATIONAL TRENDS IN IMMR 100,000 DELIVERIES IN PAST EIGHT YEARS.....	16
FIGURE 2: MAP SHOWING INSTITUTIONAL MATERNAL MORTALITY RATIO PER 100,000 DELIVERIES BY DISTRICT FOR FY2022/23 AND FY2023/24.....	18
FIGURE 3: IMMR AMONG ADOLESCENTS BY DISTRICT FY2023/24	19
FIGURE 4: SHOWING NATIONAL TRENDS IN MATERNAL DEATHS REPORTING, NOTIFICATION AND REVIEWS IN PAST EIGHT YEARS.	20
FIGURE 5: MAP SHOWING THE PROPORTION OF MATERNAL DEATHS REVIEWED BY DISTRICTS (FY 22/23 AND FY2023/24)	23
FIGURE 6: CAUSES OF MATERNAL DEATH, (N=1159) FY 2023/24.....	25
FIGURE 7: CAUSES OF MATERNAL DEATHS IN THE LAST FOUR FINANCIAL YEARS	26
FIGURE 8: CLASSIFICATION OF HAEMORRHAGE CASES, N=521	27
FIGURE 9: PROPORTIONAL CONTRIBUTION OF THE LEADING CAUSES OF DEATH BY MATERNAL AGE CATEGORY FY2023/2024.....	31
FIGURE 10: SHOWING LEADING CAUSES OF MATERNAL DEATHS BY HEALTH FACILITY LEVEL, FY23/24.....	33
FIGURE 11: DEEP DIVE OF AVOIDABLE FACTORS UNDER DELAY 3, FY2023/2024	39
FIGURE 12: TRENDS IN INSTITUTIONAL PERINATAL MORTALITY RATES (PER 1000 BIRTHS) IN UGANDA (FY2016/17 TO FY2023/24)	43
FIGURE 13: NEWBORN DEATHS (0-7 DAYS) BY LEVEL OF CARE IN KAMPALA.....	45
FIGURE 14: SHOWING INSTITUTIONAL PERINATAL MORTALITY PER 1000 BIRTHS DURING FY2022/23 AND FY2023/24	46
FIGURE 15: TRENDS IN PERINATAL DEATH NOTIFICATIONS AND REVIEWS (FY2016/17 TO FY2023/24.....	47
FIGURE 16: MAP SHOWING THE RATE OF PERINATAL DEATHS REVIEWED BY DISTRICTS FY2022/23 AND FY2023/24	50
FIGURE 17: PERINATAL DEATH REVIEW RATES BY LEVEL OF CARE FY 2023/24.....	52
FIGURE 18: CAUSES OF DEATH AMONG THE REVIEWED EARLY NEONATAL DEATHS DURING FY23/24.....	54

FIGURE 19: TRENDS IN THE LEADING CAUSES OF NEONATAL DEATHS OVER THE PAST 6 YEARS (FY2018/19 - FY2023/24)	55
FIGURE 20: RESUSCITATION OF ASPHYXIATED BABIES BY MODE FY2023/2024 (N=3398)	56
FIGURE 21: SHOWING HB TESTING AND LEVEL OF ANAEMIA DURING ANC FOR MOTHERS WITH REVIEWED PERINATAL DEATHS FY2023/2024 (N=15019)	60
FIGURE 22: PERCENTAGE HB TESTING TRENDS.....	61
FIGURE 23: HIV CASCADE FY2023/2024 (N=15019)	62
FIGURE 24: SYPHILIS TESTING AND RESULT FY2023/2024 (N=15019).....	63
FIGURE 25: PARTOGRAPH USE AMONG MOTHERS OF THE REVIEWED PERINATAL DEATHS BY HEALTH FACILITY LEVEL FY2023/24 (N=15018)	64
FIGURE 26: PERCENTAGE OF PERINATAL DEATH BY MODE OF DELIVERY.....	66
FIGURE 27: SHOWING DECISION TO INCISION INTERVAL AMONG PERINATAL DEATHS DELIVERED THROUGH C/S FY2023/2024	67
FIGURE 28: DECISION TO INCISION INTERVAL BY HEALTH FACILITY LEVEL	68
FIGURE 29: DEEP-DIVE INTO AVOIDABLE FACTORS UNDER DELAY 3, FY2023/2024	72

LIST OF TABLES

TABLE 1: EXAMPLES OF MPDSR ACCOMPLISHMENT BY HEALTH SYSTEM BUILDING BLOCKS AT AND REGIONAL LEVEL.....	04
TABLE 2: COLLABORATIVE LEARNING AND ADAPTATION	09
TABLE 3: LEARNING FROM NEAR-MISSES.....	13
TABLE 4: MATERNAL MORTALITY BY AGE CATEGORY	17
TABLE 5: REGIONAL BREAKDOWN OF MATERNAL DEATHS REPORTED, NOTIFIED AND REVIEWED FOR THE LAST FOUR FINANCIAL YEARS.....	21
TABLE 6: INSTITUTIONAL MATERNAL MORTALITY RATIO BY HEALTH FACILITY LEVEL FY2020/21, FY2021/22, FY2022/23, AND FY2023/24.....	24
TABLE 7: CAUSES OF MATERNAL DEATHS BY REGION FY2023/2024.....	29
TABLE 8: BREAKDOWN OF INDIRECT CAUSES OF MATERNAL DEATHS BY AGE FOR FY2022/23 AND FY2023/24	32
TABLE 9: LEADING CAUSES OF MATERNAL DEATHS DEEP DIVE BY REGIONAL REFERRAL HOSPITAL.....	35
TABLE 10: COMPARISON IN THE CHARACTERISTICS OF MATERNAL DEATHS REVIEWED IN FY2022/23 AND FY2023/24	36
TABLE 11: AVOIDABLE FACTORS FY2023/2024	38
TABLE 12: UNPACKING DELAY 3 BY REGION.....	40
TABLE 13: UNPACKING INAPPROPRIATE INTERVENTIONS BY REGION.....	41
TABLE 14: SHOWING THE IPMR BY REGION BETWEEN FY2022/23 AND FY2023/24.....	44
TABLE 15: SHOWING HEALTH FACILITIES IN KAMPALA WITH THE GREATEST BURDEN OF NEWBORN DEATHS (0-7 DAYS)	45
TABLE 16: SHOWING THE PERINATAL DEATH NOTIFICATIONS AND REVIEWS BY REGION BETWEEN FY2022/23 AND FY2023/24	48
TABLE 17: SHOWING PERINATAL MORTALITY RATES BY LEVEL OF HEALTH FACILITY.....	51
TABLE 18: PERINATAL DEATHS REVIEWED BY BIRTH WEIGHT [N=15019].....	53
TABLE 19: SHOWS ASPHYXIA AND NEWBORN RESUSCITATION RATES PER REGION.	57

TABLE 20: SHOWING MATERNAL CHARACTERISTICS ASSOCIATED WITH PERINATAL DEATHS REVIEWED	58
TABLE 21: SHOWING COMPLICATIONS EXPERIENCED DURING PREGNANCY FY202223/2024	65
TABLE 22: CEMONC FACILITIES CONDUCTING C-SECTION DELIVERIES BY HEALTH FACILITY LEVEL	69
TABLE 23: CEMONC FACILITIES CONDUCTING C-SECTION DELIVERIES BY REGION	69
TABLE 24: REFERRAL STATUS FOR PERINATAL DEATHS FY2023/2024	70
TABLE 25: AVOIDABLE FACTORS FOR PERINATAL DEATHS FY2023/2024	71
TABLE 26: UNPACKING INAPPROPRIATE INTERVENTIONS LEADING TO PERINATAL DEATHS	74
TABLE 27: DISTRICT DEEP-DIVES FY2023/2024	89



CHAPTER 01

INTRODUCTION

1.1 Background

Globally, the health of women, children, and adolescents is critically important to almost every area of human development and progress. Every *Woman Every Child* (EWEC) global strategy provides an opportunity to improve the health of women, children, and adolescents in all countries. Ending preventable maternal and perinatal mortality is a global priority under the Sustainable Development Goals - 2030 (SDG) agenda. The aim is to reduce the average global Maternal Mortality Ratio (MMR) to less than 70 maternal deaths per 100,000 live births and neonatal mortality to at least 12 deaths per 1000 live births by 2030.

Uganda made commitment in the NDP III to reduce maternal mortality ratio to 211 per 100,000 live births by FY2024/25. Similarly, the country committed to reduce neonatal mortality rate to 19 per 1,000 live births during the same period. The country has adopted strategies to achieve these targets as stipulated in RMNCAH Sharpened Plan and Investment Case. These include focusing on districts with the highest maternal and child mortality; increasing access for high burden population in each district; scaling up delivery of evidence-based high impact intervention packages; addressing the broader multisectoral context and strengthening mutual accountability for RMNCAH outcomes by all stakeholders.

The country has made significant progress towards the reduction of maternal mortality ratio from 336/100,000 live births (UDHS, 2016) to 189 per 100,000 live births (UDHS, 2022). This reduction has surpassed the

FY2023/24 NDP III target of 236 deaths per 100,000 live births. In addition, neonatal mortality rate decreased from 27 (UDHS, 2016) to 22 deaths per 1,000 live births (UDHS, 2022), which is close to the FY2023/24 NDP III target of 20 deaths per 1,000 live births.

Achieving SDG goal 3 targets will require access to safe, effective, quality, and affordable care for women and newborns. In 2015, the World Health Organization (WHO) prioritized improving the quality of care for women and newborns to reduce preventable maternal and newborn deaths.

In 2012 the Ministry of Health recommended that maternal and perinatal deaths be



SIGNIFICANT REDUCTION IN

**Maternal
Mortality
Ratio**

from	336/100,000	UDHS, 2016
to	189/100,000	UDHS, 2022



notified for surveillance purposes on the IDSR system. Notification would be done using the weekly reporting through the Integrated Disease Surveillance and Response (IDSR) platform so as to be able to provide real time data for response/action. The IDSR platform is linked to the DHIS2 a web data base that is used to capture and store national Health Management Information (HMIS). The MPDSR system emphasizes continuous identification and reporting of maternal/perinatal deaths and linking that information to quality improvement (QI) processes.

In Uganda, maternal and perinatal death surveillance are handled together through the quality improvement platform. Maternal and perinatal death reviews (MPDR) help to understand the circumstances around the death of a mother or newborn in order to identify factors contributing to death so as to develop strategies to address the identified factors. The MPDSR system aims at identifying ALL maternal and perinatal deaths, determine causes of death and avoidable factors that lead to maternal/newborn deaths so as to respond with actions aimed at preventing future similar deaths.

1.2 Theme, Goal, and Objectives of the Report

1.2.1 Theme:

Accounting for Every Institutional Maternal and Perinatal Deaths: Addressing Delays

in Care to Improve Maternal and Newborn Survival

1.2.2 General Objective:

To document the health care system's response in addressing the three delays associated with poor maternal and perinatal outcomes.

1.2.2.1 Specific objectives

- (i) To describe the magnitude and trends of maternal and perinatal mortality.
- (ii) To describe the causes and avoidable factors associated with maternal and perinatal deaths.
- (iii) To provide accountability in form of health system response and investments towards reduction of preventable maternal and perinatal deaths.
- (iv) To share best practices in form of success stories and case studies on MPDSR implementation for scaleup.
- (v) To assess progress towards implementation of the FY2022/2023 recommendations.



CHAPTER 02

INTRODUCTION

Uganda's Progress In MPDSR Implementation During Fy2023/2024

2.1 Sustaining the Maternal and Perinatal Death Surveillance and Response efforts

Over the last eight financial years, Uganda has made substantial strides in collecting, reporting, and analyzing data on maternal and perinatal deaths through Maternal and Perinatal Death Surveillance and Response (MPDSR). The FY2022/23 report documented significant interventions to reduce maternal and perinatal mortality, including enhanced coordination at national and subnational levels and strengthened stakeholder involvement.

The Ministry of Health has continued to provide leadership/governance and coordination of MPDSR implementation through the national weekly MPDSR meetings. In addition, the Ministry of Health team has conducted targeted regional support supervision visits and participation in regional health assemblies. The main purpose was to oversee the implementation of recommendations from the national and subnational MPDSR meetings to accelerate reduction in preventable maternal and newborn morbidity and mortality.

In FY2023/24, focus shifted towards Health systems strengthening and further operationalization of the Local Maternity and Neonatal Systems (LMNS) to improve regional accountability for maternal and newborn health.

MPDSR IMPLEMENTATION KEY HIGHLIGHTS



- Improving skills through onsite mentorship and training of healthcare workers.



- Disseminating Emergency Obstetric and Neonatal Care (EmONC) guidelines.



- Dissemination of the Guidelines for small and sick newborn



- Short course in-service training for neonatal nurses in regional referral Hospitals across six neonatology centres of excellence in the country



- Conducting confidential inquiries into maternal deaths.



- Coordinating referrals for obstetric emergencies and redistributing essential supplies.



- Engaging the public through mass media campaigns.



- Establishing a quality-of-care collaborative for managing high-risk pregnancies.



2.2 Health System Response to Preventable causes of Maternal and Perinatal Deaths

Uganda continues to face significant challenges in maternal and perinatal mortality, with persistent causes such as postpartum haemorrhage (PPH), hypertensive disorders, sepsis, while the

leading causes for newborn mortality include Birth Asphyxia, complications of prematurity and septicaemia. The Ministry of Health, with support from partners, has initiated several strategies to address these preventable causes of deaths. These efforts reflect Uganda's commitment to achieving the Sustainable Development Goals (SDGs), particularly SDG 3, which focuses on reducing maternal and neonatal mortality.

2.4 MPDSR accomplishment by Health System Building Blocks at National and Regional levels

Table 1: Examples of MPDSR accomplishment by Health System Building Blocks at National and Regional levels

WHO Building Blocks	Accomplishments
Leadership & Governance	National Level: - Weekly Data driven MPDSR community of practice meetings held virtually with improved attendance of 700 plus participants. - Initiated the development of the LMNS strategy 2024 to guide the implementation of LMNS activities in the country - Integrated mentorships and technical support supervisions visits and spot-checks by MOH top management, IPs, and LMNS networks - Hosted the global MPDSR technical working group meeting from 20 countries as part of the national prioritisation of MPDSR through global and regional commitments - Advocacy and overall enabling environment for MPDSR implementation through celebration of world prematurity day, breastfeeding week, PET advocacy campaign across the country - Development of the Newborn Care Unit (NCU's) standards and a Newborn Investment case. Subnational Level: - LMNS meetings conducted weekly with some of the regions having the district administrators (such as the Chief Administrative Officers) chairing these sessions. - Integrated Technical Support Supervision (TSS) by IP's and LMNS - Commemoration of key MNH events: PET, Prematurity, Breastfeeding etc - Conducted confidential inquiries into maternal deaths to identify gaps and improve on the quality of care such as in Busoga, Acholi, Mbarara, Bunyoro, Bugisu among others

WHO Building Blocks	Accomplishments
Service Delivery	National Level: - Operationalisation of HC IVs (Patongo, Mpumudde, Rukoki, Kasereremu, Bugangali, Awach, Namatala, Atiak, Pajule, Biiso etc). - Operationalised NCUs in Luwero, Buliisa, Kyangwali, Dokolo, Nankandulo and Bwera, among others. - Continued to scale-up the implementation of high-risk clinics (114 districts) for maternal health services, particularly for high-risk pregnancies and women with pre-existing conditions. - Conducted the EmONC needs assessment to identify the level of functionality of the health facilities and gaps. Dashboards on different indicators were also developed and shared with all stakeholders. - Strengthened emergency obstetric care (EmOnC) services to enhance BEmONC and CEmONC through improved infrastructure (HC III to HC IV) Subnational Level: - Initiation of a milk bank in a public health facility (Mbale RRH) to improve newborn survival especially the pre-term babies - Establishment of designated resuscitation teams in selected hospitals Kampala and Wakiso HC IV in Wakiso District - Onsite support to referring health facilities on timely identification and referral of mothers - Conducted the Newborn Situation Analysis where only 25% of RRH's and 8% of GHs have a fully functional Level II Neonatal unit.



Ministry of Health Top leadership Technical Support Supervision and spot check visit in Bunyoro led by the Permanent secretary and the Commissioner in charge of Reproductive, Maternal and Child Health



WHO Building Blocks	Accomplishments
Medicines and Supplies	- Ensured average monthly availability of oxytocin (76%), Mama kits (72%), Misoprostol at 53%, and ceftriaxone (70%) to manage PPH, sepsis, and hypertensive disorders among other pregnancy related complications. - Development of a digital dashboard for monitoring stock levels of blood and blood products in the country 11 HC IV's have been assessed and accredited to offer blood transfusion services. 5 HC IVs supported with equipment from partners (USAID/UHA, MSF, Care International, ADARA, Baylor Uganda, and World Vision). - Blood fridges, blood bank equipment, hard-top station wagons, and testing and grouping reagents have been procured with funding support from UCREPP. - To address the low screening levels for anaemia, a needs quantification for the Hb testing kits / supplies was done. A letter requesting districts to prioritize procurement of supplies for HB testing was sent out, guidance provided on the use of CBC machines for HB testing.
Human Resources	National Level: - MOH engaged the district local governments to recruit critical cadres for MNH service delivery including anaesthetic officers, midwives, medical officers in regions of West Nile, Busoga, Acholi, Kampala among others - Conducted monthly NASMEC webinars at national and regional LMNS levels to address knowledge gaps among MNH health care providers such as EMOTIVE, pre-eclampsia/eclampsia, prematurity and transportation of pre-term babies, sepsis, ruptured uterus among others Subnational Level: - Enhanced training and mentorship for healthcare workers in managing obstetric emergencies, infection prevention, and safe surgical practices. - Health workers have been trained on rational use of blood and blood products through the National and Regional MPDSR platforms. - Improving skills for the in-service nurses through a short course training at the six centres of excellence in neonatology in Uganda

WHO Building Blocks	Accomplishments
Health Financing	- Increased funding for RH commodities (mama-kits, misoprostol, additional FP and new products including heat stable carbetocin, tranexamic acid, caffeine) from UGX 24 billion up to about UGX 34 billion. - Through the quarterly stakeholder engagement meetings and in conjunction with CSOs, MoH advocated for an increase in funding by the Parliamentary Committee on Health - Collaboration with Corporate Societies for safe motherhood, for example Stanbic Bank which supported various health centers and hospitals with approximately UGX 600 million. This contribution included donations of Mamakits to numerous health facilities, support for infrastructural developments at Kajjansi HC IV, and donations of medical equipment to health centers such as Riki HC Arua, Mbale RRH, Rubanda HC, Naguru RRH, and Komamboga HC III.
Health Information	National Level: - Reviewed the HMIS tools to meet the new reporting requirements - Linkage and synchronisation of the HMIS 100 (Medical Certification of Death) to the maternal and perinatal death review forms - Continued to generate and disseminate weekly MPDSR reports, monthly MCH dashboards and the RMNCAH scorecard as tools for accountability and action Subnational Level: - Improved data quality to inform targeted implementation of interventions through monthly MCH data cleaning and verification - Increased data-driven regional RMNCAH performance review meeting at all levels



Review of the Longitudinal ANC register being used by Bugono HC IV to document high risk pregnancies in the High-risk pregnancy clinic

2.3 Operationalisation of Newborn care units

Nankandulo Health Center IV Newborn SCU



Luwero General Hospital Equipment Support



Bwera General Hospital Newborn SCU





2.3 MOH Strategic stakeholder Collaboration for MPDSR

The National Maternal and Perinatal Death Surveillance and Response (MPDSR) committee has prioritized multi-stakeholder Collaboration, engaging policymakers, the private sector, and the media to address challenges related to MPDSR implementation. This engagement has been crucial in ensuring accountability and monitoring maternal health interventions.

The involvement of implementing partners, donors, and bilateral organizations has led to significant progress, particularly in implementing region-specific interventions that have improved maternal and perinatal health outcomes.

2.4 Collaborative learning and adaptation

Table 2: Collaborative Learning and Adaptation

TOPIC/PRESENTATION	REGION	EXEMPLAR LESSONS AND ACHIEVEMENTS
1. REGIONAL LOCAL MATERNITY AND NEONATAL SYSTEMS (LMNS)	Mbale RRH / Mbale Regional LMNS	- Improved Communication and Community Engagement, for example, the Elgon Region translated PET IEC materials into 4 regional local languages (Gishu, Ateso, Lugwere, Luganda). This initiative was aimed at improving communication and understanding of pre-eclampsia within the community, to increase awareness and timely care-seeking for mothers. - The region also received assorted equipment for labour wards and theatres from MOH and Partners like Seed Global Health, USAID-UHA, Stanbic bank, and save the mothers, like autoclaves, monitors, surgical and delivery beds, BP machines etc.
2. PEDIATRIC SURGERY AS A CONTINUATION OF OBSTETRIC CARE	IPs [Paediatric Surgery Foundation Ltd]	Improved Antenatal Care and Early Detection: Increased awareness and diagnosis of ANC-diagnosable paediatric surgical conditions, leads to better preparation for potential complications and improved neonatal outcomes.
3. NATIONAL ANNUAL MATERNAL & PERINATAL DEATH SURVEILLANCE AND RESPONSE (MPDSR) REPORT FY 2022/2023, HIGHLIGHTS	Ministry of Health Secretariat	Reduced Maternal Mortality: A 16.4% reduction in IMMR was achieved between 2016 and 2023, demonstrating the positive impact of MPDSR implementation and targeted interventions. However, a 6.6% increase in IMMR was observed between FY 2021/2022 and FY 2022/2023, indicating the need for continuous monitoring and improvement of maternal health services.
4. MANAGEMENT OF ADVERSE BLOOD TRANSFUSION REACTIONS	Uganda Blood Transfusion Services (UBTS)	- Monitor pts undergoing blood transfusion - Implement hemovigilance system to improve reporting and investigation of treatment reactions - Observe strict SOPs for blood transfusion - Make use of the blood transfusion clinical guidelines
5. USING COMMUNITY HEALTH INTERVENTIONS TO IMPROVE EARLY ANC CONTACTS: A CASE OF MUKO HC IV	Rubanda District	- Community platforms support to dispel the myths and misconceptions about early ANC 1 contacts. - Multiple community interventions do give results as opposed to a single community strategy.

TOPIC/PRESENTATION	REGION	EXEMPLAR LESSONS AND ACHIEVEMENTS
6. PROGRAMME MANAGEMENT TO IMPROVE REPRODUCTIVE MATERNAL NEWBORN AND CHILD HEALTH OUTCOMES (RMNCAH)	WHO-UGANDA	Data-Driven Program Planning and Implementation: Improved program management practices, including comprehensive assessment of intervention coverage, analysis of activity-related indicators, and data-driven decision-making for program improvement. This has strengthened the effectiveness of RMNCAH programs and contributed to better health outcomes.
7. OVERVIEW OF INFECTION PREVENTION AND CONTROL	Fort Portal RRH	- Enhanced Infection Prevention and Control Practices: Improved hygiene practices, including regular ward cleaning and 2-hourly turning, feeding, and bed baths for critically ill patients, reduces the risk of infections. - Increased psychological and emotional support for patients and caregivers has also improved overall patient care and satisfaction.
8. RUPTURED ECTOPIC PREGNANCIES	NASMEC	Enhanced capacity for acute management of ruptured ectopic pregnancy, leads to reduction in mortality rates associated with this condition.
9. IMPROVING NEONATAL CARE IN A REMOTE & RURAL REFUGEE SETTING	Kyangwali HC IV	- To reduce this newborn mortality rate, the team resolved to set up a functional Neonatal Care Unit within the health facility. - With Result Based Financing (RBF) funds the team in the unit developed further by setting up a 115 by 100cm wooden cardboard room and purchased other necessities. - Neonatal Care Unit established on February 19, 2022, following recommendation by National Newborn Steering Committee and then started as special corner demarcated with carpets in the labour ward. - A nurse was hired to manage the NCU using RBF funds. Currently, the unit manages about 70 babies monthly and this has significantly improved neonatal care access and outcomes in a remote refugee setting.
10. MPDSR ACTION TRACKER & RECOMMENDATIONS	UNICEF	Strengthened Monitoring and Response: Development of a digital tracker to monitor actions derived under each LMNS, promoting efficient tracking of MPDSR responses and accountability for maternal and newborn health outcomes.





Addressing Delays in Care to Improve Maternal and Newborn Survival

TOPIC/PRESENTATION	REGION	EXEMPLAR LESSONS AND ACHIEVEMENTS
11. MID-TERM EXPERIENCE: REDUCING POST-DISCHARGE COMMUNITY NEWBORN DEATHS: FOSTERING NEWBORN SURVIVAL IN PUBLIC HC SETTING H2H ADAPTION	South/North Central	• Successfully implementation of the H2H model leads to: * Improvement in Health Education and preparation of parents on care for preterm and sick newborn babies during and after being discharged from the NICU. * Improvement in discharge coordination of preterm and sick newborns from Neonatal unit into community * Enhanced Collaboration and coordination on continuum of care for discharged preterm, small for age and sick newborn in community * Improved adherence to ICCM guidelines on immediate follow-up and referral following discharged from the NICU • Acceptance of the H2H program by the communities served (increased awareness on care leading to reduced maternal anxiety due to prematurity).
12. RMNCAH SUPPLY CHAIN UPDATES: OPPORTUNITIES FOR REDISTRIBUTION TO ADDRESS STOCK GAPS	MOH- Department of Pharmaceuticals and Natural Medicines (DPNM)	• Improved RMNCAH availability 59% to 63% • Availability of mama kit (72%), SP (63%) in health facilities. • Overstock of mama kits (46%), SP (32%) reported. • Regional availability: Ankole 79%, Karamoja 71% & and lowest Lango & Ankole 43% • Due to increase overstocks, redistribution was recommended as a key focus area to all districts.
13. OPTIMISING THE PPH BUNDLE TO SAVE MOTHERS: A CASE OF A MOTHER WITH REFRACTORY PPH	Nankandulo HC IV, Kamuli District	• Routine attendance of meetings at National MPDSR and LMNS has helped us to keep learning, checking ourselves and our preparedness as a facility • Being prepared for emergencies all the time because any pregnant woman can be a potential candidate, availability of emergency kits (PPH Kit, PET Kit) and response team • Maintaining a minimum number of blood units, two of which should be blood Group O-positive (2-4) for obstetric emergencies and making regular orders (making facilitation in form of SDA and transport for lab staffs available from PHC) • Acquisition of missing emergency supplies like Tranexamic Acid and other items that may be out of stock from the PHC/RBF fund (this was made possible through working with HUMC since it was not a routinely supplied drug/medicine)
14. SAVING LIVES THROUGH A NETWORK OF CARE: A MIDWIFES PERSPECTIVE	Sheema District Local Government	• The purpose of this initiative was to improve communication and coordination among midwives, leading to more efficient referral systems and better care for high-risk pregnancies. • The establishment of High-Risk Clinics (HRCs) at higher-level facilities further strengthened specialized care for high-risk pregnancies. • This also promoted utilisation of the Ankole LMNS for cross-consultations during management of obstetric and newborn complications.



Addressing Delays in Care to Improve Maternal and Newborn Survival

TOPIC/PRESENTATION	REGION	EXEMPLAR LESSONS AND ACHIEVEMENTS
15. CURRENT LANDSCAPE OF PREECLAMPSIA IN UGANDA	NASMEC/PET subcommittee	- Improved Knowledge and Management of Pre-eclampsia through the dissemination of the Essential maternal and newborn guidelines and PET framework to Professional Associations and Clinical Mentorship by Champions. - The development of awareness materials and engagement in radio and TV shows has increased community knowledge and awareness of this condition.
16. IMPROVING LABOUR MONITORING IN UGANDA: UPDATES ON IMPLEMENTATION OF THE LABOUR CARE GUIDE	Mbarara University of Science and Technology	- Adoption of the alternatively recommended mechanisms such as the labour care guide may revolutionize and motivate labour monitoring in Sub-Saharan Africa. - Data demonstrates a responsive, enthusiastic and supportive environment that has potential to facilitate LCG customization, uptake and scale up. The high LCG expectations are important considerations in developing sustainable and acceptable implementation strategies that meet user needs. - Further research to evaluate the modified LCG prototype's large-scale feasibility, acceptability and effectiveness in helping HCPs timely detect deviations from normal labour and prevent complications compared to the traditional partograph in different facilities and or settings is warranted
17. SAFE OBSTETRIC ANAESTHESIA AT A PERIPHERAL HC IV	Association of the Anaesthesia Providers in Uganda	- Focus was on capacity building on different anaesthesia techniques for pregnant mothers - How to mitigate complications of anaesthesia including Spinal Anaesthesia
18. OVERVIEW OF FEMALE GENITOURINARY FISTULA SERVICES IN UGANDA: 2023 PRELIMINARY SURVEY FINDINGS	MBARARA RRH	- Focused on awareness on the current scale-up of fistula and other birth injuries surgical services in facilities - Scale up and roll out the ETOO program countrywide to reduce the burden of iatrogenic fistula - Functionalizing the inactive facilities and supporting the active sites - Equipping sites (operation beds, instrument sets and space) - Stock drugs, sundries and supplies for fistula surgery - Each fistula care facility should have a trained and fully constituted fistula care team (surgeon, nurses, counsellor)
19. SITUATION ANALYSIS ON THE STATUS OF NEWBORN HEALTH IN UGANDA-UPDATE 2023	MAK-SPH: Exemplars in Global Health	- The newborn SITAN report highlighted that only 25% of the RRH and 8% of the general hospitals had a fully functional Level II neonatal unit. - The findings from this report will inform the establishment and scale-up of Level II neonatal units to reach the coverage of at least 80% of the district with at least one Level II neonatal units.



TOPIC/PRESENTATION	REGION	EXEMPLAR LESSONS AND ACHIEVEMENTS
20. USING MPDSR TO IMPROVE QUALITY OF CARE INTERVENTIONS	Karamoja LNMS platforms	- It was noted that regularization of regional/district MPDSR performance review meetings involving district technical, political and administrative leaders improved accountability at all levels. - To improve reporting and data quality, the team highlighted collaborative efforts with the regional partners (USAID UHA & CUAMM M&E team) to support entry of the MPDs backlog in the system. - Sharing the weekly MPDSR analytics (Action tracker), has facilitated targeted MPDSR support supervision, mentorship and coaching at spokes

2.5 Learning from the Near-misses

The table presents a summary of obstetric near misses, that were reported during FY 2023/24. The complications are categorized into various types, such as haemorrhage, ruptured uterus, and pre-existing diseases, among others. For each near miss, a detailed example case is provided, outlining the major events, treatment provided, key learnings from the incident, and recommendations to prevent similar occurrences in the future.

Table 3: Learning from Near-misses

Obstetric Complication	Example Case	Major Events and Treatment	Key Learnings	Recommendations
Abortion-Spontaneous	20/F, G2P1+0 at 27 WOA with 1 previous scar, 4 years ago. Admitted with h/o bleeding for two days and missed abortion. Induced with 400µg of Misoprostol. Mother got ruptured uterus. Ex-lap done, and uterus repaired. She was transfused and stabilized.	Came with h/o bleeding for two days	Gaps among health workers on induction of labour using misoprostol.	Oriented the doctors and midwives on correct use of Misoprostol depending on the gestational age especially in patients with previous scars.
Ruptured Uterus	24/F, G4P3 referral from a HCIII due to 2PS in active labour with foetal distress. Had generalised abdominal tenderness, with guarding and prominent foetal parts with no foetal heart. Fresh blood mixed with meconium per vaginum. Attended ANC 4 times. EMCS done Plan: FLUIDS NS 2.5L, RL 1.5L given, STAH done, 2 Units of blood were given intraoperatively. Mother saved. Baby lost.	Attended ANC 4 times from Aromo HC III 2 PS in active labor with foetal distress, abdominal tenderness, guarding, prominent foetal parts. Fresh blood mixed with meconium per vaginum.	- Early intervention is paramount in handling emergency - Active teamwork saved the mother - The availability of emergency PPH kits was critical for positive outcomes. - Blood products availability was paramount.	- Keep emergency medicine and supplies in the kit to handle emergency - Lower facilities should strengthen high-risk identification and referral in time. - Timely response to obstetrical emergencies.



Addressing Delays in Care to Improve Maternal and Newborn Survival

Obstetric Complication	Example Case	Major Events and Treatment	Key Learnings	Recommendations
Haemorrhage APH	38/F, G7P6+0 at term, a referral from a HC II with a diagnosis of APH due to unknown cause. Examination revealed features of hypovolemic shock, severe anaemia and ruptured uterus.	Examination revealed features of hypovolemic shock, severe anaemia and ruptured uterus Examination revealed features of hypovolemic shock, severe anaemia and ruptured uterus.	Timely identification and referral of risky mothers from lower health facilities.	- Operationalize IRR Clinics in all HC IIIs and IVs. All HC IIs to refer High Risk mothers to IRR Clinics. - Strengthen Emergency preparedness at all CEMONC facilities.
Haemorrhage PPH	34/F G3P2+0 with multiple pregnancy at term. Admitted with PROM. EMCS was done due to PROM, multiple pregnancy and big baby. Mother got PPH due to uterine atony and went into hypovolemic shock. Mother taken back to theatre and had SAH due to uterine atony. Mother was transfused and stabilized.	Came to the facility with pre-term rupture of membranes and multiple pregnancy.	Timely detection of the complications and quick interventions.	- Intra and postoperative monitoring of mothers is very important in detection of complications. - Need to instil alternative measures to SAH like B-lynches in mothers at risk of PPH after C/Section
Pre-existing Disease	A G8p7+0 presented in latent stage of labour with Aortic Valve Disease and a one previous scar. The midwife made attempts to refer but measures to facilitate referral were in vain. Mother was monitored in consultation with the Obstetrician at the referral facility. Mother delivered a live baby.	The midwife made attempts to refer but measures to facilitate referral were in vain.	- To identify and refer the mother during ANC to the high-risk clinic at the referral facility. - Need to utilize the risk clinic register to enable follow up and linkage of high-risk mothers to the CEMONC sites. - Effective communication for timely referral.	- Early identification and referral of all high-risk mothers. - Utilization of the risk register for easy follow and continuous linking to the Hospital. - Effective communication for timely coordination of referrals.
Pre-existing Disease	19/F, PG, admitted at 34weeks with Painful lower limbs and Fever for 1/52. Attended ANC once, booking BP or tests done were not documented, no reported h/o admissions or complication related to pregnancy, stopped hydroxyurea 2/52. Known SCD PG at 34WKS with vaso-occlusive crisis with PET. Mother delivered by EMCS after 9 days of stabilization, blood transfusion, Oxygen.	Attended ANC once, booking BP or tests done were not documented, no reported h/o admissions or complication related to pregnancy, stopped hydroxyurea 2/52	- High Risk mothers need appropriate care by specialists and medical doctors in ANC and intrapartum. - Establishment of SCD/Special clinics at Hospitals is very helpful in IRR. - More mentorships and support to SCD clinics by the regional team. - Support for Sicklers in routine medications.	- SCD mothers must regularly attend sickle cell clinic with pregnancy counselling and testing. - Multi-disciplinary teamwork and coordination between the teams managing the patient is vital. - ANC for High-risk mothers by medical officers.

Obstetric Complication	Example Case	Major Events and Treatment	Key Learnings	Recommendations
Ruptured ectopic pregnancy	26/F, G4 para 3 from home. She couldn't walk and was supported on a trolley and rolled to maternity for examination. She reported h/o PV bleeding and severe LAP. She was sweating with cold and clammy skin, Bp unrecordable, pulse feeble P/A was guarding on touch and distended with slight PV bleeding	She couldn't walk and was supported on a trolley and rolled to maternity for examination. Admitted unable to walk, with h/o PV bleeding and severe LAP, sweating with cold skin.	- Keeping emergency kits at a facility, saves lives. - Availability of blood is lifesaving. - The presence of critical staff on the ground is vital. - Early seeking of care at CEmONC health facility is important and correct diagnosis is lifesaving.	- Health education to mothers for early identification of danger signs and health seeking behaviour at CEMONC sites. - Stocks of blood and blood products should always be maintained at the facility.



Pre-Eclampsia Awareness campaign launch at Kawempe National Referral Hospital

CHAPTER 03

Analysis of the Reported and Reviewed Maternal and Perinatal Deaths

3.1 Introduction

This chapter looks at the maternal and perinatal death reports, death notification and death review trends and contributing factors in the reporting period of Financial Year 2023/2024 (FY 2023/24).

A total of 1,222 maternal deaths were reported through the monthly health facility reports (HMIS 105). Of these, 1,158 (95.4%) were notified and 1,197 (94.8%) were reviewed and electronically entered into the e-HMIS/ DHIS2 events report.

A total of 24,499 perinatal deaths were reported (HMIS 105). Of these, 14,994 (61.2%) were notified and 15,019 (61.3%) were

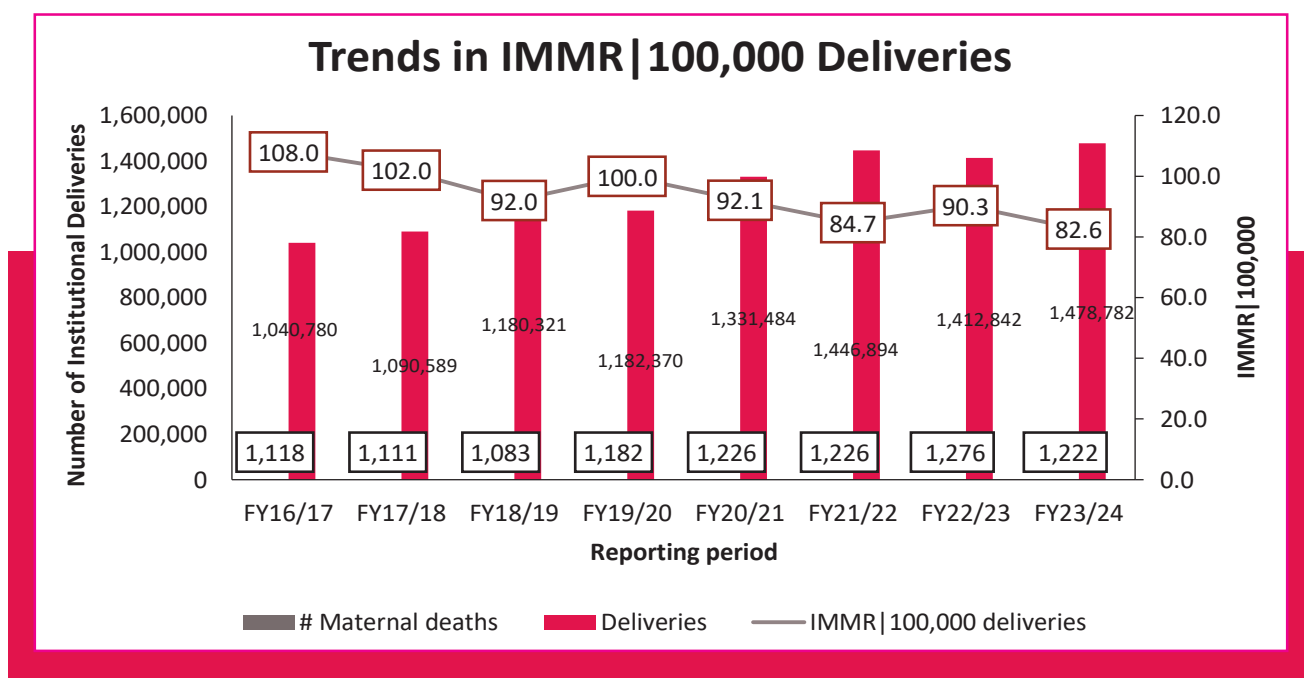
reviewed and entered into the e-HMIS/ DHIS2 events report

3.2 Institutional maternal deaths

3.2.1 National trends in Institutional maternal deaths notified, reported, and review rates.

In the FY2023/24, health facility deliveries increased by 4.7% from 1,412,842 (FY2022/23) to 1,478,782 (FY2023/24). On the other hand, the number of maternal deaths reduced from 1276 (FY2022/23) to 1222 (FY2023/24). This positive trend resulted in a reduction of the Institutional Maternal Mortality Ratio (IMMR) from 90.3/100,000 deliveries to 82.6/100,000 deliveries.

Figure 1: Showing National Trends in IMMR/100,000 Deliveries in past eight years





Over the past five years, Uganda has witnessed a significant increase in the number of institutional deliveries from 1,182,370 in FY19/20 to 1,478,782 in FY23/24, representing a 25.1% increase. The IMMR reduced from 99.97 per 100,000 deliveries in FY2019/20 to 82.6 per 100,000 deliveries in FY2023/24, marking a 17.4% reduction in the same period of the last five financial years.

This trend can be attributed to increased access to health care facilities and improved quality of care, successful public health

campaigns, better management of maternal health complications, increased capacity for skilled birth attendance, improved coordination at regional level through LMNS, and investment in maternal health care.

To sustain these gains, more investment in reproductive health supplies and commodities, human resource capacity development, infrastructure development, strengthening supportive supervision structures, health information, and demand creation at community level will be prioritised.

Table 4: Maternal mortality by Age category

Maternal age category	FY2020/21		FY2021/22		FY2022/23		FY2023/24	
	No. (proportion) of maternal deaths	IMMR/ 100,000 deliveries	No. (proportion) of maternal deaths	IMMR/ 100,000 deliveries	No. (proportion) of maternal deaths	IMMR/ 100,000 deliveries	No. (proportion) of maternal deaths	IMMR/ 100,000 deliveries
≤ 19 Yrs	148 (12%)	63.2	122(10%)	46.5	152 (12%)	62.9	133 (10.9%)	53.8
20 - 24 Yrs	273 (22%)	60.5	272(22%)	56.6	284(22%)	61.3	308 (25.2%)	62.9
≥ 25 Yrs	805 (66%)	125.4	832(68%)	118.2	840 (66%)	118.7	781 (63.9%)	105.1
Overall	1,226	92.4	1,226	84.7	1,276	90.3	1,222	82.6

Data source: DHIS2, FY2020/21-FY2023/24

The table presents maternal mortality rates (IMMR/100,000 deliveries) across different maternal age categories for the financial years FY2020/21 to FY2023/24. Over the four years, the highest proportion of maternal deaths consistently occurred among women aged 25 years and above, accounting for 63.9% of the deaths in FY2023/24. The IMMR for this age group has remained over 100 per 100,000 deliveries, reflecting a higher risk in this category compared to younger women. In contrast, the age group ≤19 years has seen a decrease in IMMR from 63.2 in FY2020/21 to 53.8 in FY2023/24.

The highest burden of maternal mortality remains concentrated in the older age group (≥25 years), which also sees consistently higher mortality rates than younger women. While the IMMR for adolescents (≤19 years) has shown some improvement, the data highlights that young people aged 20-24 years now account for a growing proportion

of deaths, increasing from 22% in FY2020/21 to 25.2% in FY2023/24. This suggests that efforts to reduce maternal mortality should increasingly focus on older women and those aged 20-24, in addition to continuing to address the risks faced by adolescents.

Interventions should prioritize maternal health programs targeting women aged 25 and above, as they account for the highest IMMR and the largest proportion of deaths. In addition, preventive measures for younger women, particularly those aged 20-24 years, should be strengthened as this group is experiencing a rising share of maternal deaths. Scaling up maternal health services and addressing age-specific risk factors—such as complications due to preexisting conditions in older women and reproductive health education for younger women—will be essential to further reducing Uganda's maternal mortality rates.

3.2.3 District level Institutional maternal deaths reported and review rates.

Figure 2: Map showing Institutional Maternal Mortality Ratio per 100,000 deliveries by district for FY2022/23 and FY2023/24

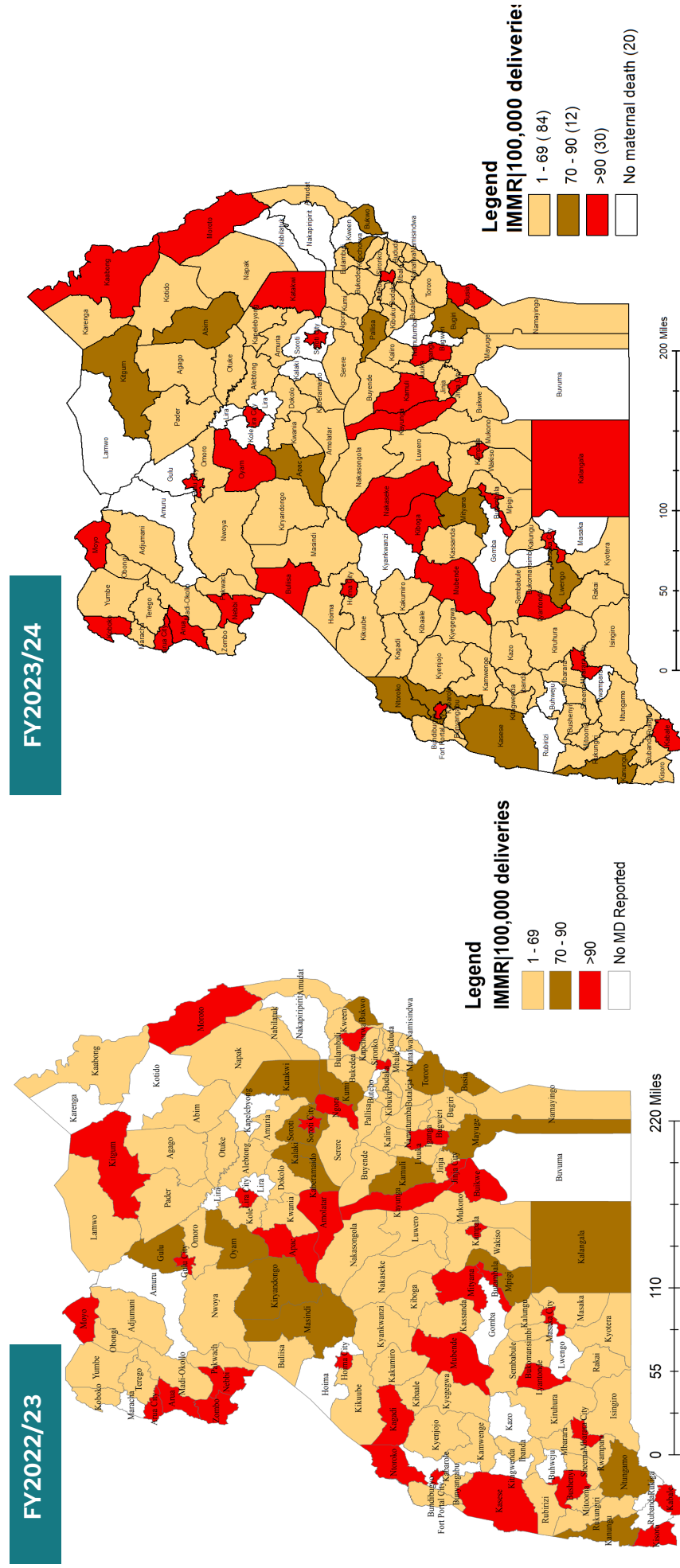
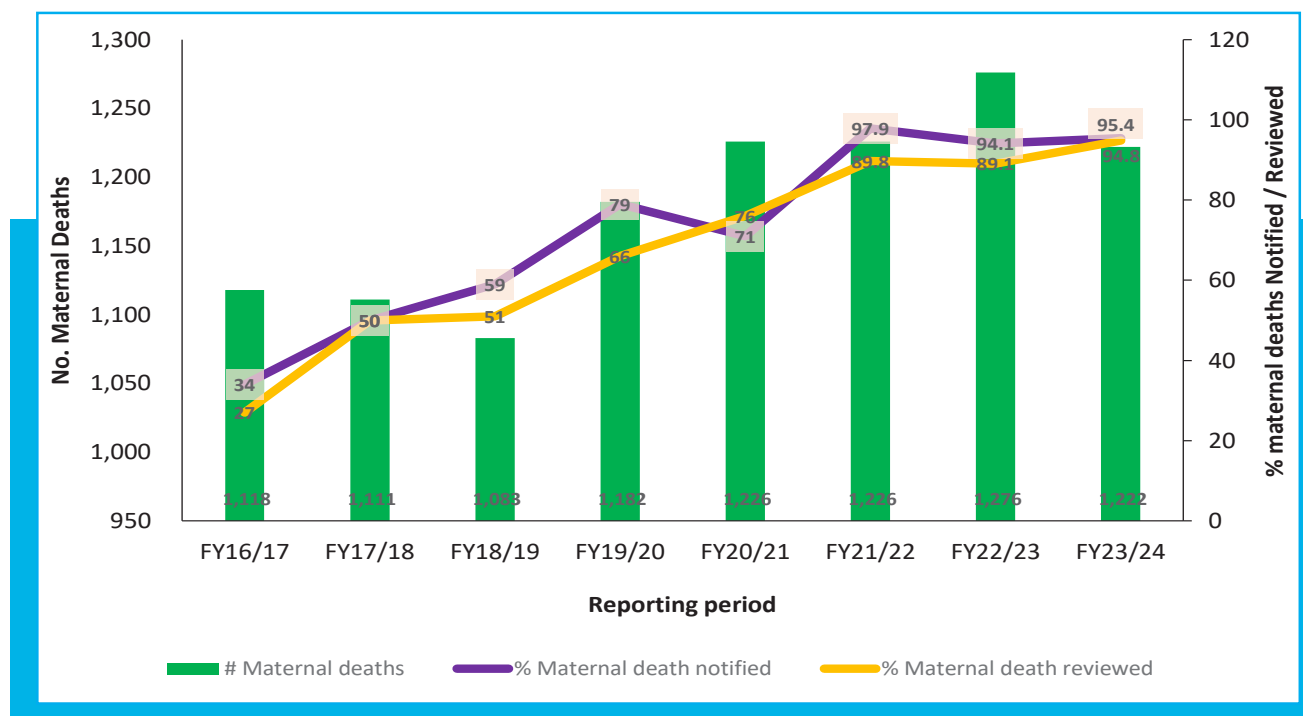


Figure 4: Showing National Trends in Maternal Deaths Reporting, notification and reviews in past eight years.



Data source: DHIS2, FY2016/17-FY2023/24

The figure shows the national trends in maternal deaths reporting, notifications, and reviews over the past eight financial years, from FY16/17 to FY23/24. The number of reported maternal deaths increased from 1,118 in FY16/17 to a peak of 1,276 in FY22/23, slightly decreasing to 1,222 in FY23/24. Notification rates improved significantly from 34% in FY16/17 to 97.9% in FY20/21, maintaining high rates of around 90% in the following years. Similarly, maternal death reviews have improved, starting at 27% in FY16/17 and steadily increasing to 94.8% in FY23/24.

The improvement in maternal death notifications and reviews indicates a strengthening of the maternal death surveillance system in Uganda. The increased notification rates over the years reflect enhanced data capture and reporting systems at health facilities. High review rates demonstrate a commitment to understanding the circumstances surrounding maternal

deaths, which is crucial for informing interventions. However, the plateauing of reported maternal deaths at around 1,200 in the past four years suggests that while the surveillance systems have improved, the overall maternal mortality burden remains significant.

Moving forward, the focus should be on sustaining high notification and review rates while addressing the persistent maternal mortality burden. Efforts should be directed toward preventing maternal deaths through targeted interventions based on insights from the reviews. This includes addressing the leading causes of maternal mortality, improving the quality of care at health facilities, and scaling up interventions for preventable causes. Additionally, continued investment in maternal health surveillance, including timely notification and comprehensive reviews, will be essential to drive further reductions in maternal mortality in Uganda.

3.2.2 Regional trends in Institutional maternal deaths reported, notifications and review rates.

Table 5: Regional breakdown of maternal deaths reported, notified and reviewed for the last four financial years

SUB-REGION	No. health facility Deliveries			No. Maternal deaths			Institutional Maternal mortality ratio/ 100,000 deliveries			% maternal death notifications				% maternal death reviews		
	FY21/22	FY22/23	FY23/24	FY21/22	FY22/23	FY23/24	FY21/22	FY22/23	FY23/24	FY21/22	FY22/23	FY23/24	FY21/22	FY22/23	FY23/24	FY23/24
Acholi	65,143	64,142	66,622	67	66	45	102.9	102.9	67.5	104.5%	98.5%	102.2%	97.0%	101.5%	102.2%	
Ankole	111,388	114,028	120,123	91	89	77	81.7	78.1	64.1	126.4%	77.5%	114.3%	113.2%	97.8%	100.0%	
Bugisu	100,244	93,492	93,553	67	114	97	66.8	121.9	103.7	106.0%	100.0%	89.7%	103.0%	95.6%	84.5%	
Bukedi	91,236	85,023	91,042	39	46	51	42.7	54.1	56.0	89.7%	106.5%	98.0%	87.2%	95.7%	96.1%	
Bunyoro	89,770	83,807	88,497	102	103	83	113.6	122.9	93.8	87.3%	79.6%	92.8%	68.6%	74.8%	95.2%	
Busoga	124,806	124,510	131,265	93	116	123	74.5	93.2	93.7	86.0%	92.2%	82.1%	87.1%	81.9%	99.2%	
Kampala	87,966	87,879	86,029	196	180	183	222.8	204.8	212.7	98.5%	99.4%	98.9%	95.9%	98.3%	98.9%	
Karamoja	33,702	35,517	40,572	23	12	30	68.2	33.8	73.9	108.7%	108.3%	110.0%	108.7%	91.7%	113.3%	
Kigezi	55,478	53,464	55,178	30	38	35	54.1	71.1	63.4	106.7%	84.2%	100.0%	100.0%	94.7%	102.9%	
Lango	78,765	74,902	86,728	55	45	53	69.8	60.1	61.1	107.3%	106.7%	111.3%	105.5%	104.4%	113.2%	
North Central	148,430	146,242	152,348	122	126	126	82.2	86.2	82.7	68.0%	77.0%	84.9%	68.9%	80.2%	84.9%	
South Central	145,614	140,932	145,322	122	87	109	83.8	61.7	75.0	88.5%	90.8%	89.0%	64.8%	77.0%	86.2%	
Teso	74,030	74,074	81,140	58	63	44	78.3	85.1	54.2	106.9%	117.5%	120.5%	89.7%	95.2%	111.4%	
Tooro	126,099	122,315	119,635	76	96	80	60.3	78.5	66.9	118.4%	94.8%	88.8%	98.7%	69.8%	81.3%	
West-Nile	114,223	112,515	120,728	85	95	86	74.4	84.4	71.2	97.6%	107.4%	94.2%	97.6%	96.8%	90.7%	
Uganda	1,446,894	1,412,842	1,478,782	1,226	1,276	1,222	84.7	90.3	82.6	97.5%	94.1%	95.4%	89.4%	89.1%	94.8%	

Data source: DHIS2, FY2020/21–FY2023/24

Key (IMMR)		Key Notifications & Reviews	
	≤63		>100
	64-90		90-100
	>90		65 -90
			<65



The table provides a breakdown of the number of maternal deaths, notifications, and reviews across different regions for the financial years FY20/21 to FY23/24. The number of maternal deaths fluctuates across regions, with Kampala consistently having the highest number of maternal deaths, totalling 183 in FY23/24. Other regions with high numbers include Busoga (123) and Ankole (77). Notifications of maternal deaths have generally improved, with most regions showing notification rates above 90%, with a few exceptions, such as North Central (84.9%) and Teso (89.7%) in FY23/24. Reviews of maternal deaths are similarly high, with many regions reaching or exceeding 100% in review rates. Notably, regions like Lango (113.2%) and Kigezi (113.3%) show particularly high review rates, while South Central (72%) and Teso (86.2%) lag behind.

The high notification and review rates in most regions suggest improvements in maternal death surveillance and response systems. However, there are significant regional disparities. For example, while Kampala, Kigezi, and Lango have strong performance in both notifications and reviews, regions like Bugisu, Tooro, North Central and South Central are falling behind, which could indicate challenges in tracking and responding to maternal deaths in these areas. This inconsistency may reflect variations in the efficiency of reporting systems, the availability of human resources, or the operational capacity of the health system in certain regions. Regions with lower notification and review rates are at risk of failing to identify critical trends or gaps in care that could prevent maternal deaths.



HIGHEST

INSTITUTIONAL MORTALITY RATIO ACROSS DIFFERENT REGIONS

FY2023/2024

REGIONS	RATIO
Kampala	212.7
Bugisu	103.7
Bunyoro	93.8
Bunsoga	93.7



LOWEST

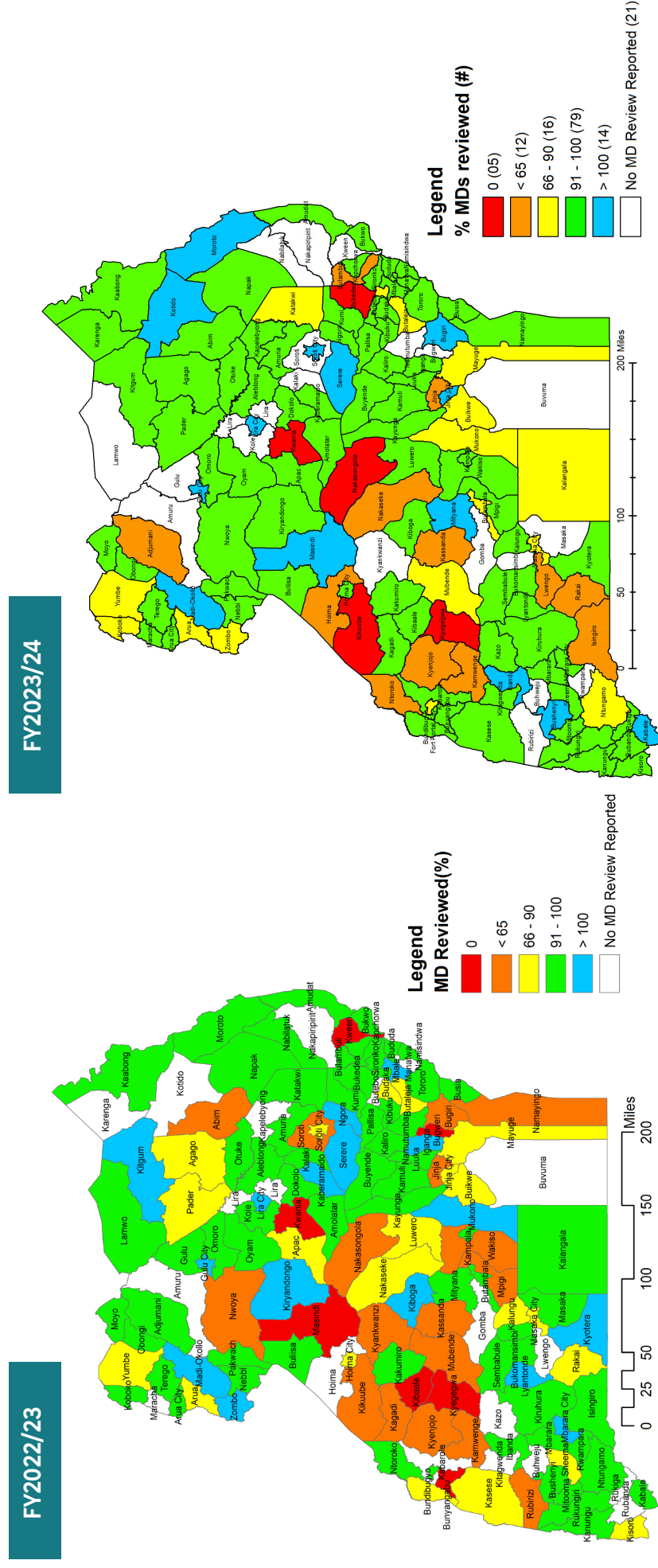
REVIEW RATES ACROSS DIFFERENT REGIONS

FY2023/2024

REGIONS	RATES
Tooro	81.3%
Bugisu	84.5%
North Central	84.9%
South Central	86.2%

District level maternal death review rates

Figure 5: Map showing the proportion of maternal deaths reviewed by districts (FY2022/22 and FY2023/24)



During FY2023/24, 79 districts (54.1%) reviewed more than 90% of their reported maternal deaths, and increase from 66 districts (45%) in FY2022/23. Fourteen districts (9.5%) reviewed more than 100% of their reported maternal deaths compared to sixteen districts (11%) in FY2022/23. Only 18 districts (12.3%) reviewed less than 65% of their reported maternal deaths, including six districts (Kyegegwa, Kikuube, Nakasongola, Kwanja, and Kween) that did not review any.

The fourteen districts that reviewed more than 100% indicate under reporting of maternal deaths in HMIS 105.

3.2.4 Institutional maternal deaths reported by health facility level

Table 6: Institutional Maternal Mortality Ratio by Health facility level FY2020/21, FY2021/22, FY2022/23, and FY2023/24

Health facility Level	No. health facility deliveries					No. maternal deaths				Institutional maternal mortality ratio			
	2020/21	2021/22	2022/23	2023/24		2020/21	2021/22	2022/23	2023/24	2020/21	2021/22	2022/23	2023/24
Referral and Large PNFP Hospitals	98,740	127,446	115,694	133,416		521	566	648	619	527.6	444.1	560.1	464.0
GHs	219,386	217,520	234,267	233,593		471	387	380	397	214.7	177.9	162.2	170.0
HC IVs	243,586	276,168	287,647	311,872		169	186	172	142	69.4	67.4	59.8	45.5
HC IIIs	595,083	679,577	646,619	672,747		53	61	64	59	8.9	9.0	9.9	8.8
HC IIs / Clinics	151,239	146,163	128,615	127,371		14	26	12	6	9.3	17.8	9.3	4.7
Total	1,308,034	1,446,874	1,412,842	1,478,999		1,228	1,226	1,276	1,222	93.9	84.7	90.3	82.7

Data source: DHIS2, FY2020/21 -FY2023/24

Data shows that more women deliver at HC III but more deaths occur at referral and large PNFP Hospitals.

The table presents the Institutional Maternal Mortality Ratio (IMMR) by health facility level for the fiscal years 2020/21 to 2023/24. It compares the number of health facility deliveries, maternal deaths, and the resulting IMMR across five facility levels: Referral and large PNFP hospitals, general hospitals (GHs), health center IVs, health center IIIs, and health center IIs/clinics.

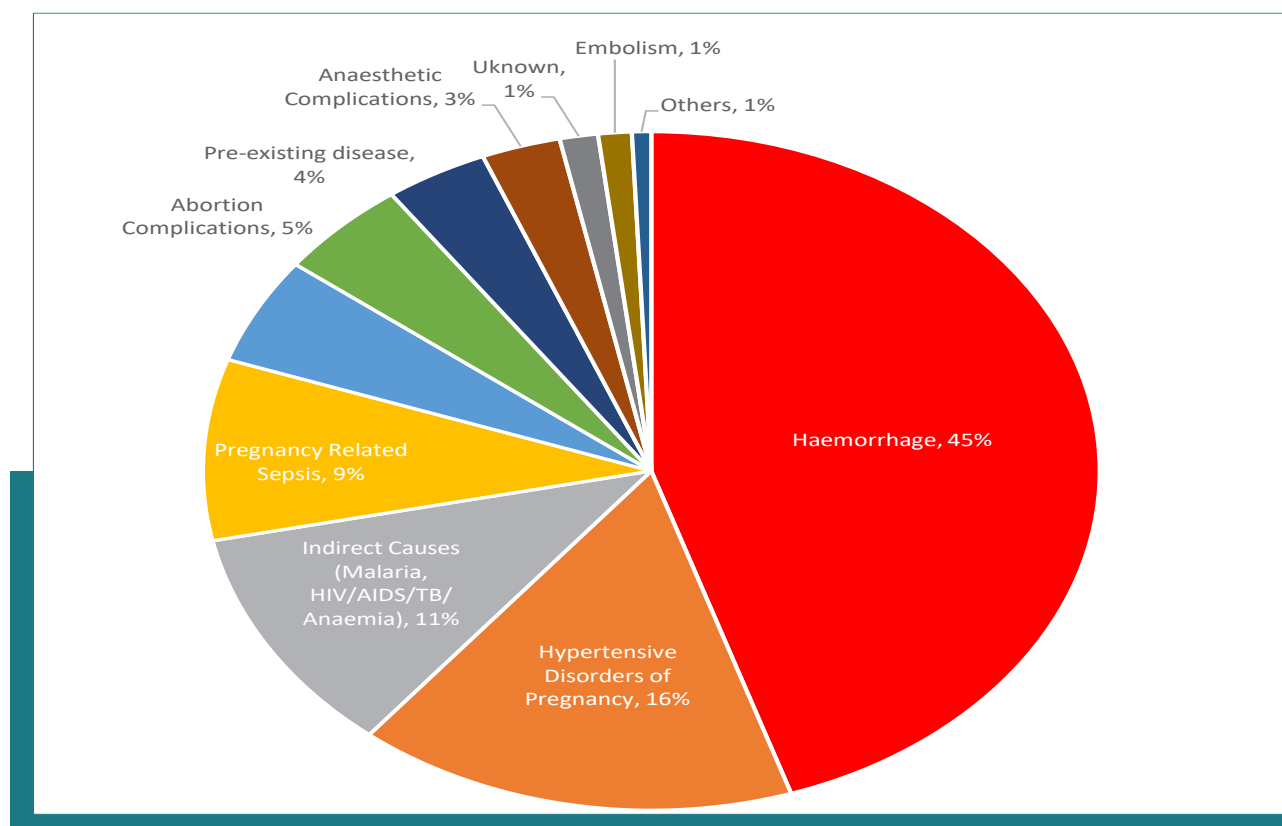
The highest IMMR consistently occurs in Referral and Large PNFP Hospitals, with a peak of 560.1 deaths per 100,000 deliveries in FY2022/23, although there was a slight improvement to 464.0 in FY2023/24. General hospitals also show a declining trend in IMMR from 214.7 in FY2020/21 to 170.0 in FY2023/24. The reduction in IMMR at lower

health facilities (HC IVs, HC IIIs, and HC IIs) indicates that improvements in healthcare service delivery, particularly at the grassroots level, have had a positive impact. However, the high mortality rates at referral hospitals indicate potential issues with timely access to emergency obstetric care, late referrals, or overwhelming patient loads at higher-level facilities.

To continue reducing maternal mortality, targeted interventions should be directed at referral hospitals and larger facilities, where a high burden of complicated cases leads to increased maternal deaths. Ensuring the timely transfer of complicated cases, improving emergency obstetric care, and addressing bottlenecks in critical supplies such as blood could help alleviate the pressure on referral hospitals. Simultaneously, efforts to strengthen capacity at lower health facilities will further reduce delays in care.

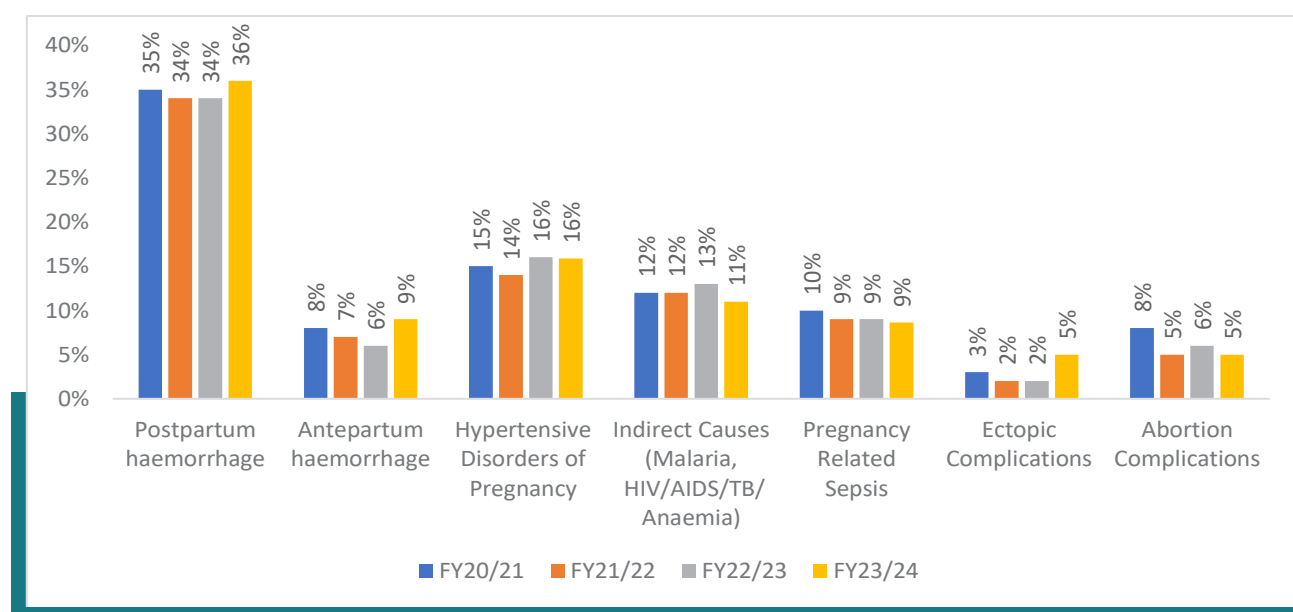
3.2.5 Causes of maternal deaths

Figure 6: Causes of Maternal Death, (n=1159) FY 2023/24



During FY2023/24, the leading cause of maternal deaths was haemorrhage, accounting for 45% of the total cases. This was followed by hypertensive disorders of pregnancy at 16%, and indirect causes at 11% (malaria, 6%, Anaemia, 3%, HIV/AIDS/TB, 1%, other, 1%), while pregnancy-related sepsis contributed to 9% of maternal deaths.

Figure 7: Causes of maternal deaths in the last four financial years



Postpartum haemorrhage has remained the dominant cause, responsible for over one-third of maternal deaths, increasing slightly from 35% in FY20/21 to 36% in FY23/24. Antepartum haemorrhage, although less common, has shown a concerning rise from 6% in FY22/23 to 9% in FY23/24. Hypertensive disorders of pregnancy, such as preeclampsia and eclampsia, have consistently contributed to 14-16% of maternal deaths, indicating persistent challenges in managing these conditions. Indirect causes, including malaria, anaemia, HIV/AIDS, and tuberculosis have also been significant, contributing between 11% and 13% of maternal deaths, while pregnancy-related sepsis has remained unchanged at around 9%. Additionally, complications from ectopic pregnancies, although less frequent, have shown an upward trend, increasing from 2% in FY21/22 to 5% in FY23/24, and abortion complications have remained a persistent

issue, contributing 5-8% of maternal deaths over the years.

These trends highlight critical areas requiring urgent attention to reduce maternal mortality. Haemorrhage remains the leading cause of death, emphasizing the need for enhanced management protocols and timely interventions, particularly in emergency obstetric care. The rise in antepartum haemorrhage and the steady contribution of hypertensive disorders reveal gaps in the quality of antenatal care, where early detection and intervention could prevent many of these deaths. The significant proportion of deaths from indirect causes indicates inadequate screening and early management for pregnant women with these conditions. The steady rate of sepsis-related deaths underscores the need for improved infection prevention and control and surgical safety. Additionally, the

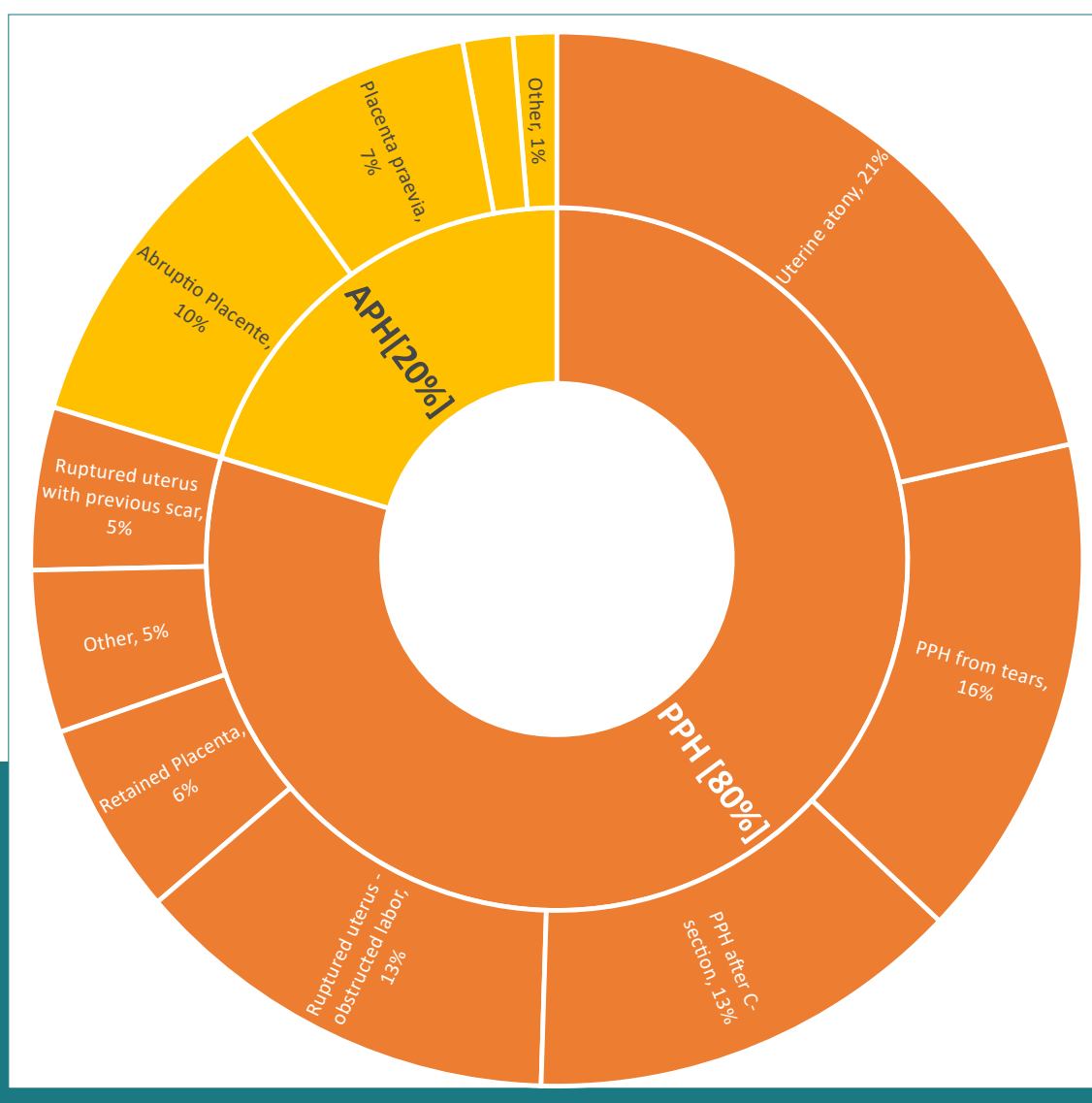
increase in deaths from ectopic pregnancies and ongoing challenges with abortion-related complications highlights the necessity for early detection and access to emergency obstetric care services, including postabortion care.

To address these challenges, health facilities must prioritize enhancing use of obstetric haemorrhage management protocols by training healthcare workers and ensuring the availability of essential resources like equipment, commodities, supplies, medicines, blood and blood products. Strengthening

antenatal care is crucial for the early detection and management of high-risk factors and conditions. Improve skills of health workers in management of hypertension and other obstetric complications including ectopic pregnancy, APH, abortions, and pre-existing conditions. Facilitate improvement of surgical skills of health care providers in both pre and in-services training. Furthermore, necessary infection prevention and control measures should be reinforced to reduce sepsis-related deaths at all levels of care.

Deep-dive analysis of maternal deaths due to obstetric haemorrhage

Figure 8: Classification of Haemorrhage Cases, n=521

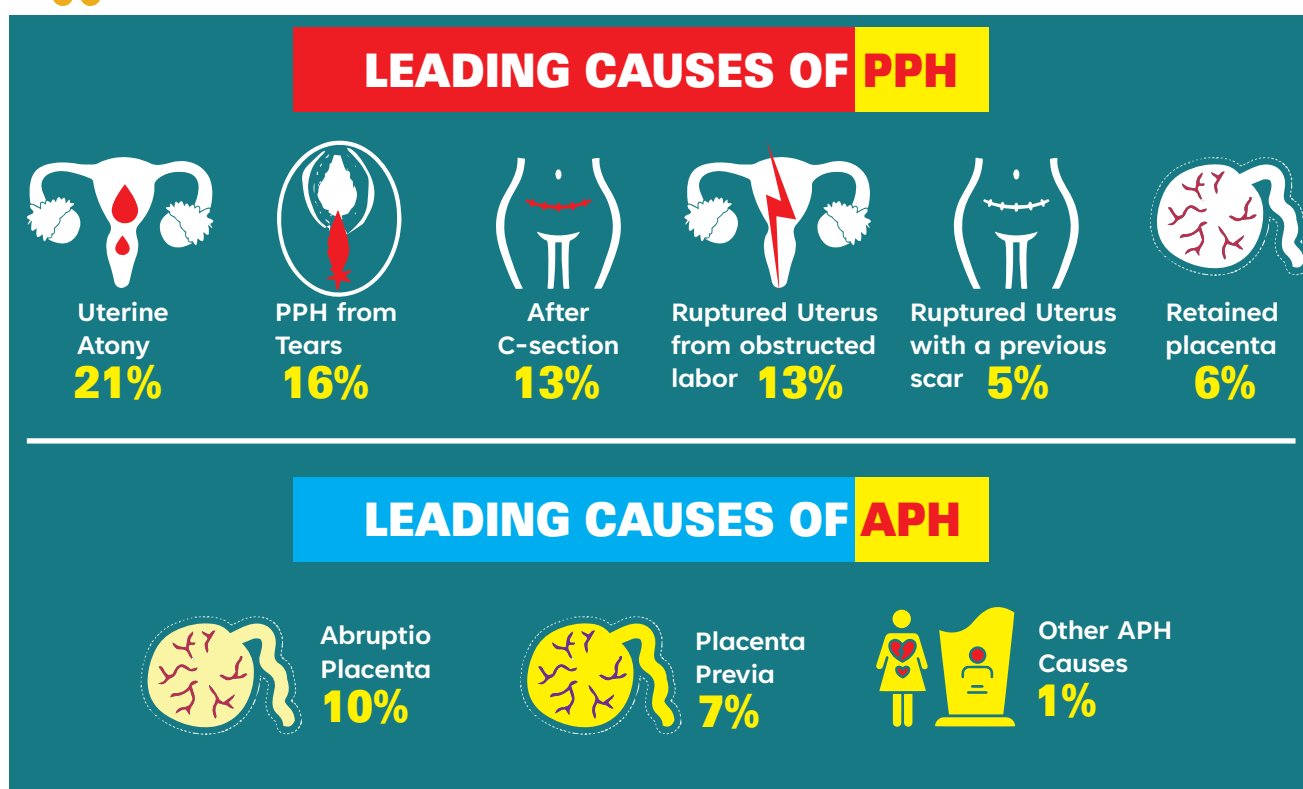


Maternal deaths due to haemorrhage was classified into postpartum haemorrhage (PPH) and antepartum haemorrhage (APH), and PPH accounted for 80% of the deaths. The leading causes of PPH were due to uterine atony (21%), PPH from tears (16%), PPH after C-section (13%), and PPH due to ruptured uterus from obstructed labour (13%). Retained placenta, and ruptured uterus with a previous scar accounted for 6% and 5% of deaths respectively. On the other hand, APH contributed 20% of the deaths, with abruptio placenta being the biggest contributor at 10%, followed by placenta previa at 7%, and other causes at 1%.

The findings above highlight PPH as the major driver of maternal deaths, particularly uterine atony, which is responsible for over a

fifth of the deaths. The high proportion of PPH from tears and PPH after C-section suggests that more attention should be focused on the quality of obstetric interventions during and immediately after childbirth. To reduce haemorrhage related deaths, MOH will strengthen the prevention and management of PPH, by ensuring the timely use of uterotonics, enhance surgical skills to manage tears and conducting C-sections, as well as improving post-operative monitoring.

Regarding APH deaths, driven by abruptio placenta and placenta previa, focus will be on scaling up high-risk clinics to identify and manage placental complications. Government will strengthen provision of ultrasound screening services, beginning at HC III and prompt referral of high-risk pregnancies.



Causes of death by region

Table 7 Causes of maternal deaths by region FY2023/2024

Region	Number of Maternal deaths	Haemorrhage	Hypertensive Disorders of Pregnancy	Indirect Causes (Malaria, HIV/AIDS/ TB/ Anaemia)	Pregnancy Related Sepsis	Ectopic Complications	Abortion Complications	Pre-existing disease	Anaesthetic Complications	Unknown	Embolism	Others
Acholi	46	41.3%	4.3%	15.2%	8.7%	6.5%	6.5%	8.7%	2.2%	0.0%	6.5%	0.0%
Ankole	77	48.1%	19.5%	1.3%	10.4%	5.2%	5.2%	2.6%	2.6%	5.2%	0.0%	0.0%
Bugisu	82	39.0%	15.9%	12.2%	15.9%	4.9%	6.1%	2.4%	0.0%	0.0%	2.4%	1.2%
Bukedi	49	55.1%	10.2%	14.3%	8.2%	2.0%	0.0%	4.1%	2.0%	2.0%	0.0%	2.0%
Bunyoro	79	48.1%	12.7%	12.7%	12.7%	6.3%	3.8%	1.3%	1.3%	1.3%	0.0%	0.0%
Busoga	122	44.3%	15.6%	9.8%	6.6%	3.3%	5.7%	9.8%	2.5%	0.8%	0.0%	1.6%
Kampala	181	33.1%	29.8%	7.7%	11.0%	8.3%	5.5%	2.8%	0.6%	0.0%	0.6%	0.6%
Karamoja	34	41.2%	11.8%	23.5%	8.8%	0.0%	2.9%	2.9%	5.9%	0.0%	2.9%	0.0%
Kigezi	36	44.4%	11.1%	11.1%	2.8%	5.6%	8.3%	2.8%	5.6%	2.8%	2.8%	2.8%
Lango	60	51.7%	15.0%	13.3%	6.7%	1.7%	10.0%	0.0%	0.0%	0.0%	1.7%	0.0%
North Central	107	48.6%	11.2%	7.5%	13.1%	4.7%	1.9%	4.7%	4.7%	1.9%	1.9%	0.0%
South Central	94	59.6%	9.6%	11.7%	4.3%	3.2%	5.3%	1.1%	2.1%	1.1%	2.1%	0.0%
Teso	49	30.6%	16.3%	20.4%	2.0%	14.3%	4.1%	4.1%	2.0%	4.1%	0.0%	2.0%
Tooro	65	43.1%	18.5%	6.2%	7.7%	6.2%	3.1%	6.2%	6.2%	1.5%	1.5%	0.0%
West Nile	78	53.8%	10.3%	15.4%	1.3%	1.3%	2.6%	1.3%	10.3%	2.6%	0.0%	1.3%
National	1159	45.0%	15.9%	10.9%	8.6%	5.1%	4.7%	3.7%	2.8%	1.4%	1.2%	0.7%



The table outlines the regional distribution of maternal deaths and their causes. Haemorrhage is the leading cause nationally, accounting for 45% of maternal deaths, with regional variations ranging from 30.6% in Teso to 59.6% in South Central. Regions such as Bukedi (55.1%) and West Nile (53.8%) also show alarmingly high rates of deaths due to haemorrhage. Hypertensive disorders of pregnancy are the second leading cause, contributing to 15.9% of maternal deaths nationwide, with Kampala having the highest regional burden (29.8%). Indirect causes such as malaria, HIV/AIDS, TB, and anaemia contribute to 10.9% of deaths, with Karamoja (23.5%) and Lango (20.4%) reporting higher percentages. Pregnancy-related sepsis and ectopic complications contribute 8.6% and 5.1%, respectively, with relatively small variations across regions.

The dominance of haemorrhage as the primary cause of maternal deaths across most regions is alarming, particularly in areas such as South Central, Bukedi, and West Nile, where rates exceed 50%. This suggests significant gaps in the management of obstetric emergencies, especially in preventing and treating haemorrhage during and after childbirth. The high incidence of hypertensive disorders, particularly in Kampala, highlights potential challenges in early detection and management of preeclampsia and other hypertensive conditions. Regions such as Karamoja and Lango, which report high

indirect causes of maternal deaths, may be facing greater challenges related to overall healthcare infrastructure and access to antenatal care. The regional disparities in causes suggest that interventions need to be more targeted to the specific health needs of each region.

Urgent actions are needed to address the high rates of maternal deaths due to haemorrhage in the entire country. As suggested above, to reduce haemorrhage related deaths, MOH will strengthen the prevention and management of PPH, by ensuring the timely use of uterotonics and the EMOTIVE bundle approach, enhance surgical skills to manage tears and conducting C-sections, as well as improving post-operative monitoring. Procuring and distribution of relevant equipment (such as Non-pneumatic Anti-shock Garments) etc for management of PPH.

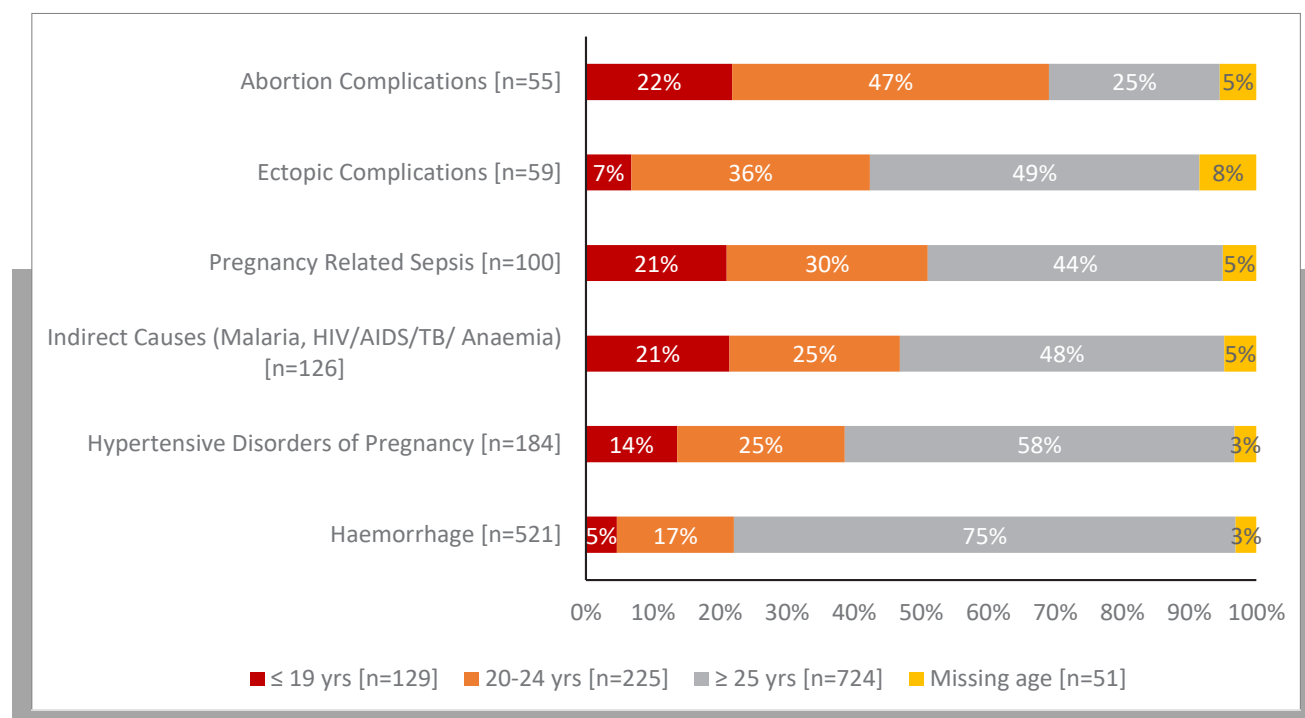
In regions with high rates of hypertensive disorders in pregnancy, like Kampala, the focus should be to improve quality of antenatal care through early detection and management. In regions such as Karamoja and Lango, where indirect causes are more prominent, broader interventions to improve maternal health through scaling up programs for maternal nutrition, malaria and HIV prevention in pregnant women are paramount. Tailored interventions, backed by strong leadership and accountability, will be essential in addressing these regional disparities and reducing maternal deaths.



To reduce haemorrhage related deaths, there is need to strengthen the prevention and management of PPH, by ensuring the timely use of uterotonics and the EMOTIVE bundle approach, enhance surgical skills to manage tears and conducting C-sections, as well as improving post-operative monitoring.

Maternal deaths by age category

Figure 9: Proportional contribution of the leading causes of death by maternal age category FY2023/2024



The chart illustrates the leading causes of maternal deaths, categorized by maternal age groups: 19 years and below, 20-24 years, and 25 years and above. Haemorrhage is the leading cause of death across all age groups, with 75% of cases occurring in women 25 years and above of age. Hypertensive disorders of pregnancy disproportionately affect women 25 years and above (58%), but a notable percentage also occurs in younger women (14% 19 years and below). Indirect causes such as malaria, HIV/AIDS, TB, and anaemia primarily affect women 25 and above (48%), while pregnancy-related sepsis has a more balanced distribution across age groups. Ectopic complications and abortion complications show higher proportions in the 20-24 age group (36% and 47%, respectively). Over all, it is important to note that adolescent girls (≤ 19 years) are more prone to dying of complications related to abortions (22%), sepsis (21%), and indirect causes (21%).

The age-related patterns show that haemorrhage and hypertensive disorders are most prevalent in women (25 years and above), suggesting that targeted interventions for this age group should focus on managing these two major causes. However, the risks faced by adolescents 19 years and below from pregnancy-related sepsis, abortion complications, and indirect causes cannot be overlooked, as these are serious health threats in this age group. The 20-24 age group is also at significant risk for ectopic pregnancies and abortion complications, indicating that reproductive health services for this cohort need strengthening to reduce preventable maternal deaths.

Interventions should be age-targeted to address the most prevalent causes of maternal deaths. Health care providers should prioritise the prevention and management of haemorrhage and hypertensive disorders



during and after delivery for women of all age groups. Adolescent girls 19 years and below should be targeted for more tailored reproductive health information and services, with particular focus on accessing timely postabortion services. Young women aged 20-24 years should benefit from enhanced

access to quality family planning services, especially post-pregnancy (postabortion and postpartum) family planning. It is also important to address social norms and behaviours that hinder uptake of family planning/contraceptives services.

Table 8: Breakdown of indirect causes of maternal deaths by age for FY2022/23 and FY2023/24

Age Group	Malaria		Severe Anaemia		HIV/AIDS		Other		Overall	
	FY22/23	FY23/24	FY22/23	FY23/24	FY22/23	FY23/24	FY22/23	FY23/24	FY22/23	FY23/24
≤19 yrs	24(17%)	17 (13%)	2(1%)	10(8%)	0%	0%	2(1%)	0%	28(19%)	27 (21%)
20-24 yrs	26(18%)	20(16%)	5(3%)	3(2%)	1(1%)	7(6%)	4(3%)	2(2%)	36(25%)	32(25%)
≥ 25 yrs	27(19%)	27(21%)	17(12%)	15(12%)	11(8%)	9(7%)	13(9%)	10(8%)	68(47%)	61(48%)
Missing	9(6%)	3(2%)	2(1%)	2(2%)	1(1%)	0%	1(1%)	1(1%)	13(9%)	5%
Grand Total	86(59%)	67(53%)	26(18%)	30(24%)	13(9%)	16(13%)	20(14%)	13(10%)	145(100%)	126(100%)

Overall, the majority of indirect maternal deaths occur in women 25 years and above, contributing 47% in FY22/23 and 48% in FY23/24. Malaria remains the most significant indirect cause, with 53% of maternal deaths in FY23/24, though this is a decrease from 59% in FY22/23. Severe anaemia has increased slightly, from 18% in FY22/23 to 24% in FY23/24, particularly affecting the adolescent age group (≤19 years). HIV/AIDS-related maternal deaths also increased slightly, with most of the burden in women 25 years and above. Other causes accounted for around 10% of deaths, with no major change between the two years.

The results highlight malaria as the leading indirect cause of maternal deaths across all age groups, although its proportion has slightly decreased. The rise in deaths due to severe anaemia, particularly in adolescent

age group (≤19 years), is concerning, as it suggests a gap in nutrition and quality of antenatal care for this vulnerable group. The increase in HIV/AIDS-related maternal deaths, especially in the 20-24 and over 25-year age groups, signals a need for better integration of HIV care into maternal health services. The consistent contribution of other indirect causes suggests that a broad approach to maternal health is necessary, addressing not just specific diseases but utilise an integrated approach to care.

Efforts should continue to prioritize malaria prevention, particularly in pregnant women, through strategies like insecticide-treated nets, intermittent preventive treatment (IPT), and prompt treatment of malaria during pregnancy. Addressing the rise in severe anaemia among adolescents requires improving nutritional interventions and

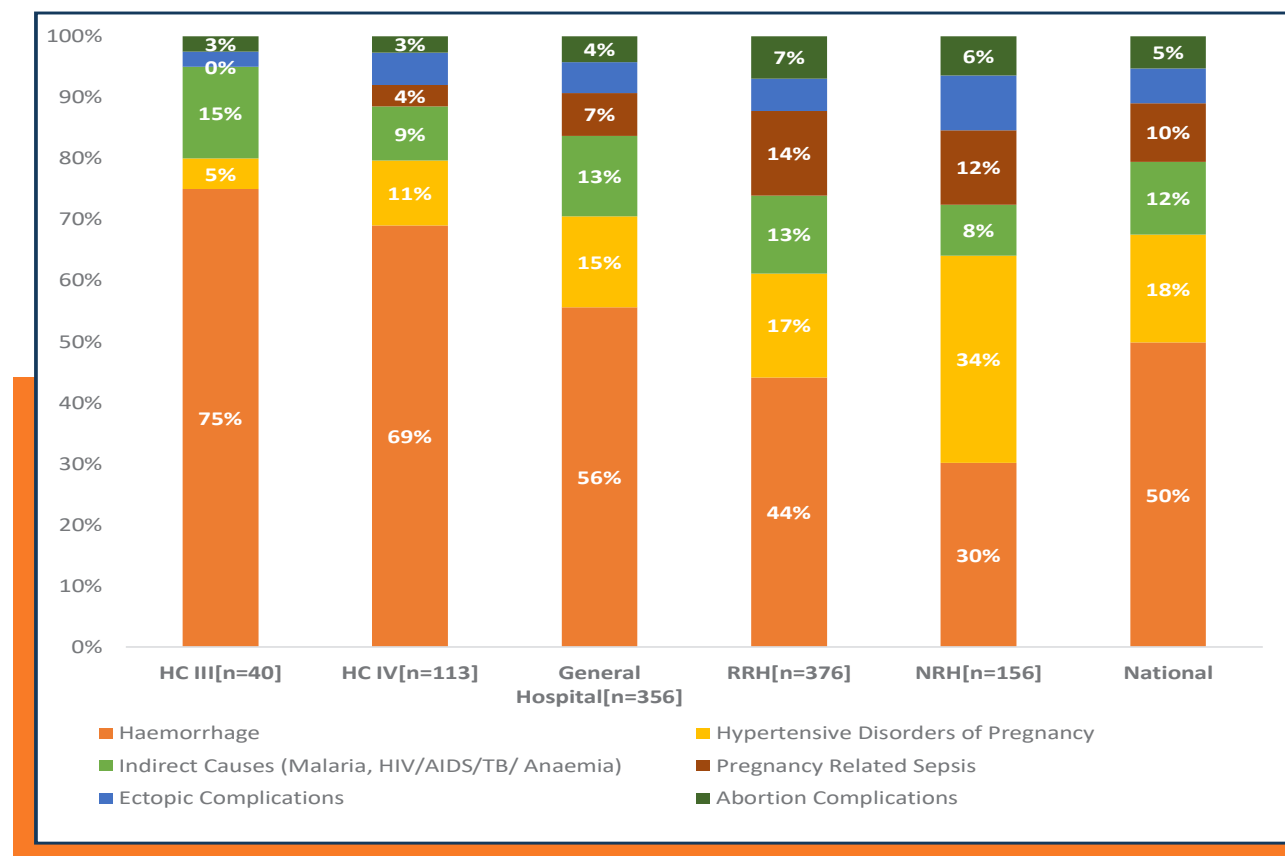


ensuring adequate stock of iron and folic acid supplementation to meet the demand during antenatal care. The increase in HIV/AIDS-

related maternal deaths calls for enhanced HIV testing, early initiation of treatment, and adherence support during pregnancy.

Leading causes of maternal deaths by health facility level

Figure 10: Showing leading causes of maternal deaths by Health Facility level, FY2023/24



Haemorrhage is the leading cause of death at all facility levels, contributing to 50% of all maternal deaths nationally. The proportion is highest in HC III facilities (75%) and HC IV facilities (69%). General Hospitals and RRHs show slightly lower rates of haemorrhage, at 56% and 44%, respectively. Hypertensive disorders of pregnancy contribute to a significant portion of deaths in NRH (34%) and RRH (17%), while pregnancy-related sepsis is a notable cause in RRHs (14%) and HC IVs (11%). Indirect causes, including malaria, HIV/AIDS/TB, and anaemia, account for a notable

proportion of deaths in HC III (15%), HC IV (13%) and RRH (13%).

Haemorrhage continues to be a major cause of death across all health facility levels, particularly in lower-level facilities (HC III and HC IV). The relatively lower proportion of deaths due to haemorrhage in higher-level facilities (RRH and NRH) suggests that these facilities may have better capacity for managing haemorrhage. The high proportion of maternal deaths due to hypertensive disorders reflects gaps in quality and timely

management of these complications. The high proportion of pregnancy-related sepsis maternal deaths in RRHs and NRH points to gaps in community knowledge in use of traditional herbs during labour, persistent use of Traditional Birth Attendants (TBA), poor quality of the referral system, and inadequate definitive management as it relates to pre-operative antibiotics including resuscitation, compounded with poor surgical skills and general poor infection prevention and control measures.

To address the high burden of postpartum haemorrhage, particularly in HC III and IV facilities, there will be a need to prioritise focused mentorship interventions at those levels and equipping them with PPH kits. It will also involve establishing blood

transfusion systems at HC III and improve emergency transport systems to higher-level facilities when needed. At regional and national hospitals, efforts should focus on the early identification and timely quality management of hypertensive disorders.

There is also a need to continue to advocate for the implementation of the approved MOH staffing structure to ensure adequate numbers of health workers managing these complications.

Additionally, infection prevention measures and timely management of sepsis must be prioritized at all levels of care and availability of the necessary medicines, supplies, and equipment.



Table 9: Leading causes of maternal deaths deep dive by Regional Referral Hospital

Regional Referral Hospital	# of Deaths Reported	Haemorrhage	Hypertensive Disorders of Pregnancy	Pregnancy Related Sepsis	Indirect Causes (Malaria, HIV/AIDS/TB/ Anaemia)	Abortion Complications	Ectopic Complications	Pre-existing disease	Anaesthetic Complications	Overall
Mbale RRH	61	5%	2%	3%	2%	1%	1%	0%	0%	15%
Jinja RRH	53	5%	2%	1%	1%	1%	0%	1%	0%	13%
Hoima RRH	52	5%	2%	2%	1%	1%	1%	0%	0%	13%
Mbarara RRH	45	4%	3%	1%	0%	1%	1%	0%	0%	11%
Masaka RRH	34	4%	1%	1%	1%	1%	0%	0%	0%	8%
Soroti RRH	23	1%	1%	0%	1%	0%	0%	0%	0%	6%
Kayunga RRH	23	4%	1%	0%	0%	0%	0%	0%	0%	6%
Mubende RRH	22	2%	0%	2%	1%	0%	0%	0%	0%	5%
Fort Portal RRH	22	1%	1%	1%	0%	0%	0%	1%	0%	5%
Lira RRH	20	3%	1%	0%	1%	0%	0%	0%	0%	5%
Arua RRH	19	2%	0%	0%	1%	0%	0%	0%	1%	5%
Entebbe RRH	9	1%	0%	0%	0%	0%	0%	0%	0%	2%
Moroto RRH	9	1%	0%	0%	1%	0%	0%	0%	0%	2%
Gulu RRH	8	1%	0%	0%	0%	0%	0%	0%	0%	2%
Kabale RRH	8	1%	0%	0%	0%	0%	0%	0%	0%	2%
Yumbe RRH	4	0%	0%	0%	0%	0%	0%	0%	0%	1%
National	412	40%	16%	13%	12%	6%	5%	4%	3%	100%



In FY2023/24, RRHs exhibited a higher proportion of deaths due to specific causes. For instance, Mbale RRH shows a higher proportion of deaths due to sepsis (3%) and indirect causes (3%). On the other hand, Mbarara RRH had a higher proportion of deaths due to Hypertensive Disorders of Pregnancy (3%), whereas Mbale RRH, Jinja RRH, and Hoima RRH had haemorrhage exhibiting a higher proportion of deaths due to haemorrhage.

To effectively address the burden of maternal mortality at the RRH level, we recommend implementation of tailored interventions based on the leading causes of death identified at each RRH. This may involve strengthening specific clinical areas, improving access to essential medicines and supplies, or enhancing community engagement. Foster collaboration and learning between RRHs, sharing best practices and lessons learned to improve maternal health outcomes across the country.

Characteristics of maternal deaths reported / reviewed

Table 10: Comparison in the Characteristics of Maternal Deaths Reviewed in FY2022/23 and FY2023/24

Item	FY22/23 (n=1137)		FY23/24 (n=1159)	
	Frequency (n=1137)	Frequency (%)	Frequency (n=1159)	Frequency (%)
Age Group				
<19 yrs	121	10.6%	129	11.1%
20-24 yrs	223	19.6%	255	22.0%
>=25 yrs	684	60.2%	724	62.5%
Missing Age	109	9.6%	51	4.4%
Parity at death				
Para 1	220	19.3%	394	34.0%
Para 2-4	496	43.6%	435	37.5%
Para 5-6	219	19.3%	156	13.5%
Para 7+	167	14.7%	87	7.5%
Missing data	35	3.1%	87	7.5%
Referral status to the facility where the death occurred				
Referred	698	61.4%	658	56.8%
Not Referred	366	32.2%	501	43.2%
Missing data	73	6.4%		
Duration of stay (between time of admission and time of death)				
<1 hr	819	72.0%	184	15.9%
1-5 hrs	216	19.0%	334	28.8%
6-24 hrs	28	2.5%	473	40.8%
> 24 hrs	1	0.1%	46	4.0%
Missing data	73	6.4%	122	10.5%
Mode of delivery				
Vaginal delivery	344	30.3%	418	36.1%
Assisted vaginal delivery	4	0.4%	16	1.4%



Addressing Delays in Care to Improve Maternal and Newborn Survival

Caesarean section	444	39.1%	430	37.1%
Unknown/Missing	107	9.4%	79	6.8%
Not Applicable	238	20.9%	216	18.6%
Investigations done during Antenatal care of this pregnancy				
Hepatitis B testing				
Yes	126	11.1%	207	17.9%
No	171	15.0%	124	10.7%
Unknown/Missing	840	73.9%	828	71.4%
Urinalysis-Protein/Sugar/casts				
Yes	137	12.0%	150	12.9%
No	173	15.2%	143	12.3%
Unknown/Missing	827	72.7%	866	74.7%
HIV testing				
Yes	590	51.9%	554	48%
Test result positive	54	9.2%	35	6%
Test result negative	536	90.8%	519	94%
No	26	2.3%	33	3%
Unknown/Missing	521	45.8%	572	49%
Syphilis testing				
Yes	400	35.2%	391	33.7%
Test result positive	22	5.5%	12	3.1%
Test result negative	366	91.5%	379	96.9%
No	26	2.3%	75	6.5%
Unknown/Missing	673	59.2%	693	59.8%
Hemoglobin testing				
Yes	132	11.6%	148	13%
No	177	15.6%	146	13%
Unknown/Missing	828	72.8%	865	75%

During FY2023/24, 62.5% of maternal deaths reviewed were women aged 25 years and above. Most maternal deaths reviewed (71.5%) were women of low parity 1-4. The referred and non-referred reviewed cases were almost the same proportion.

The duration of stay shows that 40.8% of the reviewed maternal deaths died between 6 and 24 hours after admission which shows a significant increase from 2.5% of FY2022/23. Of the maternal deaths that were reviewed,

36.1% died after a vaginal delivery while 37.1% died after caesarean section. Antenatal investigations among the reviewed maternal deaths were not performed optimally pointing to poor quality of antenatal care.

The relatively high percentage of deaths in women referred to facilities (56.8%) points to delays or gaps in the quality of care and the referral pathway. The significant increase in deaths amongst women who had stayed at the health facility for 6 to 24 hours after



admission relates to gaps in the quality of emergency obstetric care services. Among the reviewed maternal deaths, a high percentage of deaths was contributed to by mothers delivered through caesarean section, yet less mothers are delivered through this method. This may imply poor gaps in pre and post operative care. The sub-optimal antenatal investigations indicate weaknesses in antenatal care quality, limiting the ability for early identification and management of maternal health risks. The poor quality of ANC is partly due to inadequate stock of iron, folic acid and fansider, which leads to inadequate management of anaemia and malaria during pregnancy. This could be linked to the costs

associated in procuring these commodities at health facility level.

Improving the quality of the referral system is crucial, ensuring that women referred to facilities receive timely and adequate care, particularly within the critical first 24 hours of admission. The high proportion of deaths following caesarean sections calls for continued mentorship in operative obstetrics. Addressing the gaps in antenatal investigations is essential; ensuring complete testing for infections such as Hepatitis B, syphilis, HIV, and urinary tract issues can help prevent complications during pregnancy and delivery.

(i) Avoidable factors using the 3 delays – Deep dive into the delays

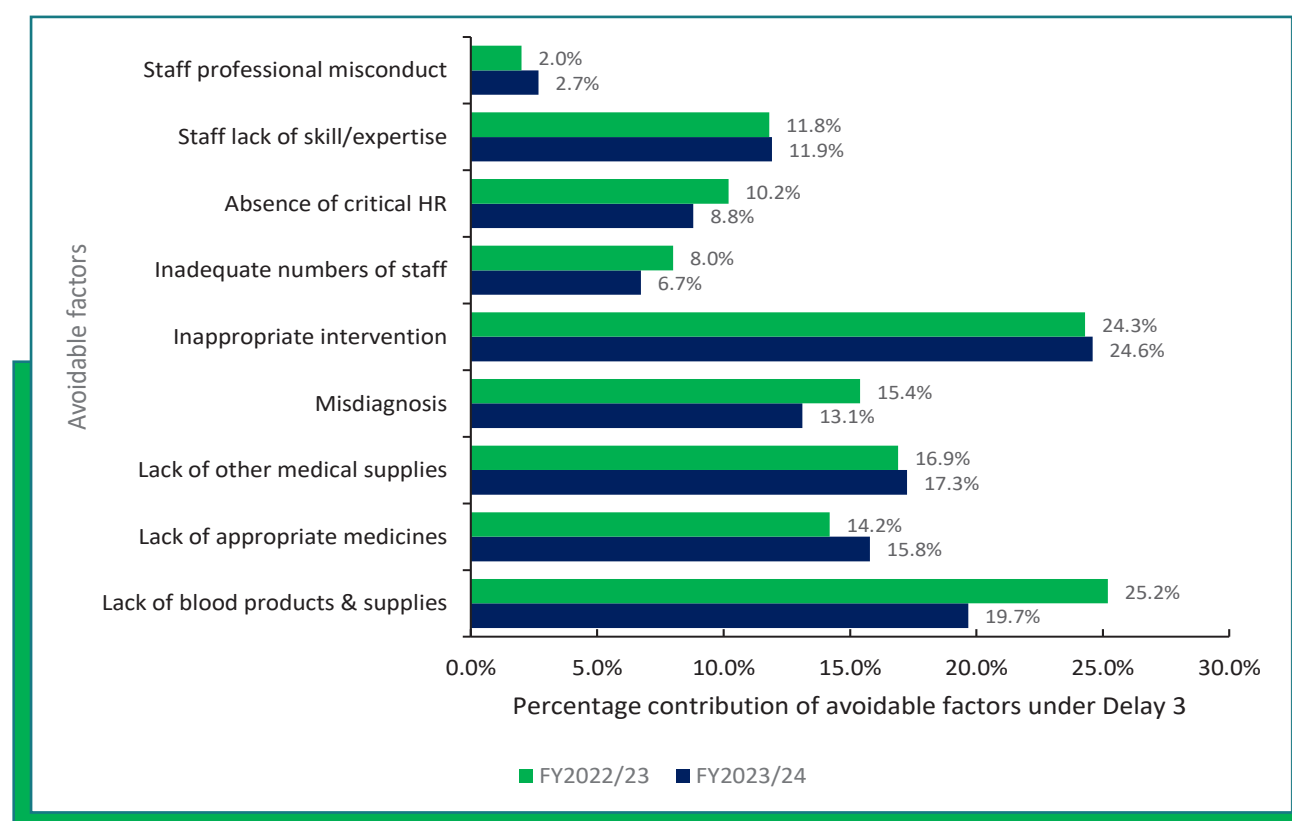
Table 11: Avoidable factors FY2023/2024

Region	Delay 1	Delay 2	Delay 3	No. Maternal reviews	Percentage contribution		
					Delay 1	Delay 2	Delay 3
Acholi	22	13	30	46	48%	28%	65%
Ankole	36	23	48	77	47%	30%	62%
Bugisu	32	21	51	82	39%	26%	62%
Bukedi	36	26	36	49	73%	53%	73%
Bunyoro	40	23	56	79	51%	29%	71%
Busoga	68	47	86	122	56%	39%	70%
Kampala	104	66	95	181	57%	36%	52%
Karamoja	23	18	18	34	68%	53%	53%
Kigezi	23	11	23	36	64%	31%	64%
Lango	32	22	37	60	53%	37%	62%
North Central	64	43	59	107	60%	40%	55%
South Central	48	27	50	94	51%	29%	53%
Teso	37	22	30	49	76%	45%	61%
Tooro	33	15	45	65	51%	23%	69%
West Nile	39	33	53	78	50%	42%	68%
National	637	410	717	1159	55%	35%	62%

Generally, Delay 3 (related to inadequate quality care at the health facility) contributed the highest proportion to maternal deaths, accounting for 62% of all delays, followed by Delay 1 (decision to seek care) at 55%, and Delay 2 (delay to reach health facility) at 35%. Regions such as Bukedi (73%), Bunyoro

(71%), and Busoga (70%) have the highest contributions of Delay 3 factors. Delay 1 is particularly significant in Teso (76%), Bukedi (73%), and Karamoja (68%), while Delay 2 shows high contributions in Bukedi (53%), Karamoja (53%), and Teso (45%).

Figure 11: Deep dive of avoidable factors under delay 3, FY2023/2024



There was a decrease in the percentage contribution of lack of blood products and supplies, absence of critical HR, inadequate number of staff, and misdiagnosis as avoidable factors for maternal deaths between FY2022/23 and FY2023/24. However, there was a slight increase in the percentage contribution of lack of appropriate medicines, while others remained almost unchanged.

The current efforts by government to increase availability of blood and blood products for obstetric emergencies should be further strengthened to ensure increased coverage of blood transfusion services up to HC III level.

There should be continued skills building and equipping health facilities for rational use of blood and its management.

Training and mentorship should be scaled up to ensure that healthcare workers are equipped with appropriate skills to manage obstetric complications/emergencies, accompanied by regular support supervision, and confidential enquiries where applicable. Additionally, ensuring the availability of adequate essential medicines and medical supplies at all times through improved procurement, ordering and distribution systems is crucial.

Table 12: Unpacking Delay 3 by region

Region	Lack of blood products, supplies & consumables	Lack of appropriate medicines for client management including Lab Supplies	Lack of other medical supplies, equipment & consumables for use in patient care	Misdiagnosis	Inappropriate intervention/ doses given	Inadequate numbers of staff	Absence of critical human resource	Staff lack of skill/expertise	Staff professional misconduct
Acholi	17%	17%	17%	17%	39%	13%	17%	13%	0%
Ankole	14%	10%	10%	17%	16%	1%	1%	16%	3%
Bugisu	22%	12%	13%	16%	37%	11%	20%	17%	4%
Bukedi	27%	22%	35%	20%	12%	16%	14%	10%	4%
Bunyoro	25%	11%	22%	6%	24%	5%	9%	11%	1%
Busoga	24%	23%	26%	16%	34%	7%	5%	9%	3%
Kampala	13%	7%	8%	9%	26%	4%	9%	8%	2%
Karamoja	24%	15%	15%	15%	18%	3%	12%	15%	3%
Kigezi	11%	25%	14%	11%	33%	19%	8%	17%	0%
Lango	23%	18%	17%	12%	27%	5%	8%	7%	2%
North Central	22%	18%	19%	9%	10%	4%	6%	8%	4%
South Central	19%	16%	15%	7%	12%	6%	7%	11%	1%
Teso	22%	29%	33%	14%	22%	8%	4%	18%	4%
Tooro	22%	17%	15%	18%	31%	6%	6%	18%	6%
West Nile	15%	17%	17%	18%	32%	6%	12%	15%	3%
National	20%	16%	17%	13%	25%	7%	9%	12%	3%

The data from Figure 12 reveals distinct challenges contributing to Delay 3 across various regions in Uganda, including shortages of blood products, medical supplies, staff, and issues with medical interventions. Regions like Bukedi (27%), Busoga (24%), and Bunyoro (25%) face significant challenges with the lack of blood products and consumables, which severely impacts timely patient care. The high percentages in these regions indicate critical gaps in supplies that need immediate attention to reduce delays in care delivery.

In contrast, misdiagnosis and inappropriate interventions are major issues in regions like Acholi, where 39% of delays are due to inappropriate interventions, and Bugisu, which reports a similarly high rate of 37%. These regions would benefit from targeted training programs to improve diagnostic accuracy and the provision of appropriate treatments, reducing delays caused by incorrect interventions.

Meanwhile, regions such as Tooro (18%), Teso (18%), and Kigezi (17%) struggle with staffing shortages and skill gaps. In these regions, critical human resources are lacking, and staff often do not have the necessary expertise to provide quality care. Tooro and Teso, in particular, report significant gaps, which suggest a need for focused workforce development efforts, including recruitment and continuous training programs, to close these critical gaps.

In summary, regions like Bukedi and Busoga should focus on improving the availability of medical supplies, Acholi and Bugisu should prioritize enhancing diagnostic and treatment practices, and Tooro and Teso should concentrate on addressing staff shortages and skill development. These targeted efforts would significantly reduce Delay 3 and improve maternal and newborn health outcomes across Uganda.

Table 13: Unpacking Inappropriate interventions by region

Region	Inadequate post-operative monitoring and follow up	Capacity gaps to manage Obstetric Complications, PPH, PET, MIP, Sepsis	Failure to identify and act on High-risk mothers	Delayed referral between facilities	Failure to seek for help from the senior team	Poor communication between facilities	Inadequate Investigations done	Absenteeism of critical staff	Lack of equipment (for EFT and LFT, Ultra Sound Scan, Fridge in theatre)
Acholi	21%	29%	21%	0%	14%	7%	7%	0%	0%
Ankole	27%	9%	9%	27%	9%	9%	0%	9%	0%
Bugisu	21%	14%	18%	7%	7%	18%	11%	0%	4%
Bukedi	50%	0%	0%	33%	0%	0%	0%	0%	17%
Bunyoro	28%	11%	6%	11%	22%	6%	6%	11%	0%
Busoga	32%	16%	11%	18%	3%	5%	8%	8%	0%
Kampala	17%	33%	11%	28%	7%	0%	2%	2%	0%
Karamoja	17%	17%	17%	33%	0%	17%	0%	0%	0%
Kigezi	33%	22%	11%	0%	11%	11%	11%	0%	0%
Lango	24%	12%	29%	12%	0%	6%	12%	6%	0%
North Central	33%	8%	8%	8%	0%	17%	0%	17%	0%
South Central	25%	17%	33%	8%	0%	0%	0%	8%	8%
Teso	29%	0%	29%	43%	0%	0%	0%	0%	0%
Tooro	6%	6%	22%	17%	22%	11%	11%	0%	6%
West Nile	28%	32%	20%	0%	4%	0%	4%	12%	0%
National	24%	18%	16%	15%	7%	6%	6%	5%	1%



The data from Figure 12 highlights various factors contributing to inappropriate interventions across regions in Uganda. Notably, inadequate post-operative monitoring is a significant issue, with Bukedi reporting 50%, followed by Kigezi and North Central at 33%. This suggests a gap in patient follow-up after surgical procedures, increasing the risk of complications. Capacity gaps in managing obstetric complications, such as postpartum haemorrhage (PPH), preeclampsia (PET), maternal infections (MIP), and sepsis, are also prevalent, particularly in Kampala (33%) and West Nile (32%). Additionally, delayed referrals between facilities are a concern in Teso (43%) and Bukedi (33%), indicating that patients are not being transferred in a timely manner to appropriate care settings. Moreover, the failure to identify and act on high-risk mothers is most common in South Central (33%) and Lango (29%), reflecting weaknesses in early detection and management systems.

These findings suggest that different regions face unique challenges that affect the quality of maternal care. The high rates of inadequate post-operative monitoring in Bukedi and Kigezi point to the need for improved post-surgical follow-up protocols. Similarly, the capacity gaps in managing critical obstetric complications in Kampala and West Nile indicate that healthcare workers require additional training and resources to handle emergencies effectively. The delays in referrals observed in Teso and Bukedi highlight the need for better coordination between facilities to ensure timely care for patients requiring higher-level interventions. Meanwhile, in South Central and Lango, improving risk identification systems for high-risk mothers during antenatal care is crucial to preventing complications.

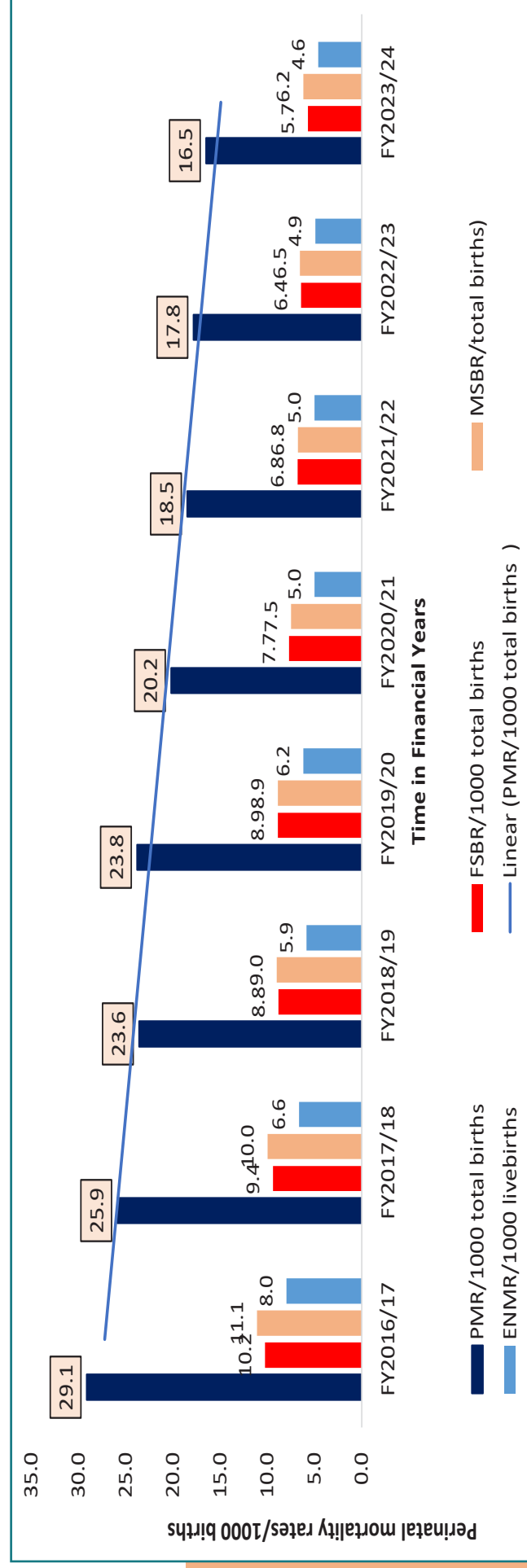
To address these issues, region-specific interventions should be implemented. Improving post-operative care in Bukedi and Kigezi can be achieved by introducing standardized monitoring protocols. In Kampala and West Nile, enhancing clinical capacity through targeted training programs will help bridge the gaps in managing obstetric complications. Streamlining referral systems in Teso and Bukedi is essential to ensuring that patients are transferred promptly to appropriate care facilities. Finally, South Central and Lango should focus on strengthening antenatal care screening procedures to ensure that high-risk mothers are identified early and receive timely interventions. These focused efforts can significantly reduce inappropriate interventions and improve maternal health outcomes across the country.

3.3 Institutional Perinatal Deaths

3.3.1 National trends in Institutional Perinatal Mortality Rates (per 1000 births)

Overall, the institutional perinatal mortality rate has reduced by 30% over the past five years (from 23.8/1000 total birth in FY2019/20 to 16.5/1000 total birth in FY2023/24). There has been a significant reduction across the perinatal death types with fresh still birth having the highest reduction of 36%, followed by MSBs by 30% and ENND by 26% over the past five years. The consistent decline across all these mortality indicators over the past five years highlights the positive impact of targeted interventions and strengthened healthcare systems in improving perinatal and neonatal outcomes in Uganda.

Figure 12: Trends in Institutional Perinatal Mortality Rates (per 1000 births) in Uganda (FY2016/17 to FY2023/24)



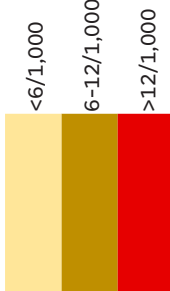
The percentage reduction can be explained by the following: 1. Functionalisation of the newborn units 2. Dissemination of EMOC and the newborn care guidelines, care for the small sick newborn 3. Enhanced coordination within the local maternity and newborn networks and 4. Functionalisation of health centre IVs. For still births, establishment of high-risk clinics in the CeMONC sites 4. Improving skills for the in-service nurses through a short course training at the six centres of excellence in neonatology in Uganda. These reductions indicate enhanced prenatal care, improvement in management of complications during pregnancy, delivery, and immediate postpartum period.

3.3.2 Institutional Perinatal Mortality Ratio by Region

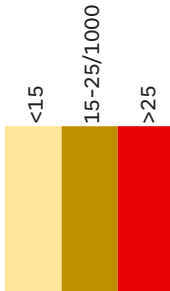
Table 14: Showing the IPMR by Region between FY2022/23 and FY2023/24

	FY2022/23	FY2023/24	FY2022/23	FY2023/24	FY2022/23	FY2023/24	FY2022/23	FY2023/24	FY2022/23	FY2023/24	%Diff.
Region	Total Births		MSB/1000 Births		FSB/1000 Births		ENND/1000 Live Births		IPMR/1000 births		In IPMR
Acholi	64,129	66,792	7.3	8.4	6.1	5.6	7.4	7.5	20.8	21.3	2.55
Ankole	114,088	121,593	5.4	5.2	5.4	4.6	2.3	3.3	13.1	13.1	0.00
Bugisu	92,823	93,750	5.5	5.1	5.0	5.3	1.3	1.2	11.8	11.6	-1.58
Bukedi	84,427	91,846	4.0	4.1	4.5	4.6	2.5	2.4	10.9	11.0	0.95
Bunyoro	84,253	87,963	9.0	8.1	10.2	8.8	5.7	5.9	24.9	22.7	-8.71
Busoga	124,731	131,260	7.0	7.1	7.0	6.7	5.4	4.9]	19.2	18.6	-3.17
Kampala	89,845	87,240	11.2	10.2	8.8	7.7	18.6	18.2	38.2	35.8	-6.39
Karamoja	34,963	40,599	3.6	3.3	6.5	6.3	4.0	4.5	14.1	14.1	0.00
Kigezi	53,911	55,432	5.4	5.1	4.4	3.7	5.2	6.4	14.8	15.2	2.43
Lango	74,782	86,639	5.3	4.7	5.6	5.0	4.1	3.0	15.0	12.7	-15.13
North Central	146,767	152,764	7.2	7.1	7.9	6.6	3.4	3.2	18.4	16.9	-8.24
South Central	141,233	145,774	6.7	6.6	6.7	5.7	4.3	4.0	17.6	16.2	-8.08
Teso	73,733	80,787	6.0	5.1	5.6	4.9	3.4	3.3	14.9	13.3	-11.01
Tooro	121,567	118,672	5.3	4.5	5.1	4.1	3.5	2.4	13.9	11.0	-20.87
West Nile	112,505	120,815	6.8	6.8	6.1	5.8	5.3	3.9	18.1	16.4	-9.60
National	1,413,757	1,481,926	6.5	6.2	6.4	5.7	4.9	4.6	17.8	16.5	-7.25

FSBR, MSBR, ENND/1000



IPMR/1000



Generally, there was a 7.25% reduction in the IPMR between FY2022/23 and FY2023/24, with Tooro region having the highest reduction of 20.87% followed by Lango region, 15.13% and Teso region with 11.01%. However, three regions of Acholi, Bukedi, and Kigezi registered an increase in the IPMR over the past one year. The highest burden of MSB per 1000 total birth above the National Average (6.2) was reported in Kampala (10.2), followed by Acholi (8.4), Bunyoro (8.1), Busoga (7.1), North Central (7.1), west Nile (6.8) and South Central (6.6 respectively).

There was a general reduction in FSB rate per 1000 total births across all regions except for

Bugisu and Bukedi over the past one year. However, there is still a high burden of FSB in the regions of Bunyoro, Kampala, Busoga, Karamoja and North Central who are still above the national average of 5.7/1000 total births.

There was also a general reduction in ENND rate per 1000 live births across all regions except for Ankole, Acholi, and Bunyoro. However, the regions of Kampala, Acholi and Kigezi had an ENND rate above the national average of 4.6 per 1000 live births. Despite the reductions in ENND rate, Kampala still faces unique challenges in its efforts to reduce the early newborn mortality rate.

Deep dive for ENND for Kampala by level and ownership and referrals

Figure 13: Newborn deaths (0-7 days) by level of care in Kampala

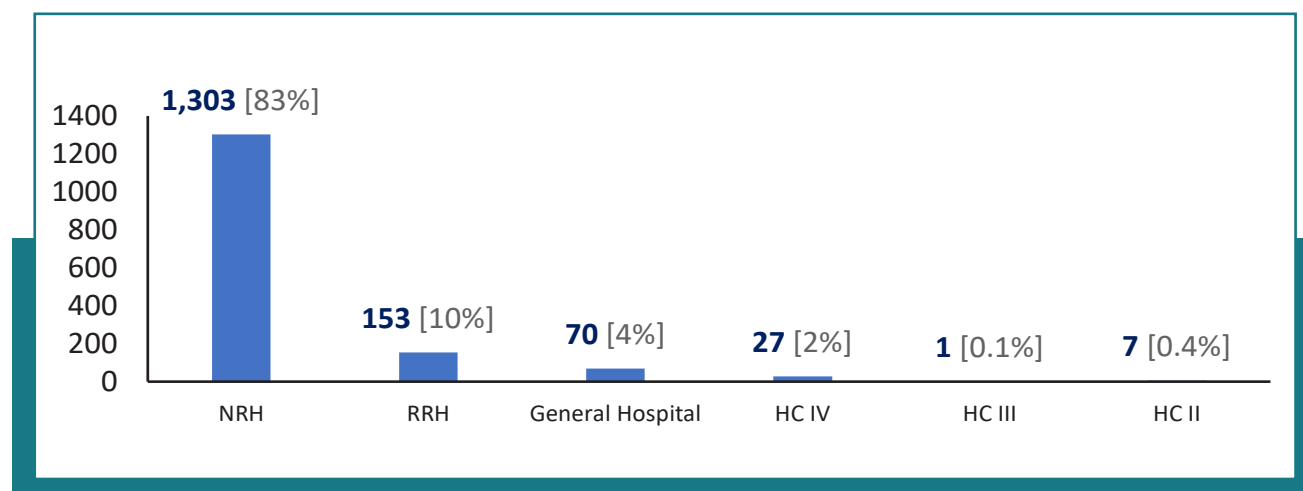


Table 15: Showing health facilities in Kampala with the greatest burden of newborn deaths (0-7 days)

Health facility	Ownership	No. of Newborn deaths (0-7 days)	Percentage Contribution
Kawempe National Referral Hospital	Gov	1196	77%
China Uganda Friendship RRH	Gov	153	10%
Mulago SWN Hospital	Gov	107	7%
Lubaga Hospital	PNFP	31	2%
St. Francis Nsambya Hospital	PNFP	20	1%
Kisenyi Health Centre IV	Gov	13	1%
Mengo Hospital	PNFP	11	1%
Other facilities	NA	30	2%

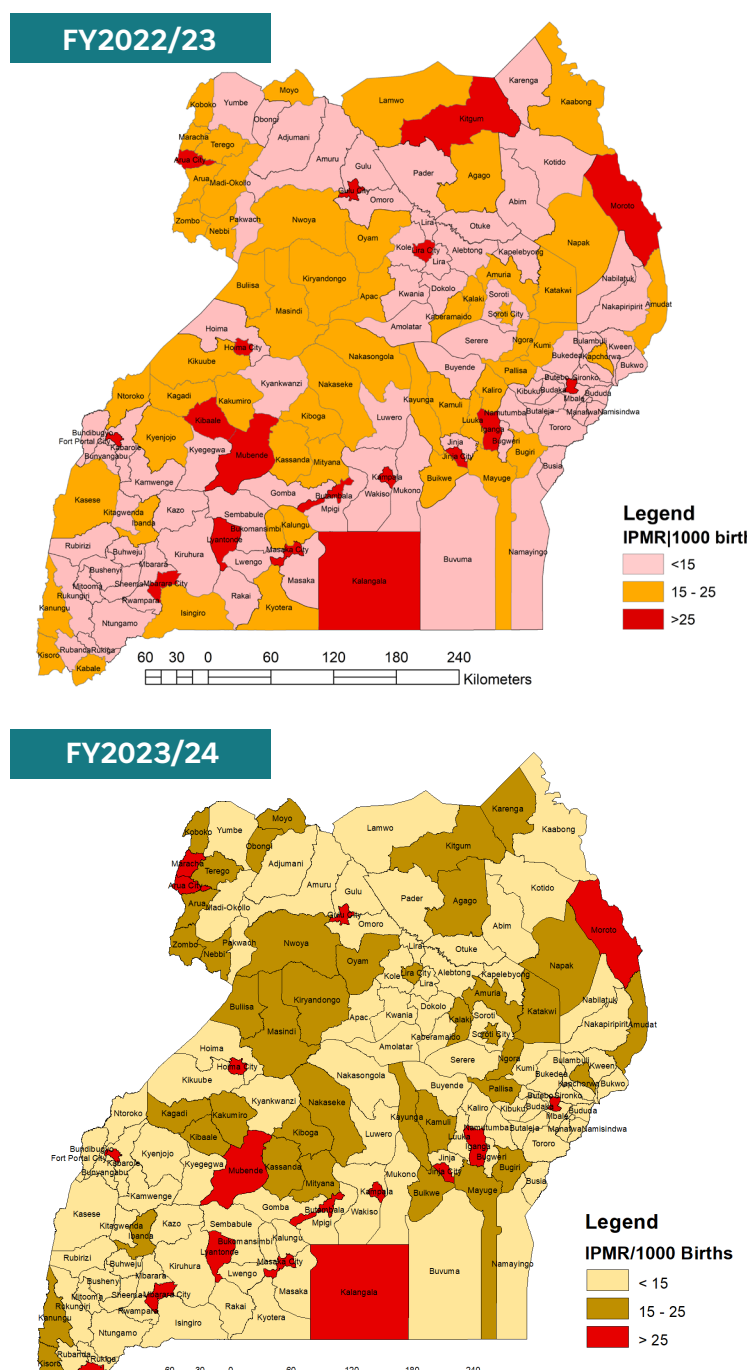
Kawempe NRH had the greatest burden (77%) of newborn deaths (0-7 days) in Kampala during FY2023/24. This was followed by China Uganda Friendship RRH (10%) and Mulago SWN Hospital (7%).

The high burden on these hospitals is attributed to the very many referrals from the

lower health facilities.

Interventions should be geared to supporting these high burdened health facilities to reduce on the high mortality rates. These will include establishment and functionalization of lower health units in Kampala to least level 11 and strengthen the referral systems.

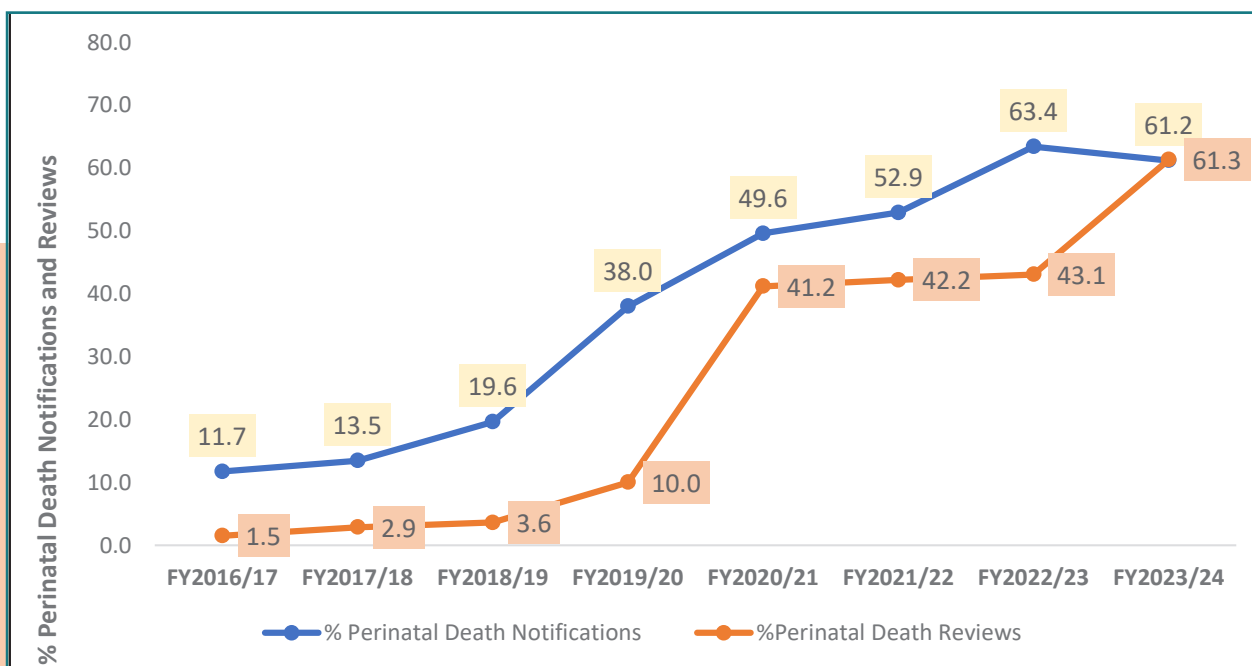
Figure 14: Showing Institutional Perinatal Mortality per 1000 births during FY2022/23 and FY2023/24



During FY2023/24, there was an increase in the number of districts with reduced IPMR of less than 15/1000 total birth from 82 districts in FY2022/23 to 89 districts. Most of the districts/cities with IPMR greater than 25/1000 total birth have RRH/high volume General Hospitals, reflecting the quality of referrals from the lower health facilities. However, there are three districts of Kalangala, Lyantonde, and Maracha with persistent high IPMR of more than 25/1000 total births.

More emphasis and close follow-up shall be put on the high burdened district to conduct the death reviews so as to design interventions aimed at reducing high IPMR.

Figure 15: Trends in Perinatal Death Notifications and Reviews (FY2016/17 to FY2023/24)



Over the past five financial years, Uganda has seen remarkable progress in the notification and review of perinatal deaths, reflecting improvements in data reporting and accountability within the healthcare system. The percentage of perinatal death notification increased from 38.0% in FY2019/20 to 61.2% in FY2023/24, marking an increase of 61%. Similarly, perinatal death reviews increased from 10.0% in FY2019/20 to 61.3% in FY2023/24, marking a substantial increase of 51.3 percentage points. This upward trend demonstrates a significant commitment to improving maternal and newborn health outcomes through better tracking, follow-ups, and reporting mechanisms.

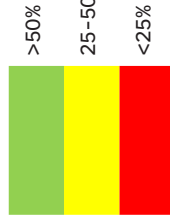
This significant rise indicates that not only are more deaths being reported, but they are also being systematically reviewed to understand underlying causes and to inform targeted interventions. This is a crucial step towards preventing future perinatal deaths and enhancing the quality of care in healthcare facilities across Uganda.

These trends highlight the importance of continued efforts to strengthen surveillance and response systems for maternal and perinatal health, as well as the need for ongoing training and support for healthcare providers to sustain these improvements.

Table 16: Showing the Perinatal Death Notifications and Reviews by Region between FY2022/23 and FY2023/24

	FY 2022/23		FY 2023/24		FY 2022/23		FY 2023/24		% Diff Perinatal Death Notification	% Diff Perinatal Death Review
Region	Total Perinatal Deaths		Perinatal death Notification rate_24HRs (%)		Perinatal death Notification rate_24HRs (%)		Perinatal death Review rate (%)			
Acholi	1332	1424	73.4	94.2	68.8	86.4	28.4	25.5		
Ankole	1489	1591	87.6	55.3	67.4	73.7	-36.8	9.5		
Bugisu	1094	1085	95.1	109.5	47.3	74.7	15.2	58.2		
Bukedi	920	1012	41.2	80.7	36.3	68.4	96.0	88.4		
Bunyoro	2095	2000	53.5	50.9	131	39.9	-4.9	204.7		
Busoga	2396	2442	46.9	64.0	17.3	79.0	36.6	355.8		
Kampala	3436	3127	86.8	25.1	70.1	65.0	-71.1	-7.2		
Karamoja	493	571	45.0	95.6	61.9	80.7	112.3	30.5		
Kigezi	800	841	87.5	102.1	79.1	99.8	16.7	26.1		
Lango	1119	1103	64.5	97.8	72.1	96.0	51.6	33.1		
North Central	2703	2580	57.0	52.1	22.6	37.4	-8.8	65.3		
South Central	2489	2362	51.7	35.7	16.4	25.6	-30.9	55.6		
Teso	1102	1077	51.3	75.9	55.5	68.8	48.0	23.9		
Tooro	1690	1301	58.7	48.9	23.9	44.5	-16.7	86.2		
West Nile	2041	1983	50.2	64.4	59.1	55.9	28.4	-5.4		
National	25199	24499	63.4	61.2	431	61.3	-3.5	42.3		

PDN/ PDR (%)





During FY2023/24, all regions had above 50% of their perinatal deaths notified except for Kampala (25.1%), South Central (35.7%) and Tooro (48.9%). There was a 3.5% reduction in the perinatal death notification between FY2022/23 and FY2023/24. Kampala registered the highest percentage reduction in perinatal death notification of 71.1% followed by Ankole (36.8%) and South Central (30.9%). The reduction in notification and review rates is attributed to gaps in reporting in selected high-volume health facilities using HMIS MCH-019 Perinatal Death Notification Form and human resource constraints to support data entry.

On the other hand, perinatal death reviews significantly increased by 42.3% between FY2022/23 and FY2023/24. The greatest increase was noticed in Busoga followed by Bunyoro, Bukedi, and Tooro regions. However, two regions of Kampala and West Nile had reductions in their perinatal death reviews by 7.2% and 5.4% respectively.

In FY2024/25, efforts will focus on closely monitoring the notification and review indicators during performance review meetings at all subnational levels. Additionally, efforts shall be put in place to review perinatal deaths especially among districts with low rates of notification and reviews.

REDUCTION
in Perinatal Death
Notifications was;
3.5%

LOWEST IN

Kampala	(25.1%)
South Central	(35.7%)
Tooro	(48.9%)

INCREASE
in Perinatal Death
Reviews was;
42%

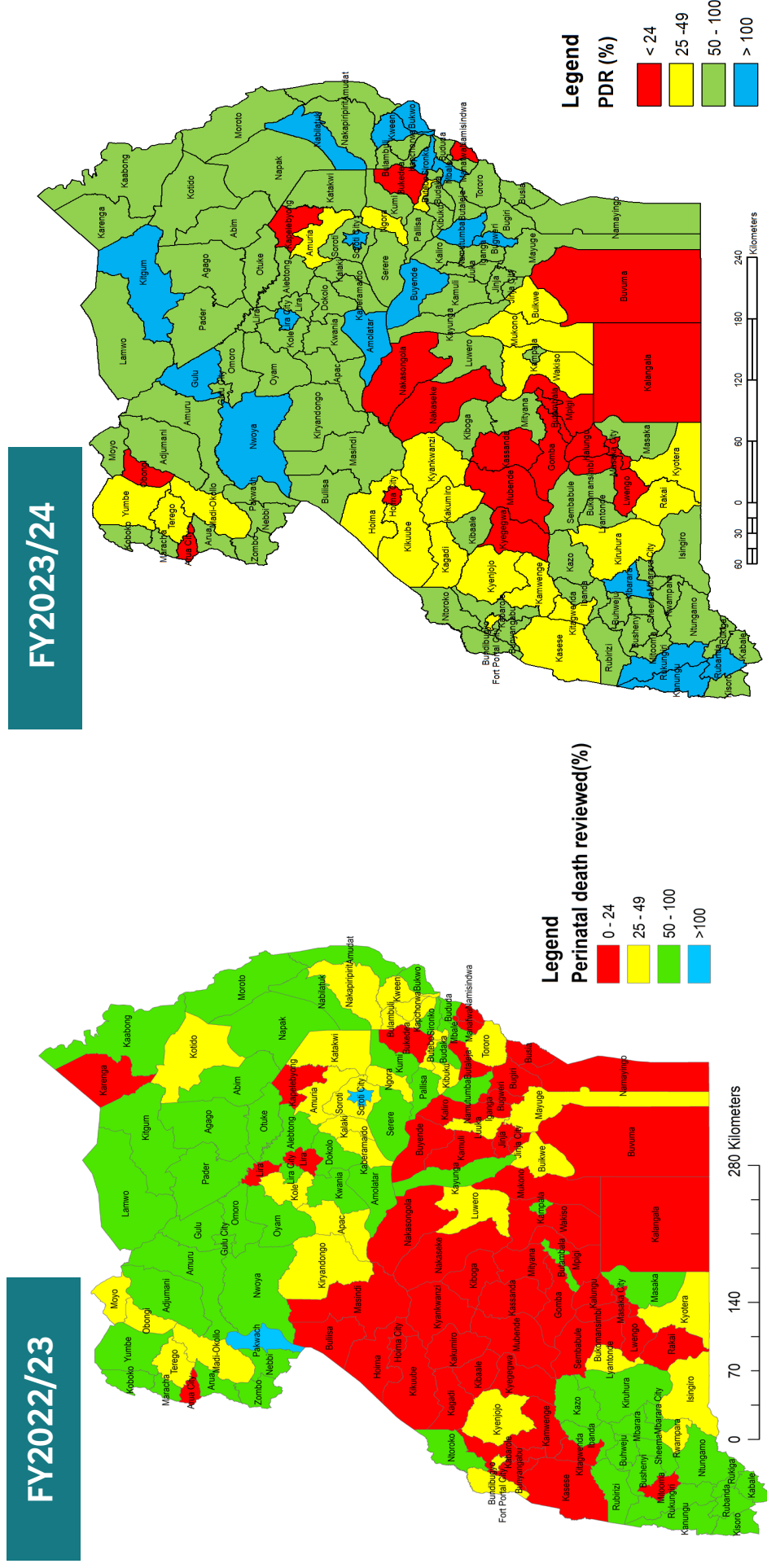
EXCEPT FOR

Kampala	(-7.2)
West Nile	(-5.4)

3.3.2 Institutional perinatal deaths reported, notifications and review rates by District.

Perinatal Death Reviews by District

Figure 16: Map showing the rate of perinatal deaths reviewed by districts FY2022/23 and FY2023/24



102 districts (69.8%) reviewed over 50% of reported deaths. Five (5) districts (3.4%) reported no perinatal death reviews including Bukomansimbi, Buvuma, Gomba, Kassanda, and Lwengo. Fifteen districts had <25% review rates. Suboptimal reviews in these districts hinder comprehensive insights into perinatal mortality causes.



3.4 Perinatal mortality and review rates by level of care

Table 17: Showing Perinatal mortality rates by level of Health Facility

Facility Level	Total Births	Total Live births in Unit	Total Perina- tal Deaths	IPMR/ 1000 births	FSBR/ 1000 births	MSBR/ 1000 births	ENMR/ 1000 Livebirths
HC II/Clinic	126035	125405	783	6.2	2.4	2.6	1.2
HC III	671585	669174	2956	4.4	1.6	2.0	0.8
HC IV	313437	309617	4649	14.8	6.0	6.2	2.7
General Hosp	251297	244992	8732	34.7	12.3	12.8	9.9
RRH	89426	86110	4689	52.4	18.4	18.7	15.9
NRH	30146	28912	2690	89.2	17.3	23.7	50.4
National	1481926	1464210	24499	16.5	5.7	6.2	4.6

FSBR, MSBR,ENND/1000		IPMR/1000	
	<6/1000		<15
	6-12/1000		15-25/1000
	>12/1000		>25

The table presents perinatal mortality rates across various health facility levels, including Health Center (HC) II/Clinics, HC III, HC IV, General Hospitals, Regional Referral Hospitals (RRH), and National Referral Hospitals (NRH). The national perinatal mortality rate (IPMR) is 16.5 per 1,000 births, with significant variation across facility levels. The NRH has the highest perinatal mortality rate at 89.2 per 1,000 births, followed by RRH (52.4) and General Hospitals (34.7). Similarly, the rates for macerated stillbirths (MSBR), and early neonatal mortality (ENMR) are also highest at NRHs, with MSBR at 23.7 per 1,000, and ENMR at 50.4. FSBR was highest at RRH (18.4). Lower-level facilities, such as HC II/Clinics and HC III, report considerably lower mortality rates across all categories.

The extremely high perinatal mortality rates in NRHs and RRHs indicate that the most complicated pregnancies and deliveries are concentrated at these higher-level facilities. These facilities typically handle referrals for high-risk cases, which may explain

the elevated mortality rates. However, the significant difference between these higher-level facilities and lower-level health centers suggests gaps in the timely and adequate management of high-risk pregnancies. The high rates of stillbirths (both fresh and macerated) at these facilities indicate delays or inadequate care during labour and delivery. The elevated early neonatal mortality rate (50.4 per 1,000 live births) at NRHs points to potential challenges in providing appropriate newborn care after birth

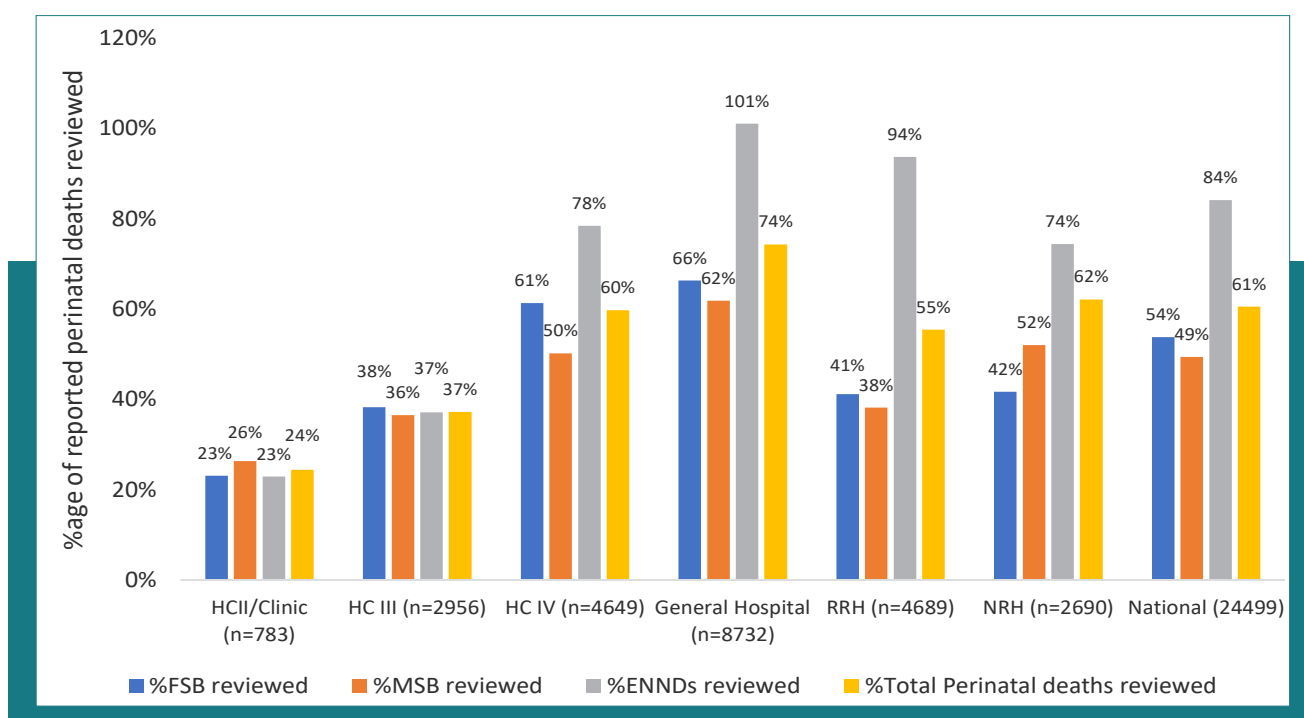
Efforts should focus on improving the quality of care at higher-level facilities, particularly NRHs and RRHs, where the most vulnerable cases are concentrated. Strengthening emergency obstetric and neonatal care, improving staff capacity, and ensuring the timely availability of critical resources such as blood products and medicines such as caffeine, Surfactant, and equipment such as CPAP, are essential to reducing perinatal deaths. Additionally, improving the referral system to ensure that high-risk pregnancies



receive timely care before reaching critical stages could help reduce fresh stillbirth rates. Further investment in neonatal care units and improving infrastructure for lower health units that refer to the NRHs, is necessary to address the high early neonatal mortality rate and improve newborn survival. Other

additional interventions include national wide improvement of neonatal transport and referral, establishment of designated neonatal resuscitation teams and stabilization of newborn babies in the delivery rooms, national and regional program for neonatal resuscitation.

Figure 17: Perinatal death review rates by level of care FY2023/24



The chart shows the percentage of reported perinatal deaths reviewed across different facility levels. Nationally, 61% of all perinatal deaths were reviewed, with varying review rates across facility levels. NRH has the highest total perinatal death review rate at 62%, followed by General Hospitals at 55% and RRHs at 41%. The review of specific categories, such as fresh stillbirths (FSB), macerated stillbirths (MSB), and early neonatal deaths (ENND), also varies. General Hospitals reviewed 66% of FSBs, while RRHs reviewed only 41%. ENND reviews were highest in RRHs at 101%, indicating some data anomalies, and General Hospitals at 78%. Lower-level facilities, like HC II/Clinics, had the lowest

overall review rates, with only 24% of total perinatal deaths reviewed.

The wide variation in review rates across facility levels highlights challenges in consistent perinatal death reviews. While NRHs and General Hospitals are performing relatively better in reviewing perinatal deaths, the lower review rates in HC II/Clinics and HC III facilities suggest that many deaths at these levels are going unreviewed. This raises concerns about the quality of care at lower levels and the ability to learn from and prevent future deaths. The high review rates for ENNDs at RRHs, despite data anomalies, suggest a focus on neonatal care, but also



point to potential issues in accurate data reporting.

Efforts should be made to strengthen perinatal death review processes at lower-level facilities, such as HC II/Clinics and HC III, to ensure that all deaths are reviewed, and lessons are drawn to improve care. The high review rates for fresh stillbirths and early neonatal deaths at higher-level facilities,

such as General Hospitals and NRHs, indicate that these facilities are more focused on understanding and addressing these deaths. However, improving the review processes across all levels, ensuring accurate data reporting, and identifying systemic issues are crucial to preventing perinatal deaths. Training and capacity-building for health workers at lower-level facilities in conducting death reviews could help close these gaps.

3.3.5 Characteristics of the perinatal deaths reviewed

Birth weight

Table 18: Perinatal Deaths Reviewed by Birth Weight [n=15019]

Type of perinatal death	Fresh Still Birth	Macerated still Birth	Neonatal Death	Unclassified	Total
<1000g	2%	4%	4%	2%	3%
1000-1499g	6%	11%	18%	10%	12%
1500-2499g	18%	31%	26%	19%	25%
2500-3499g	50%	38%	38%	30%	42%
≥3500	19%	12%	10%	9%	13%
Missing Age	5%	5%	5%	31%	5%
Total (N)	4577	4542	5704	196	15019

The table categorizes perinatal deaths into fresh stillbirths, macerated stillbirths, and neonatal deaths by birth weight. A total of 15,019 perinatal deaths were reviewed. The largest proportion of perinatal deaths occurred in the 2500-3499g weight category, accounting for 42% of total deaths, with 50% of fresh stillbirths, 38% of macerated stillbirths, and 38% of neonatal deaths in this weight group. The second-largest group is the 1500-2499g category, contributing 25% of deaths. Deaths among neonates with birth weights below 1000g represent 3% of the total reviewed deaths, and 13% of deaths occurred in the ≥3500g group. There is a significant amount of missing data for birth weight (5%).

The fact that the majority of perinatal deaths occurred among infants in the 2500-3499g and 1500-2499g weight categories is concerning, as these are often considered birth weights that should have better survival outcomes under normal conditions. The high proportion of fresh stillbirths in the 2500-3499g group suggests that many of these deaths are preventable, possibly due to delays or inadequate care during labour and delivery. The 13% of deaths occurring in neonates with birth weights above 3500g, who are generally expected to be at lower risk, indicates potential gaps in perinatal and neonatal care. Additionally, the 5% of deaths with missing birth weight data highlights a

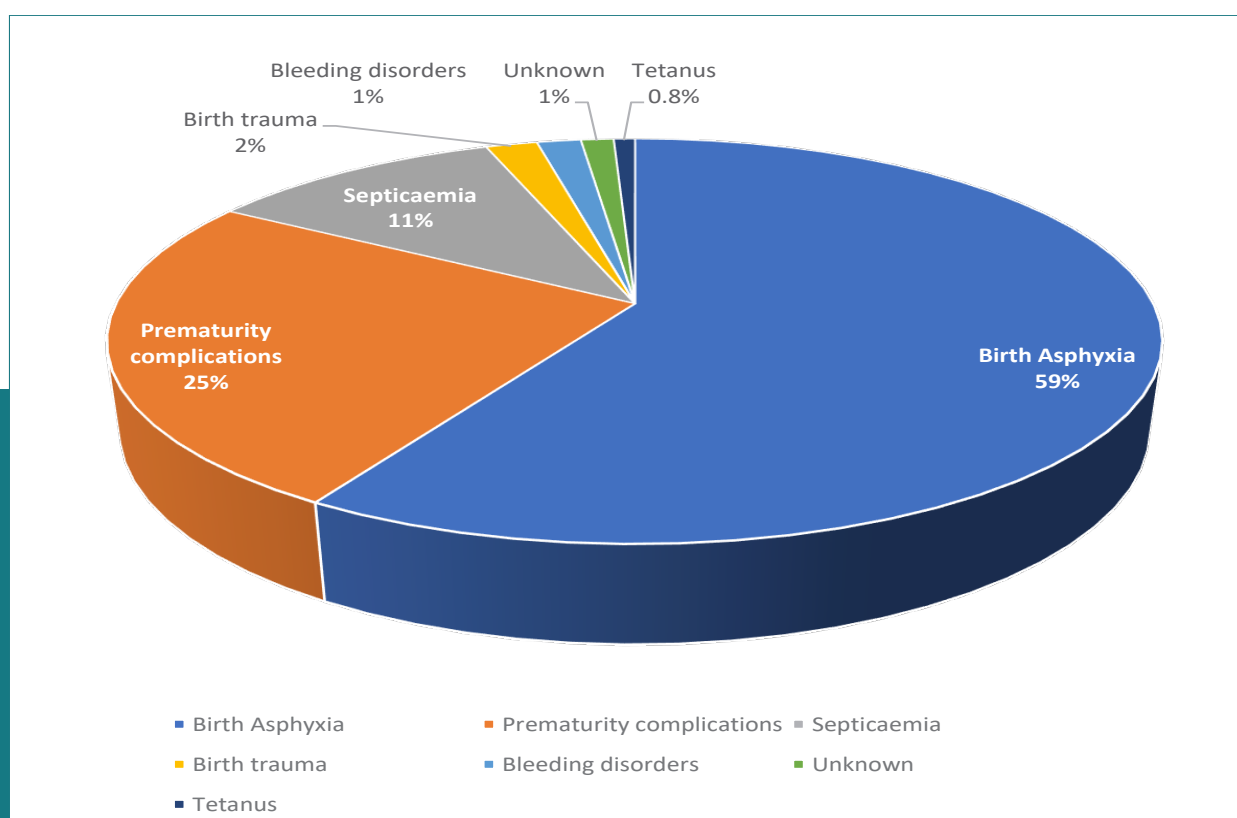
weakness in record-keeping, which may affect the accuracy of analyses and interventions.

To reduce preventable perinatal deaths, particularly in the 2500–3499g weight group, it is critical to improve the quality of care during labour and delivery, including better monitoring, timely intervention, and skilled management of complications. Focused interventions targeting newborns in the 1500–2499g weight group are also necessary,

such as enhancing neonatal care services for moderately low birth weight infants, who may require additional support. Addressing the high mortality in larger infants ($\geq 3500\text{g}$) could involve reviewing labour management practices and potential complications like shoulder dystocia or other birth trauma. Finally, improving data collection on birth weight is essential for accurately tracking outcomes and designing effective interventions.

3.3.5 Causes of perinatal deaths

Figure 18: Causes of death among the Reviewed Early Neonatal Deaths during FY2023/2024 (n=4098)



The pie chart illustrates the causes of death for 4,098 reviewed early neonatal deaths during FY2023/2024. The leading cause of death is birth asphyxia, which accounts for 59% of the total early neonatal deaths. The second largest cause is prematurity complications, contributing 25%. Septicemia accounts for 11%

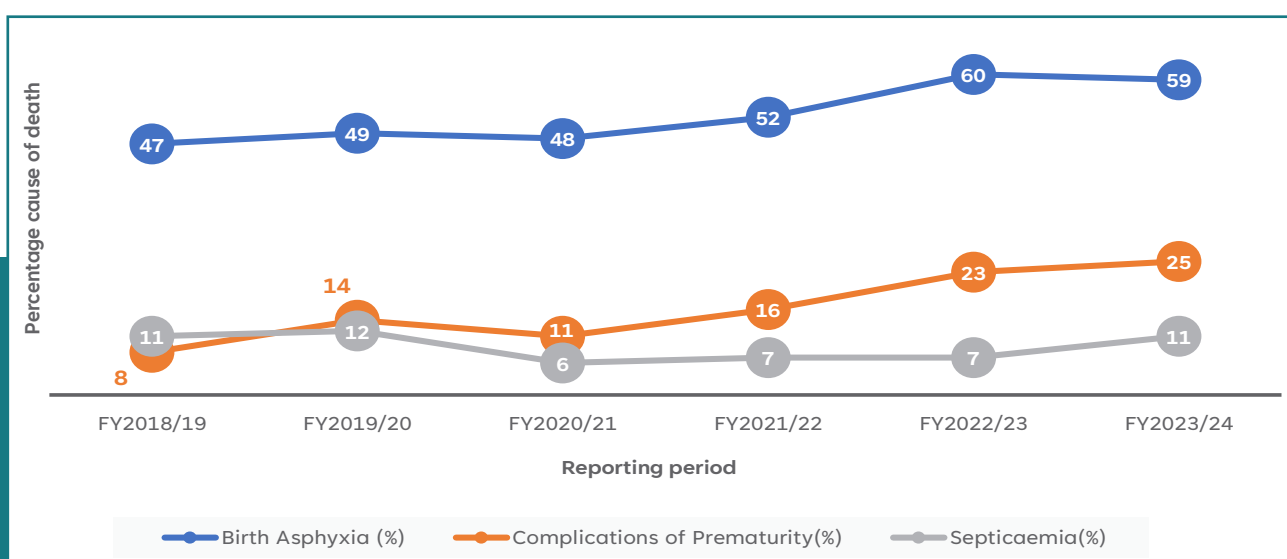
of the deaths, while other causes, including birth trauma (2%), bleeding disorders (1%), and tetanus (0.8%), make up smaller proportions. A small percentage (1%) of the deaths fall under the “unknown” category, indicating gaps in the documentation or cause identification.

The dominance of birth asphyxia as the leading cause of early neonatal deaths highlights critical gaps in intrapartum care, particularly related to delayed or inadequate neonatal resuscitation and poor management of birth complications, prolonged incision to decision time for most of the caesarean section deliveries. Prematurity complications, which account for 25% of deaths, indicate the challenges of managing preterm births and the associated respiratory and hypothermia. Septicaemia, responsible for 11% of deaths, points to gaps in infection prevention and control in neonatal care settings. Additionally, the low numbers may be explained by the fact that most units lack the facilities to make the diagnosis for neonatal sepsis. The presence of preventable conditions like birth trauma and tetanus, albeit in smaller proportions, raises concerns about the quality of delivery and postnatal care. The “unknown” category, while small, suggests issues with diagnosis and record-keeping.

To reduce early neonatal deaths, a priority should be placed on improving the management of birth asphyxia. This could involve expanding neonatal resuscitation training for healthcare workers, ensuring

the availability of resuscitation equipment, and monitoring adherence to labour management protocols. Establishment of designated neonatal resuscitation teams and also interventions to stabilize the newborn in the delivery room is key to reduce asphyxia related deaths. Establishment of the national program for neonatal resuscitation and scaling up regionally and having quality improvement collaboratives to improve neonatal resuscitation. Interventions to address prematurity complications should focus on improving infrastructure and skill to care for preterm infants, all antenatal steroids, providing appropriate respiratory support such as CPAP and Caffeine scaled up nationally, and enhancing kangaroo mother care for preterm infants. Infection prevention measures need to be reinforced, in all neonatal intensive care units such as hand washing, appropriate reprocessing of resuscitation equipment and breathing circuits, and have avoiding overcrowding, to reduce deaths from septicaemia. Improving documentation and diagnostic capacity abilities for neonatal sepsis will help in better understanding and addressing the causes of neonatal deaths, ensuring that all deaths are classified correctly, and gaps are identified.

Figure 19: Trends in the leading causes of Neonatal deaths over the past 6 years (FY2018/19- FY2023/24)

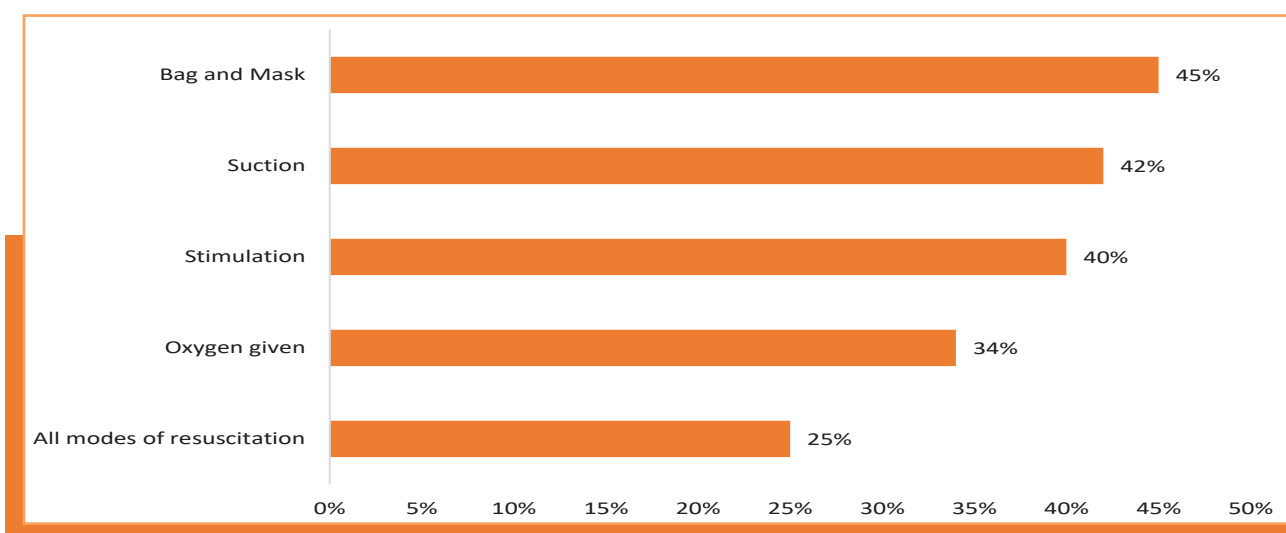


The chart shows the trends in early neonatal deaths (ENNDs) per 1,000 live births over the past six financial years and the contribution of the three leading causes of neonatal deaths: birth asphyxia, complications of prematurity, and septicaemia. Early neonatal death rates have decreased from 6.2 per 1,000 live births in FY2019/20 to 4.6 in FY2023/24. Birth asphyxia remains the leading cause of neonatal deaths, accounting for over 50% of deaths consistently, though its percentage has remained stable in recent years. Complications of prematurity have been rising steadily, from around 15% in FY2018/19 to over 30% in FY2023/24. Septicaemia has remained relatively low, accounting for less than 10% of neonatal deaths, but shows a slight increase in recent years.

The declining rate of early neonatal deaths per 1,000 live births is an encouraging sign, indicating improvements in neonatal survival overall. However, birth asphyxia continues to be the dominant cause of neonatal deaths, reflecting persistent challenges in intrapartum care and neonatal resuscitation. The rising trend of neonatal deaths due to prematurity complications suggests that preterm birth management and neonatal care for preterm infants need strengthening. The low, contribution of septicaemia points to lack diagnostic capacity within the neonatal units in Uganda.

To further reduce neonatal deaths, priority should be given to improving the management of birth asphyxia. This includes training health workers in neonatal resuscitation, improving delivery monitoring, and ensuring that appropriate equipment is available in delivery rooms. The increasing trend in deaths due to prematurity complications requires investments in neonatal intensive care units (NICUs), particularly for managing respiratory distress and other common preterm complications. Efforts should also focus on preventing preterm births through better antenatal care, including nutritional support and infection prevention. While septicaemia contributes to a smaller portion of neonatal deaths, continued attention to infection control practices in neonatal care units is essential to prevent further increases in deaths due to infections.

Figure 20: Resuscitation of asphyxiated babies by mode FY2023/2024 (n=3398)





The figure illustrates the different modes of resuscitation provided to 3,398 asphyxiated babies during FY2023/2024. The most common method used was bag and mask, which was administered to 45% of the babies. Suction was used for 42%, while 40% of babies were resuscitated through stimulation. Oxygen was given to 34% of the babies, and only 25% of babies received all modes of resuscitation.

The high use of bag and mask, a standard method of neonatal resuscitation, indicates that many healthcare providers are equipped with the basic skills and tools to resuscitate asphyxiated newborns. However, the fact that only 25% of babies received all modes of resuscitation suggests gaps in the comprehensive management of severe birth asphyxia cases. The lower use of oxygen, compared to bag and mask, indicates potential limitations in access to oxygen or the equipment required to administer it. Given that birth asphyxia is the leading cause

of neonatal deaths, these resuscitation gaps may contribute to preventable mortality and morbidity.

Efforts should focus on ensuring that all healthcare facilities have access to the necessary resuscitation equipment, including oxygen and suction devices, as well as proper training for healthcare workers on their use. Standardized neonatal resuscitation protocols should be implemented to ensure that all modes of resuscitation are used when appropriate, especially in cases of severe birth asphyxia. Regular training and drills on neonatal resuscitation should be conducted, with a focus on the correct use of bag and mask, suction, stimulation, and oxygen to improve outcomes for asphyxiated newborns. Additionally, facilities should ensure adequate documentation and evaluation of resuscitation outcomes to continually refine resuscitation practices.

Table 20: Shows asphyxia and newborn resuscitation rates per region.

REGIONS	No. of Live births in Unit	No. of Newborn deaths (0-7 days)	Early Newborn Deaths/1000 Live Births	Number of Babies with Birth Asphyxia	No. of Babies successfully Resuscitated	Birth Asphyxia rate	Newborn Resuscitation Rate
Acholi	65860	492	7.5	1838	1603	2.8	87.2
Ankole	120396	392	3.3	3267	3167	2.7	96.9
Bugisu	92778	113	1.2	3526	2626	3.8	74.5
Bukedi	91053	219	2.4	2307	2470	2.5	107.1
Bunyoro	86473	510	5.9	3110	3551	3.6	114.2
Busoga	129446	628	4.9	4896	4616	3.8	94.3
Kampala	85674	1561	18.2	3140	3331	3.7	106.1
Karamoja	40210	182	4.5	1367	1297	3.4	94.9
Kigezi	54942	351	6.4	1151	1043	2.1	90.6
Lango	85794	268	3.1	2889	2826	3.4	97.8
North Central	150664	479	3.2	4394	4482	2.9	102.0
South Central	143992	579	4.0	4644	4825	3.2	103.9
Teso	79977	266	3.3	2686	3125	3.4	116.3
Tooro	117648	279	2.4	3610	4475	3.1	124.0
West Nile	119303	465	3.9	4176	4160	3.5	99.6
National	1464210	6784	4.6	47001	47597	3.2	101.3

	Early Newborn Deaths/1000 Live births	Birth Asphyxia Rate	Newborn Resuscitation Rate
	≤5	≤3%	≥95%
	5-12/1000	3-4%	90-94%
	>12	≥ 4%	<90%



The table presents data on live births, newborn deaths, early newborn deaths per 1,000 live births, the number of babies with birth asphyxia, and the number of babies successfully resuscitated by region. Nationally, the birth asphyxia rate is 3.2%, and the newborn resuscitation rate is 101.3%, indicating that most regions successfully resuscitate more than 90% of asphyxiated babies. Some regions, like Bukedi (114.2%) and Tooro (124%), report resuscitation rates above 100%, possibly due to successful interventions on multiple newborns. However, regions such as Bugisu (74.5%) and Acholi (87.2%) show lower resuscitation rates, indicating challenges in managing birth asphyxia. Kampala has the highest early newborn death rate at 18.2 per 1,000 live births, while regions like Tooro (2.4) and South Central (4.0) show much lower rates.

The national birth asphyxia rate of 3.2% falls within the acceptable range, though there are regional disparities. High early newborn death rates, particularly in Kampala, point to significant challenges in managing neonatal complications. The lower resuscitation

rates in regions such as Bugisu and Acholi highlight possible gaps in neonatal care infrastructure, training, or access to essential resuscitation equipment. Conversely, regions with resuscitation rates exceeding 100% may indicate high success in managing asphyxia, though it could also point to inconsistencies in reporting or counting multiple resuscitations.

Efforts should focus on improving newborn resuscitation rates in regions with lower success rates, such as Bugisu and Acholi. This could involve providing additional training for healthcare providers on neonatal resuscitation techniques, ensuring the availability of essential equipment like bag and mask devices, and improving the overall quality of care for asphyxiated newborns. In regions with high early newborn death rates, such as Kampala, a deeper investigation into the underlying causes of death, such as birth asphyxia, prematurity, or infections, should be conducted to guide targeted interventions. Continuous monitoring of resuscitation outcomes and early newborn death rates will help identify areas where further improvements in neonatal care are needed.

Maternal characteristics of the perinatal deaths reviewed

(i) Age, parity, ANC contacts, and type of pregnancy

Table 21: Showing maternal characteristics associated with perinatal deaths reviewed

Type of perinatal death	Maternal age (%)				Mother's parity (%)				ANC contacts (%)						Type of pregnancy (%)	
	≤19	20-24	25-34	35+	1	2-4	5-7	7+	0	1-3	4	5-7	8	8+	Multiple	Singleton
Fresh Still Birth (n=4577)	16.8	26.1	37.3	13.1	23.1	43.8	19.4	5.2	0.1	33.3	18.2	19.7	1.2	0.3	6.9	89.5
Macerated Still Birth (n=4542)	14.8	27.7	36.1	14.2	24.9	43.7	18.1	4.7	0.1	35.0	17.0	18.3	1.1	0.4	5.7	90.0
Neonatal Death (n=5548)	18.6	25.9	29.5	9.3	30.1	38.3	11.8	3.0	0.1	25.2	14.1	15.4	1.3	0.5	10.7	80.6
Unclassified (n=352)	15.3	25.0	29.6	12.8	21.4	38.3	16.3	4.1	0.0	26.5	8.7	13.3	2.0	0.5	6.1	80.1
Total (n=15019)	16.9	26.5	33.9	12.0	26.3	41.6	16.1	4.2	0.1	30.7	16.2	17.6	1.2	0.4	7.9	86.2



The table presents the maternal characteristics—age, parity, ANC contacts, and type of pregnancy—associated with perinatal deaths, including fresh stillbirths, macerated stillbirths, neonatal deaths, and unclassified perinatal deaths.

The majority of perinatal deaths occur in mothers aged 25–34 years (33.9%), with 26.5% in those aged 20–24 years, and 16.9% in those aged 19 years or younger. Regarding parity, the largest proportion of perinatal deaths occurs in mothers with 2–4 previous children (41.6%), followed by those who are first-time mothers (26.3%). The majority of perinatal deaths are observed in mothers who had 1–3 ANC contacts (30.7%), followed by those who had no ANC contact (0.1%). Most deaths occur in singleton pregnancies (86.2%), with a smaller proportion in multiple pregnancies (7.9%).

The high proportion of perinatal deaths among mothers aged 25–34 and those with 2–4 previous children suggests that these groups may be at higher risk for complications leading to perinatal death. The data on ANC contacts show that many mothers who experienced perinatal deaths

had 1–3 ANC visits, suggesting that despite attending antenatal care, these visits may not have been sufficient to detect or manage complications. Additionally, the relatively high proportion of deaths in mothers with no ANC contacts highlights the critical importance of antenatal care in preventing perinatal mortality. Singleton pregnancies make up the vast majority of perinatal deaths, possibly reflecting the larger proportion of singleton births overall, but it also suggests that complications in singleton pregnancies should be given more attention.

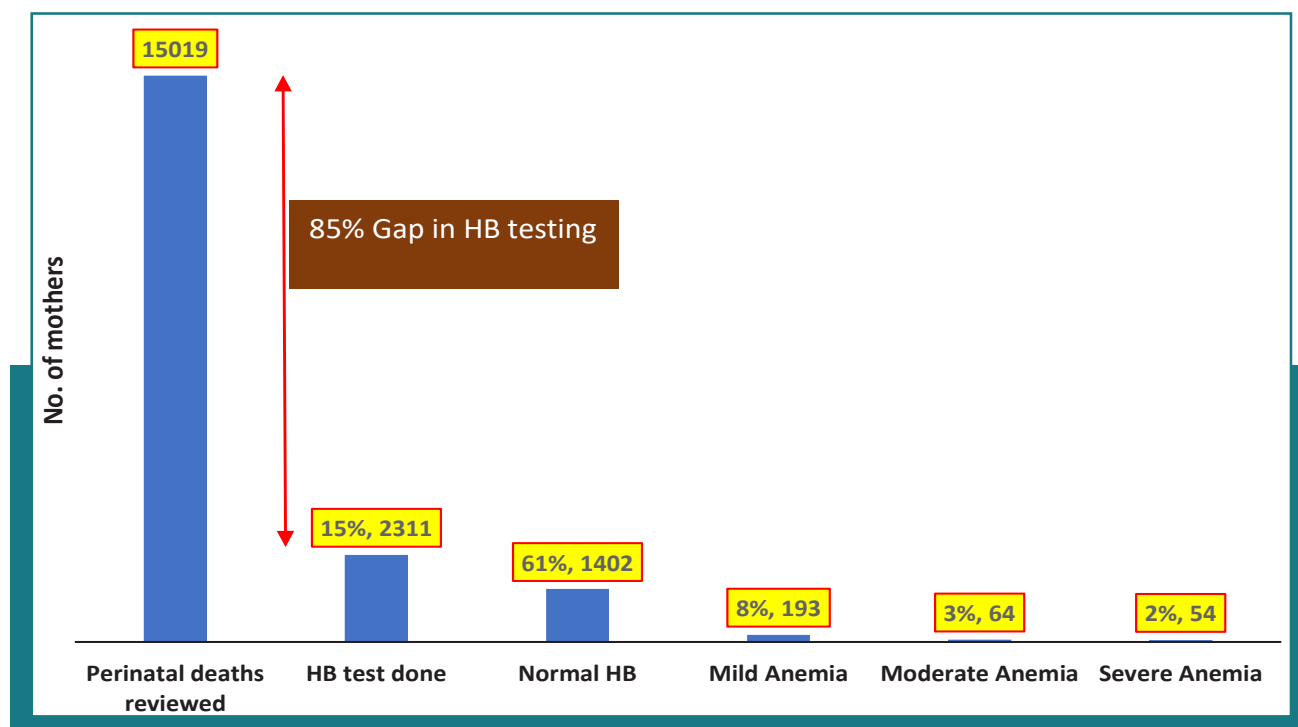
To address the high rates of perinatal deaths among mothers aged 25–34 and those with multiple pregnancies, targeted interventions should be implemented to identify and manage complications early during antenatal visits. Health systems need to focus on improving the quality and frequency of ANC visits, ensuring that high-risk pregnancies receive appropriate monitoring and care. Increasing access to and utilization of ANC, particularly for women with no ANC contacts, should be prioritized to reduce preventable perinatal deaths. Lastly, more attention should be given to managing singleton pregnancies, which contribute the highest proportion of deaths.



To address the high rates of perinatal deaths among mothers aged 25–34 and those with multiple pregnancies, targeted interventions should be implemented to identify and manage complications early during antenatal visits.

(ii) ANC interventions

Figure 21: Showing HB Testing and level of anaemia during ANC for mothers with reviewed perinatal deaths FY2023/2024 (n=15019)



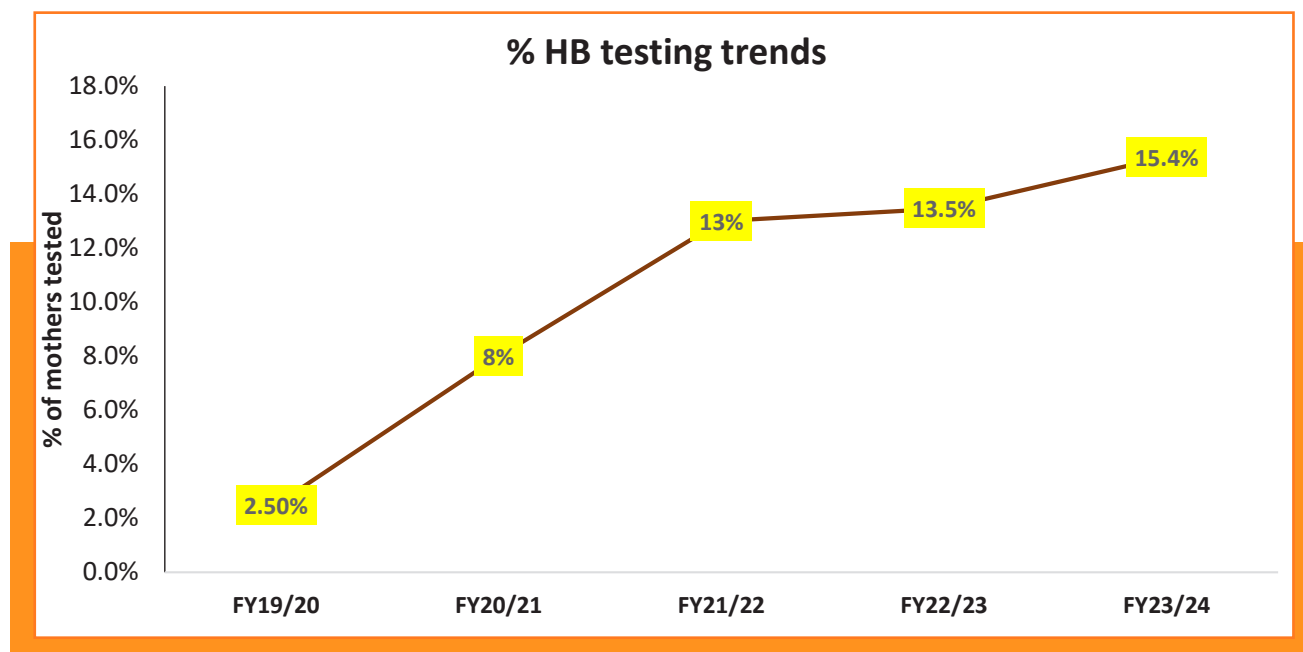
The figure highlights a significant gap in HB testing among mothers whose perinatal deaths were reviewed. Out of the 15,019 perinatal deaths reviewed, only 15% (2,311 mothers) had their HB levels tested, leaving an 85% gap in HB testing during antenatal care (ANC). Among the mothers who were tested, 61% (1,402 mothers) had normal HB levels, while 8% (193 mothers) were found to have mild anaemia. Moderate anaemia was diagnosed in 3% (64 mothers), and 2% (54 mothers) were diagnosed with severe anaemia.

The large 85% gap in HB testing reflects a missed opportunity to identify and manage maternal anaemia, a well-known risk factor for poor pregnancy outcomes, including perinatal deaths. This suggests that many mothers were not screened for anaemia during their ANC visits, potentially contributing to adverse pregnancy outcomes. While most of the mothers who were tested had normal HB

levels, the presence of mild, moderate, and severe anaemia in a significant portion of those tested emphasizes the need for better screening and treatment to improve maternal and perinatal outcomes.

To address the high gap in HB testing, it is crucial to strengthen routine screening for anaemia during ANC, ensuring that all pregnant women receive timely HB testing. Early identification of anaemia will allow for appropriate interventions, including nutritional support or medical treatment for women with moderate to severe anaemia. Expanding HB testing coverage should be a priority, particularly in regions with limited access to healthcare services. Additionally, raising awareness among healthcare providers and pregnant women about the importance of anaemia screening during pregnancy will help reduce perinatal deaths linked to untreated anaemia.

Figure 22: Percentage HB testing trends



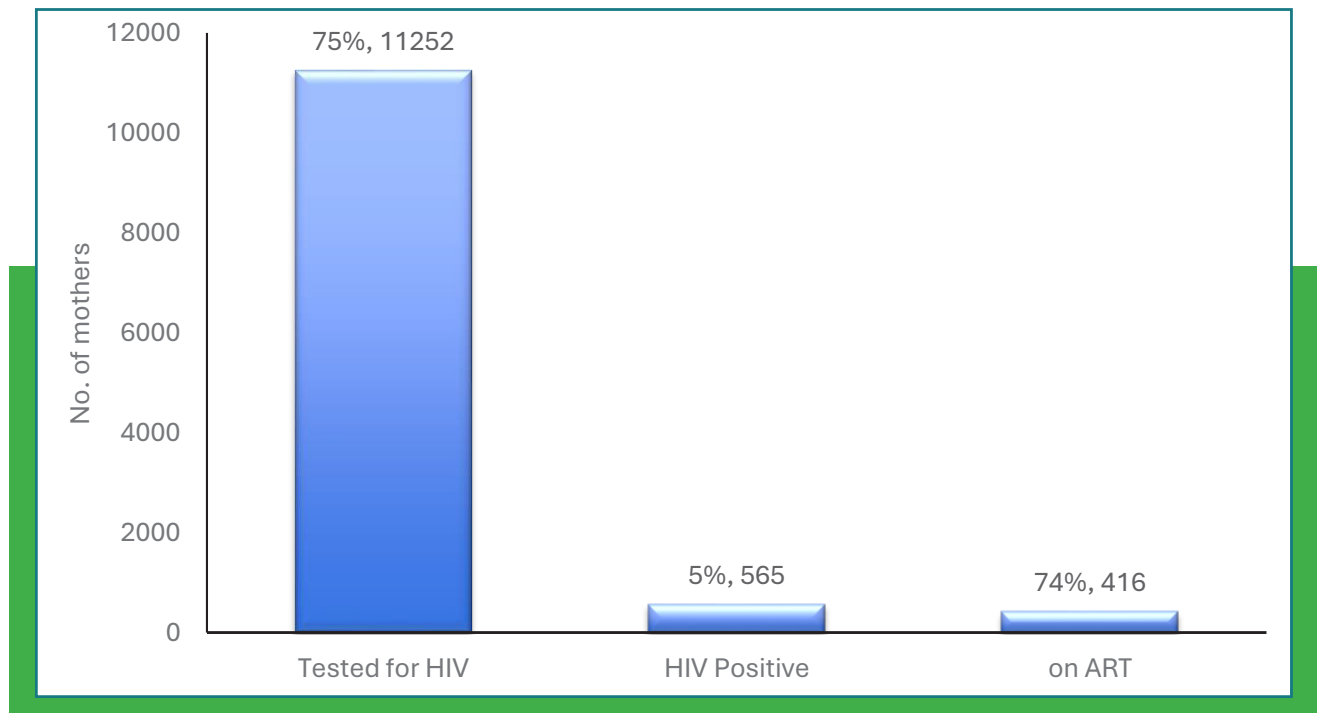
The figure shows the trends in HB testing percentages for mothers over the past five financial years. There has been a steady increase in the percentage of mothers tested for HB during antenatal care, starting at 2.5% in FY2019/20 and rising to 15.4% in FY2023/24. This indicates a progressive improvement in the coverage of HB testing for pregnant women over time, though the overall percentage remains low.

While the upward trend in HB testing is a positive development, the overall percentage of mothers tested remains relatively low, with only 15.4% of mothers receiving HB testing in FY2023/24. Given the critical role of anaemia screening in identifying maternal health risks, the current testing rate is insufficient to adequately detect and manage anaemia-related complications during pregnancy. The

gap in HB testing means many women at risk of anaemia are not being identified, which could contribute to preventable maternal and perinatal deaths.

To continue improving HB testing coverage, it is essential to integrate HB testing as a routine part of antenatal care, ensuring that all pregnant women receive the necessary screening. This will require strengthening health systems to increase the availability of testing supplies, training healthcare workers on the importance of routine HB screening and raising awareness among pregnant women about the need for anaemia testing. Achieving higher coverage of HB testing will allow for earlier detection of anaemia, timely interventions, and ultimately better maternal and newborn outcomes.

Figure 23: HIV cascade FY2023/2024 (n=15019)



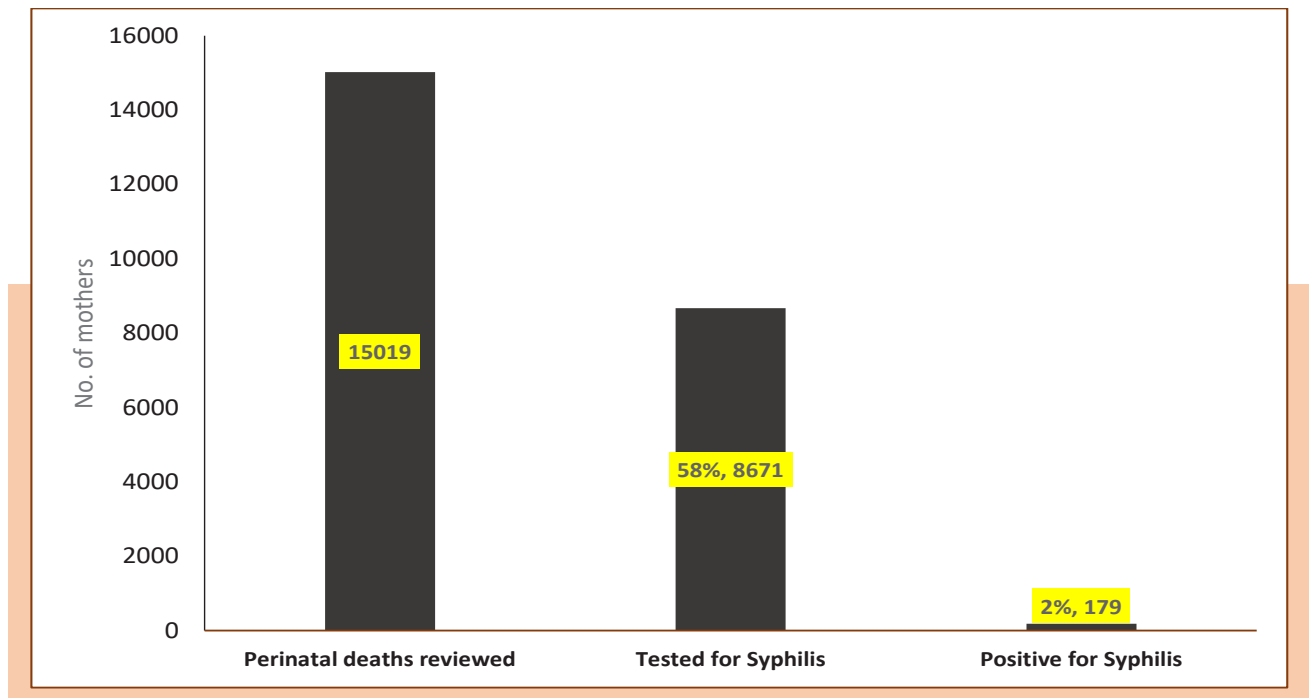
The figure illustrates the HIV testing and treatment cascade for 15,019 mothers in FY2023/2024. Of these mothers, 75% (11,252) were tested for HIV. Among those tested, 5% (565 mothers) were found to be HIV-positive. Of the HIV-positive mothers, 74% (416 mothers) were enrolled in antiretroviral therapy (ART).

The 75% HIV testing rate is a positive indicator of progress in maternal HIV screening during antenatal care, though there is still a 25% gap in testing. The 5% HIV positivity rate aligns with known HIV prevalence rates in many regions of Uganda. However, the fact that only 74% of HIV-positive mothers were on ART suggests that some mothers are not receiving the essential treatment needed to prevent mother-to-child transmission (MTCT) of HIV.

This gap in ART coverage leaves a significant number of mothers and their babies at risk of poor health outcomes and potential transmission of HIV during childbirth and breastfeeding.

To close the gaps in both HIV testing and ART coverage, efforts should focus on ensuring that all pregnant women are tested for HIV during ANC visits. Strengthening the follow-up mechanisms for HIV-positive mothers to ensure they are enrolled and retained in ART programs is also crucial. Providing counselling, addressing barriers to treatment access, and ensuring the availability of ART supplies can help increase ART coverage to 100% for HIV-positive mothers. By achieving this, the risk of MTCT can be minimized, improving maternal and newborn health outcomes.

Figure 24: Syphilis testing and result FY2023/2024 (n=15019)



The figure presents data on syphilis testing for 15,019 mothers whose perinatal deaths were reviewed. Of these, 58% (8,671 mothers) were tested for syphilis. Among those tested, 2% (179 mothers) tested positive for syphilis.

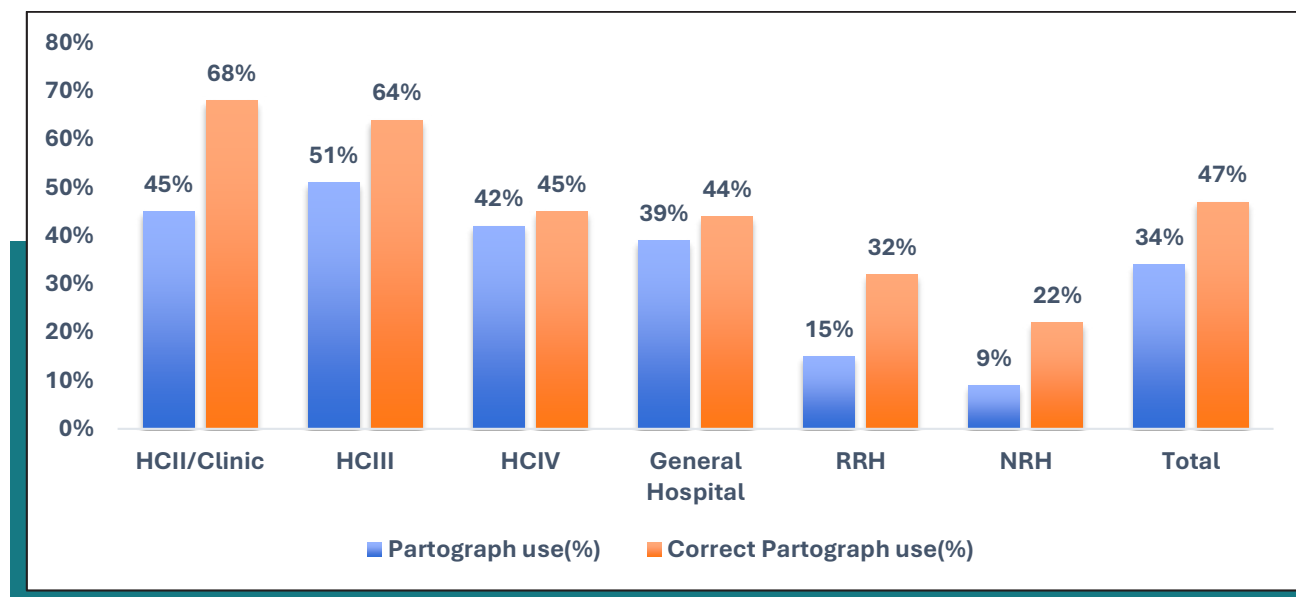
The fact that only 58% of mothers were tested for syphilis indicates a significant gap in routine antenatal screening. Given that syphilis can lead to adverse pregnancy outcomes such as stillbirths, neonatal deaths, and congenital infections, this low testing coverage may contribute to undetected infections, which could have been treated to improve pregnancy outcomes. While only 2% of those tested were positive for syphilis, it is critical to identify and treat these cases

early to prevent transmission to the fetus and reduce perinatal mortality.

To address the gap in syphilis testing, it is essential to improve the coverage of syphilis screening during antenatal care. This can be achieved by ensuring that testing kits are readily available at health facilities, training healthcare workers on the importance of routine syphilis testing and raising awareness among pregnant women about the need for syphilis screening. Strengthening the integration of syphilis testing into routine ANC will help identify and treat infections early, reducing the risk of adverse outcomes such as stillbirths and neonatal deaths.

(iii) Partograph use among mothers of the reviewed perinatal deaths

Figure 25: Partograph use among mothers of the reviewed perinatal deaths by health facility level FY2023/24 (n=15018)



The figure shows that nationally, 34% of mothers had partographs used during labour (reduction from 43%), but only 47% (reduction from 68%) of those partographs were used correctly. Partograph use and correct partograph use rates vary significantly across facility levels. At the HC II/Clinic level, 45% of mothers had partographs used, and 51% of those were used correctly. In HC III facilities, partograph use was the highest, with 68% of mothers receiving partograph monitoring and 64% of those used correctly. HC IV facilities reported partograph use of 42%, with 45% used correctly. General hospitals had partograph use at 39%, with 44% used correctly. Regional referral hospitals (RRH) showed the lowest partograph use at 15%, with 32% used correctly. National referral hospitals (NRH) reported 22% partograph use, with only 9% used correctly.

The data shows considerable gaps in partograph use and correct usage across all facility levels, reflecting missed opportunities for monitoring labour progression and

ensuring timely interventions. The partograph is an essential tool for detecting complications during labour, and these low usage and correct-use rates highlight the potential for adverse outcomes. Particularly concerning is the low partograph use at higher-level facilities, such as RRH and NRH, where the most complicated cases are handled. The discrepancy between partograph use and correct use suggests that while the tool is sometimes employed, it is not always being utilized effectively to monitor maternal and fetal well-being, contributing to missed opportunities for life-saving interventions.

Efforts should be made to increase both the usage and correct application of partographs across all levels of care. Training healthcare providers on the importance and correct use of the partograph is essential, particularly in higher-level facilities where the most at-risk pregnancies are managed. Implementing monitoring and accountability mechanisms to ensure partographs are completed and used properly during labour will be key to



reducing perinatal deaths and complications. Additionally, interventions that focus on improving correct use rates in facilities where

partographs are already being utilized could help enhance maternal and fetal outcomes during labour.

(iv) Complications during Pregnancy

Table 21: Showing complications experienced during pregnancy FY202223/2024

Perinatal Death Type	Rates of Maternal Complications during Pregnancy									
	APH (%)	HTN in pregnancy (%)	PROM (%)	DM in pregnancy (%)	Anaemia in pregnancy (%)	UTI in pregnancy (%)	Malaria in pregnancy (%)	Trauma-accidental (%)	GBV in pregnancy (%)	Drugs/Medicines (%)
Fresh Still Birth (1894)	20.0	13.5	7.4	2.4	6.5	21.5	22.6	2.0	1.3	2.7
Macerated Still Birth (2284)	7.8	14.0	4.9	1.7	6.3	25.0	33.6	2.2	1.4	3.1
Neonatal Death (1745)	11.2	11.3	10.9	3.1	4.2	25.8	28.0	1.2	1.0	3.3
Total (5923)	12.7	13.0	7.5	2.3	5.8	24.2	28.4	1.8	1.3	3.1

The table presents data on various complications experienced during pregnancy for mothers who had perinatal deaths, categorized by fresh stillbirths, macerated stillbirths, and neonatal deaths. Among all 5,923 cases reviewed, the most common complication was malaria in pregnancy, affecting 28.4% of mothers. This was followed by urinary tract infections (UTI) at 24.2%, hypertensive disorders in pregnancy (HTN) at 13%, and antepartum haemorrhage (APH) at 12.7%. Anaemia was recorded in 5.8% of pregnancies, premature rupture of membranes (PROM) in 7.5%, and diabetes mellitus (DM) in 2.3%. Other complications such as accidental trauma (1.8%), gender-based violence (GBV) during pregnancy (1.3%), and drug/medicine use (3.1%) were less common.

Notably, the highest rates of malaria in pregnancy were associated with macerated stillbirths at 33.6%, and UTIs were most common among cases of neonatal death, affecting 25.8%. Hypertensive disorders, particularly HTN in pregnancy, were slightly

higher in cases of fresh and macerated stillbirths, with rates around 13-14%.

The high prevalence of malaria and UTIs during pregnancy indicates significant risks that may contribute to adverse outcomes, such as stillbirths and neonatal deaths. Malaria in pregnancy is known to cause complications like low birth weight and preterm labour, contributing to neonatal deaths, particularly in resource-limited settings. UTIs, if left untreated, can also lead to preterm birth and other complications, potentially explaining their association with neonatal deaths. The relatively high rate of hypertensive disorders, especially among mothers who experienced stillbirths, highlights the critical need for monitoring and managing blood pressure during pregnancy to prevent complications like preeclampsia. The data also suggest that some less frequent but important complications, such as accidental trauma and GBV during pregnancy, while lower in prevalence, still pose risks to maternal and perinatal outcomes.

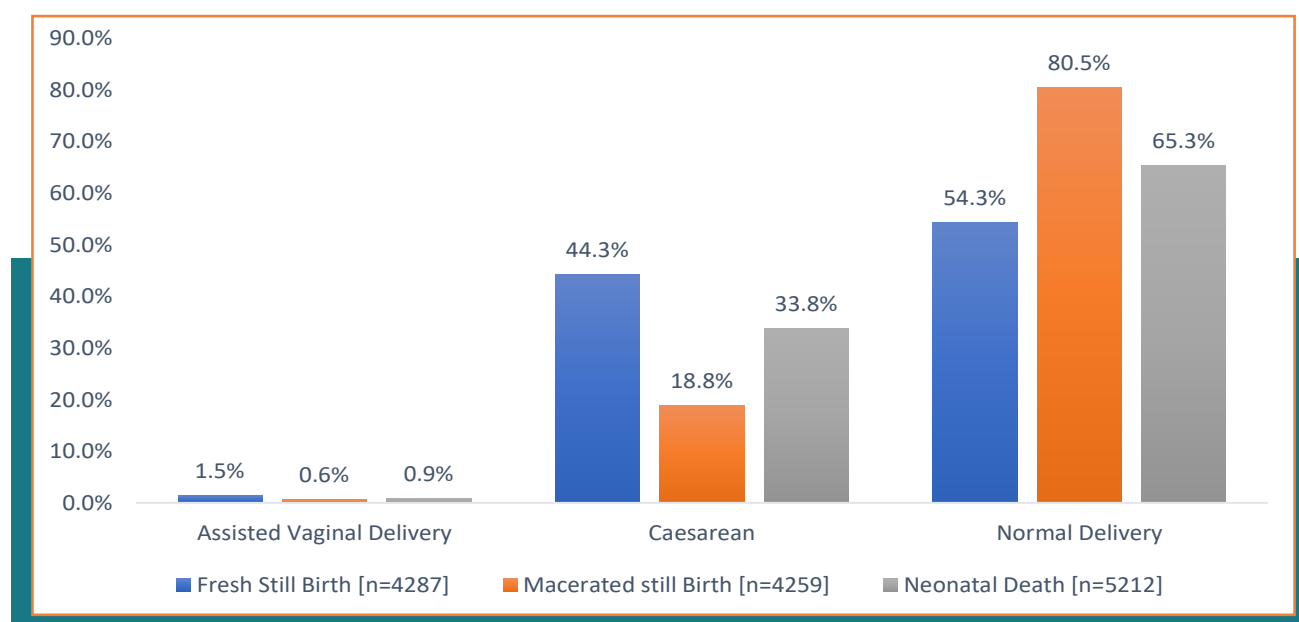


To reduce the complications leading to perinatal deaths, efforts should focus on improving malaria prevention and treatment during pregnancy, especially in high-burden areas. This could involve expanding the use of intermittent preventive treatment in pregnancy (IPTp) and ensuring access to insecticide-treated bed nets. UTI screening and treatment should also be prioritized, given the strong association with neonatal

deaths. Hypertensive disorders require closer monitoring, especially in facilities dealing with high-risk pregnancies, to manage preeclampsia and related conditions more effectively. Awareness campaigns and interventions addressing less common complications, such as GBV during pregnancy, should also be integrated into maternal health programs to ensure comprehensive care for all pregnant women.

Mode of delivery

Figure 26: Percentage of Perinatal death by Mode of Delivery



The figure presents data on perinatal deaths categorized by different modes of delivery. The modes of delivery include vaginal delivery, caesarean section (C-section), and assisted vaginal delivery. The largest proportion of perinatal deaths occurred in mothers who had vaginal deliveries, followed by caesarean sections. Assisted vaginal deliveries accounted for the smallest proportion of perinatal deaths.

The fact that the majority of perinatal deaths occurred in mothers who had vaginal deliveries

suggests that many of these deaths may be related to issues occurring during labour and delivery, such as delays in recognizing fetal distress or inadequate monitoring. The significant proportion of perinatal deaths following caesarean sections may indicate that these were high-risk pregnancies, where the decision to perform a C-section was made in response to complications. However, this also raises concerns about the quality of care during and after the procedure, as well as the timeliness of the intervention. The relatively low proportion of deaths following

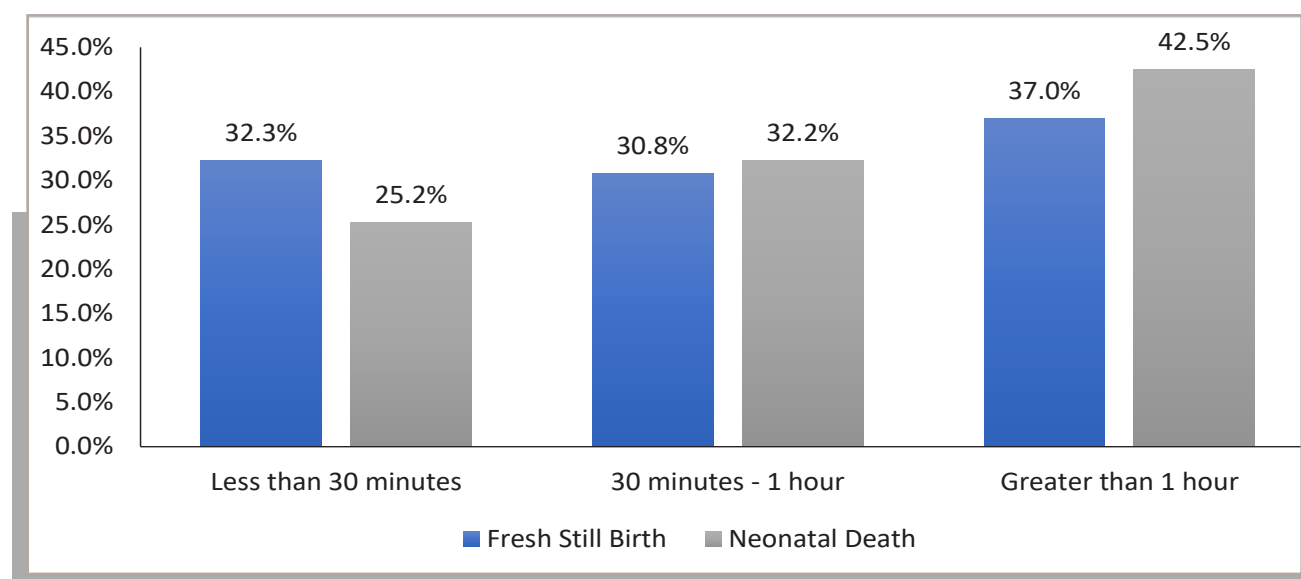
assisted vaginal deliveries suggests that this mode of delivery is less frequently associated with perinatal mortality, though this may also reflect the smaller number of such deliveries overall.

To address the high rates of perinatal deaths following vaginal deliveries, it is important to strengthen labour monitoring and timely intervention practices in cases of fetal distress or other complications. This includes ensuring that partographs are used consistently and

correctly and that healthcare providers are trained to recognize and respond to signs of labour complications early. For perinatal deaths following C-sections, a review of the timing and quality of the procedure is needed to ensure that the surgery is performed when necessary and that postoperative care is adequate to prevent adverse outcomes. Implementing these measures will help reduce preventable perinatal deaths across all modes of delivery.

(v) Decision to incision interval

Figure 27: Showing Decision to Incision Interval among perinatal deaths delivered through C/S FY2023/2024



The data highlights significant delays in the decision-to-incision interval among mothers who underwent caesarean sections and experienced perinatal deaths. A substantial proportion of cases, both fresh stillbirths (FSB) and early neonatal deaths (ENND) were delivered over 60 minutes after the decision to operate, with 37% of FSBs and 42.5% of ENNDs occurring after more than one hour. In contrast, a smaller portion of cases (32.3% of FSBs and 25.2% of ENNDs) were delivered within 30 minutes.

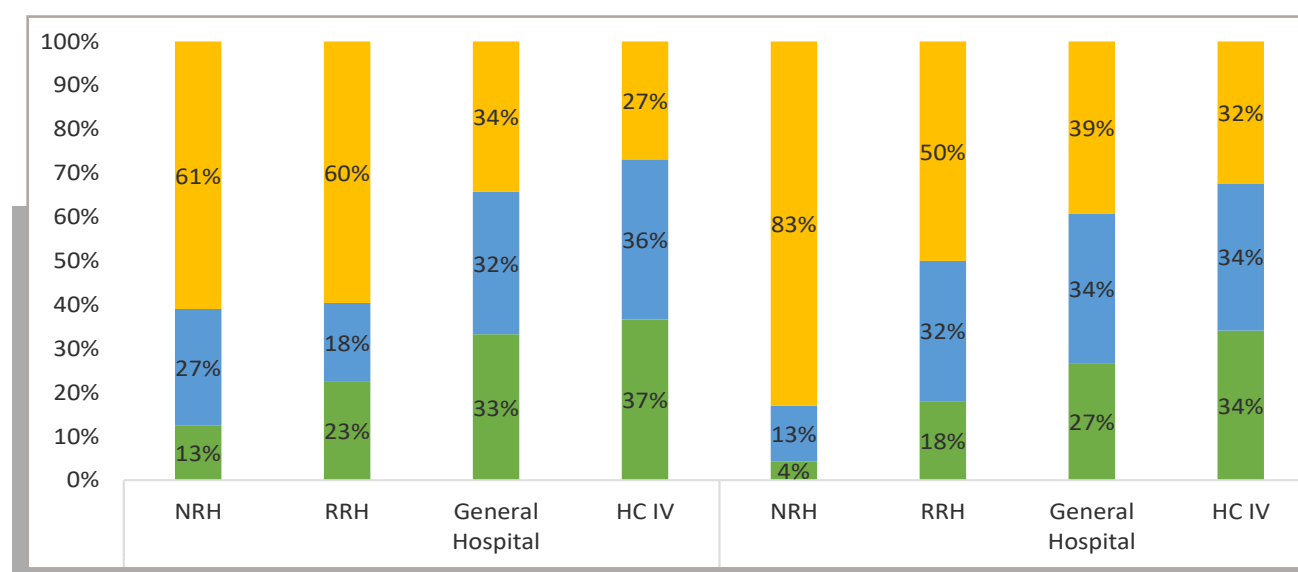
These figures underscore a critical issue: delays in performing emergency caesarean sections. While a timely intervention could mitigate adverse outcomes such as asphyxia, the data suggests that the majority of surgeries were delayed beyond the recommended 30 – 60 minute window. This inefficiency is a key contributor to preventable perinatal mortality.

The reflection should focus on addressing these delays. Reducing the decision-to-incision interval is essential to improving perinatal

outcomes. Key strategies include streamlining the readiness of surgical teams, ensuring operating theatres are always prepared, and enhancing coordination and communication among healthcare providers. By minimizing

delays in emergency C-sections, healthcare facilities can significantly improve survival rates and reduce the burden of perinatal deaths.

Figure 28: Decision to incision interval by health facility level



The data highlights significant delays in decision-to-incision intervals among perinatal deaths across various health facility levels. At National Referral Hospitals (NRHs) and Regional Referral Hospitals (RRHs), a large proportion of fresh stillbirths (61% at NRHs and 60% at RRHs) and neonatal deaths (83% at NRHs and 50% at RRHs) occurred when the decision-to-incision interval exceeded one hour. This delay is critical as timely caesarean intervention is essential to manage fetal distress and other obstetric emergencies.

While General Hospitals and Health Center IVs (HC IVs) show relatively lower delays, with 34% and 27% of fresh stillbirths occurring after one hour, the presence of delays at all facility levels indicates a systemic issue. The quicker response times at HC IVs may reflect

lower patient volumes and less complex cases, but the overall trend of delays across facilities highlights the need for improvement in emergency surgical readiness.

The high percentage of delays, particularly in NRHs and RRHs where more complex cases are referred, underscores the need to streamline processes. Reducing decision-to-incision intervals can be achieved by improving the preparedness of surgical teams, ensuring operating theatres are fully functional and well equipped, and optimizing decision-making protocols to expedite care. Enhancing communication and coordination within healthcare teams is essential to reduce these delays and ultimately improve perinatal outcomes.



Table 22: CEMONC facilities conducting C-section deliveries by Health facility level

Facility Level	Total Deliveries	C-Section Deliveries	Total CEMONC Health Facilities	CEMONC conducting C-section deliveries	C Section Rate	Proportion of CEMONC facilities conducting C-section deliveries
NRH	29,259	14,464	3	3	49.4%	100.0%
RRH	89,065	32,760	16	16	36.8%	100.0%
General Hospital	249,054	86,273	186	152	34.6%	81.7%
HC IV	311,180	62,735	266	227	20.2%	85.3%
Total	678,558	196,232	471	398	28.9%	84.5%

Table 23: CEMONC facilities conducting C-section deliveries by Region

Region	Total Deliveries	C-Section Deliveries	Total CEMONC Health Facilities	CEMONC conducting C-Section deliveries	C-Section Rate	Proportion of CEMONC facilities conducting C-Section deliveries
Bugisu	31,692	7,363	20	20	23.2%	100.0%
Busoga	52,600	11,183	31	31	21.3%	100.0%
Lango	29,982	6,636	17	16	22.1%	94.1%
West Nile	48,047	15,293	30	28	31.8%	93.3%
Ankole	60,814	17,132	41	37	28.2%	90.2%
Karamoja	8,982	1,775	10	9	19.8%	90.0%
Tooro	56,650	17,740	37	33	31.3%	89.2%
North Central	78,941	25,281	55	49	32.0%	89.1%
Bunyoro	42,086	11,636	25	22	27.6%	88.0%
Bukedi	32,060	6,307	19	16	19.7%	84.2%
Kigezi	32,188	9,684	30	25	30.1%	83.3%
Acholi	29,337	6,153	17	14	21.0%	82.4%
Teso	30,197	7,934	22	18	26.3%	81.8%
South Central	75,634	24,605	67	51	32.5%	76.1%
Kampala	69,348	27,510	50	29	39.7%	58.0%
Total	678,558	196,232	471	398	28.9%	84.5%

The tables provide data on C-section deliveries across various facility levels and regions. National Referral Hospitals (NRHs) and Regional Referral Hospitals (RRHs) exhibit the highest C-section rates—49.4% and 36.8%, respectively—while General Hospitals and Health Center IVs (HC IVs) handle a

larger volume of total deliveries but have lower C-section rates, particularly at HC IVs (20.2%). At the regional level, C-section rates vary significantly, with Kampala at the top (39.7%) and Bukedi and Karamoja at the lower end, with rates of 19.7% and 19.8%, respectively.



The variation in C-section rates across facility levels and regions reveals disparities in access to emergency obstetric care. NRHs and RRHs are fully equipped to handle complex deliveries, while General Hospitals and HC IVs, which manage a higher volume of deliveries, are underutilized for C-sections. This underutilization in lower-level facilities suggests gaps in surgical capacity, resource allocation, or readiness. Regional differences, particularly the low C-section rates in areas like Karamoja and Bukedi, highlight potential accessibility issues that may be contributing to poorer maternal and perinatal outcomes.

To address these gaps, efforts should focus on enhancing C-section service capacity at General Hospitals and HC IVs. This includes improving surgical readiness, expanding access to CEMONC services, and allocating resources where demand is highest. Additionally, targeted interventions should be implemented in regions with lower C-section rates, such as Karamoja and Bukedi, to improve access to life-saving emergency obstetric care. By addressing these disparities, maternal and perinatal outcomes can be significantly improved across the country.

(v) Referral status

Table 24: Referral status for perinatal deaths FY2023/2024

Type of death/delivery	Referral Status (%)		Referral from (%)			
	Yes	No	GH	Health Centre	VHT	TBA
Fresh Still Birth(n=3861)	25%	33%	15%	27%	13%	45%
Macerated still Birth(n=3809)	20%	34%	18%	21%	22%	7%
Neonatal Death(n=4975)	55%	33%	67%	53%	65%	48%
Total(n=12645)	27%	73%	16%	80%	1%	2%

The table provides data on the referral status for perinatal deaths, distinguishing between fresh stillbirths, macerated stillbirths, and neonatal deaths. It shows that 27% of perinatal deaths were referred from another facility, while 73% were not. Neonatal deaths had a higher referral rate (55%) compared to fresh stillbirths (25%) and macerated stillbirths (20%). The majority of referrals came from health centres (80%), with smaller contributions from general hospitals (16%) and very few from Village Health Teams (VHTs) and Traditional Birth Attendants (TBAs) (1% and 2%, respectively). Interestingly, 45% of fresh stillbirths were referred by TBAs, while VHTs accounted for 65% of neonatal death referrals.

The low referral rates for fresh and macerated stillbirths suggest that many complications at lower levels of care may not be adequately identified, or referrals are delayed. This highlights potential gaps in the early recognition of risks during pregnancy and labour, particularly at the community and health centre levels. The higher referral rate for neonatal deaths indicates that these cases are more likely to be recognized as emergencies requiring higher-level intervention. However, the significant proportion of fresh stillbirths referred by TBAs suggests a continued reliance on traditional birth practices, which may contribute to delayed access to essential medical care. The dominance of health



centres as the main source of referrals further underscores their critical role in managing complex cases, yet their ability to handle emergency situations may be limited.

To reduce perinatal deaths, improvements must be made in the referral system, especially for fresh and macerated stillbirths. This could include training healthcare providers and community health workers (including VHTs and TBAs) to identify complications early

and refer cases promptly. Strengthening communication and transportation systems between lower-level facilities and referral centres will ensure timely access to care. Additionally, improving the capacity of health centres to manage emergencies while waiting for higher-level interventions will be essential to addressing the high mortality rates. A more efficient and responsive referral system can greatly improve perinatal outcomes.

Avoidable/modifiable factors by the level of care

Table 25: Avoidable factors for perinatal deaths FY2023/2024

Number of avoidable factors grouped					Contribution of the delays		
	Delay 1	Delay 2	Delay 3	Total	Delay 1	Delay 2	Delay 3
Acholi	571	326	388	1230	46	27	32
Ankole	513	345	168	1173	44	29	14
Bugisu	352	273	157	811	43	34	19
Bukedi	426	393	139	692	62	57	20
Bunyoro	407	306	199	797	51	38	25
Busoga	1060	701	461	1928	55	36	24
Kampala	706	560	395	2032	35	28	19
Karamoja	262	200	125	461	57	43	27
Kigezi	343	217	205	839	41	26	24
Lango	447	274	250	1059	42	26	24
North Central	447	328	154	964	46	34	16
South Central	254	163	108	604	42	27	18
Teso	436	263	167	741	59	35	23
Tooro	284	192	104	579	49	33	18
West Nile	525	242	344	1109	47	22	31
Total	7033	4783	3364	15019	47	32	22

The table outlines the avoidable factors contributing to perinatal deaths, categorized by three types of delays: Delay 1 (delay in deciding to seek care), Delay 2 (delay in reaching a health facility), and Delay 3 (delay in receiving adequate care at the facility). Across all regions, 47% of avoidable factors

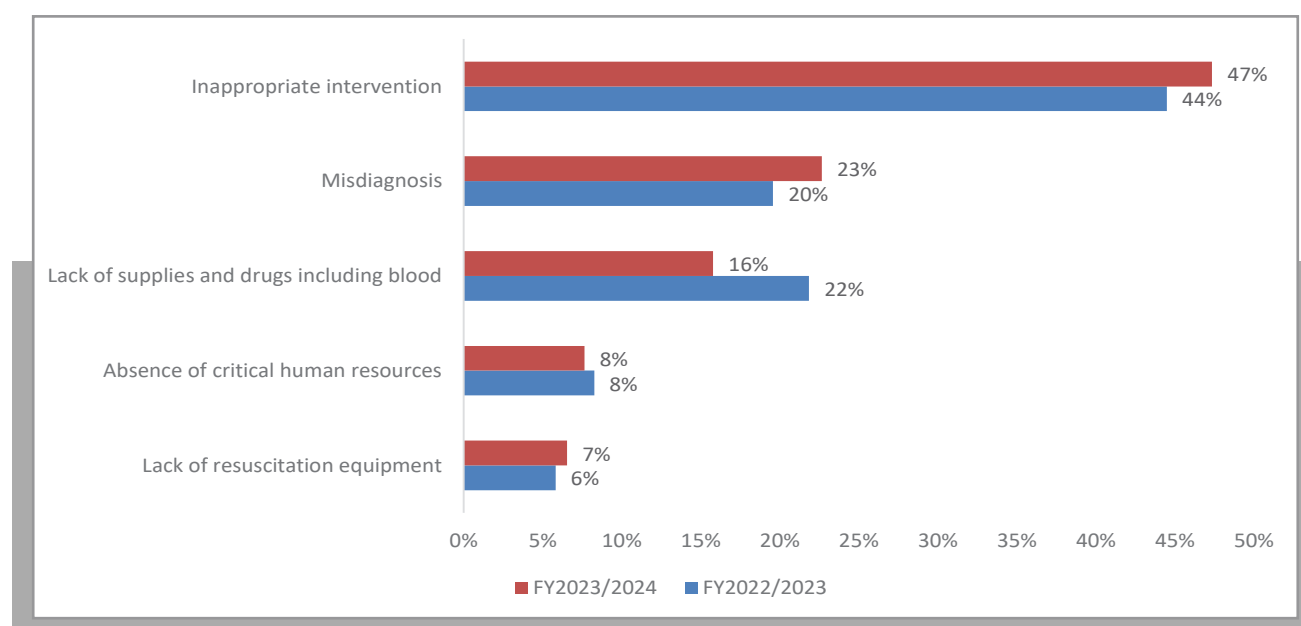
were linked to Delay 1, 32% to Delay 2, and 22% to Delay 3. Regions such as Kampala, Busoga, and Ankole had the highest total numbers of avoidable factors, while specific regions like Bukedi and Teso showed that over 60% of their avoidable factors were due to Delay 1. In contrast, regions like Busoga

and North Central saw higher contributions from Delay 2.

The high proportion of factors related to Delay 1 suggests that many perinatal deaths stem from delays in decision-making at the household or community level. This indicates a need for greater awareness of the importance of seeking timely care during pregnancy and labour. Delay 2, which accounts for nearly one-third of the avoidable factors, reflects significant challenges in transportation and access to healthcare services, particularly in rural and underserved areas. Although Delay 3 contributes less overall, it still plays a substantial role in certain regions, such as Kampala and Acholi, pointing to lapses in care quality once patients reach healthcare facilities. These could be attributed to shortages of skilled personnel, lack of timely interventions, or inadequate medical resources.

To reduce perinatal deaths, several steps need to be taken. First, addressing Delay 1 requires the expansion of community education and outreach initiatives to help families recognize complications and seek care promptly. Building stronger communication channels between families and healthcare providers can also improve early decision-making. Second, the issue of Delay 2 can be tackled by investing in transportation infrastructure and improving referral systems, ensuring that pregnant women can reach health facilities in time. Lastly, to reduce Delay 3, health facilities must be equipped with the necessary resources, such as trained personnel and medical supplies, to manage emergencies effectively. Targeting regions with a high contribution from Delay 3, such as Kampala, will be essential in improving facility-based care and reducing preventable perinatal deaths.

Figure 29: Deep-dive into avoidable factors under delay 3, FY2023/2024



The Figure 29 presents avoidable factors under Delay 3 (delays in receiving adequate care at the health facility) that contributed to perinatal deaths in FY2023/2024. The most common avoidable factor was “inappropriate intervention,” which increased from 1,550 cases in FY2022/2023 to



1,944 cases in FY2023/2024. Other significant factors include misdiagnosis, lack of supplies and drugs (such as blood), and the absence of critical human resources. Misdiagnosis cases rose from 682 to 930, while the lack of resuscitation equipment increased from 203 to 269 over the same period.

The rise in inappropriate interventions and misdiagnosis indicates ongoing issues with the quality of care at healthcare facilities. Inappropriate interventions, which may involve incorrect clinical procedures or delayed responses to emergencies, directly contribute to preventable perinatal deaths. The increase in misdiagnosis reflects a gap in clinical skills and judgment among healthcare providers, leading to delayed or improper treatment. Additionally, the persistent lack of supplies, drugs (especially blood), and critical human resources highlights systemic challenges in

equipping healthcare facilities to handle obstetric emergencies effectively.

To reduce these avoidable factors, it is essential to improve the quality of care provided at health facilities. This can be done through continuous training and capacity building for healthcare providers to ensure appropriate interventions and improve diagnostic accuracy. Ensuring the availability of essential supplies, including blood products and resuscitation equipment, is also critical to managing life-threatening emergencies. Addressing shortages of healthcare workers, particularly in critical areas, will further enhance the capacity of facilities to respond to emergencies. Strengthening leadership and monitoring processes at the facility level to ensure adherence to clinical guidelines will be key in reducing Delay 3 factors and ultimately improving perinatal outcomes.

Table 26: Unpacking inappropriate interventions leading to perinatal deaths

Region	Inappropriate/ Delayed medication and doses	Inadequate Monitoring and follow up	Obstetric Complications (APH, PET, MIP, Syphilis)	Delayed Referral	Poor documentation and capacity gaps	Delay in decision to incision	Inadequate investigations done	Stockout of medicines and supplies	Lack of Blood Products	Absence of critical staff	Failure to seek for assistance	Inadequate capacity to manage emergency (Oxygen)
Acholi	34.3%	13.6%	18.7%	10.6%	7.6%	4.5%	6.6%	3.0%	0.0%	1.0%	0.0%	0.0%
Ankole	14.7%	25.3%	12.0%	21.3%	1.3%	12.0%	5.3%	0.0%	4.0%	1.3%	2.7%	0.0%
Bugisu	16.5%	17.6%	22.0%	13.2%	7.7%	12.1%	3.3%	3.3%	1.1%	3.3%	0.0%	0.0%
Bukedi	18.0%	8.0%	14.0%	10.0%	14.0%	18.0%	8.0%	4.0%	0.0%	6.0%	0.0%	0.0%
Bunyoro	21.4%	25.2%	19.4%	10.7%	5.8%	3.9%	6.8%	2.9%	2.9%	1.0%	0.0%	0.0%
Busoga	33.9%	19.1%	18.7%	8.7%	4.8%	5.2%	4.8%	2.2%	0.0%	1.3%	0.0%	1.3%
Kampala	22.4%	14.8%	8.1%	22.4%	9.4%	6.7%	6.7%	3.1%	3.1%	0.9%	0.9%	1.3%
Karamoja	35.8%	5.7%	5.7%	17.0%	18.9%	5.7%	1.9%	5.7%	3.8%	0.0%	0.0%	0.0%
Kigezi	27.5%	22.9%	11.0%	10.1%	6.4%	11.9%	8.3%	0.0%	0.0%	0.9%	0.9%	0.0%
Lango	28.7%	13.1%	16.4%	10.7%	10.7%	8.2%	3.3%	3.3%	2.5%	0.8%	1.6%	0.8%
North Central	29.8%	17.0%	10.6%	25.5%	4.3%	0.0%	4.3%	6.4%	2.1%	0.0%	0.0%	0.0%
South Central	24.4%	15.6%	13.3%	13.3%	24.4%	0.0%	4.4%	2.2%	0.0%	0.0%	0.0%	2.2%
Teso	35.9%	14.1%	14.1%	21.9%	7.8%	1.6%	1.6%	0.0%	1.6%	0.0%	1.6%	0.0%
Tooro	36.2%	6.4%	21.3%	14.9%	14.9%	2.1%	0.0%	2.1%	0.0%	2.1%	0.0%	0.0%
West Nile	28.5%	15.8%	15.8%	14.9%	5.9%	6.3%	4.5%	1.4%	1.4%	0.5%	2.7%	2.3%
National	27.7%	16.4%	15.1%	14.3%	8.1%	6.6%	5.1%	2.4%	1.4%	1.1%	0.8%	0.8%



CHAPTER 04

Recommendations

Building block	Issue/Gap	Recommendation	Targeted Region
Service delivery	Maternal: High IMMR >90 per 100,000 deliveries in 31 districts/cities (20.5%) The highest IMMR consistently occurs in Referral and Large PNFP Hospitals Perinatal: High IPMR above 25 per 1,000 births in 17 districts/Cities (11.6%)	- Regions with high IMMR should conduct a deep-dive analysis to identify the associated avoidable factors to be addressed through the LMNS platforms. - Strengthen the quality of care at the referral and large PNFP hospitals including the emergency transport for obstetric and newborn complications - Strengthen the early Identification Retention and Response to maternal and newborn complications - Strengthen skills in management of the obstetric and newborn complications at all levels. - Conduct referral mapping for maternal and perinatal deaths at high-volume health facilities and provide targeted onsite mentorship. - Operationalise HC IVs to offer CEmONC services. - Strengthen provision of tailored reproductive health information and services, with particular focus on accessing timely postabortion services among adolescent girls 19 years and below - Improve access to quality family planning services, especially post-pregnancy (postabortion and postpartum) family planning for young women aged 20-24 years - Enhance interventions towards prevention and management of malaria among pregnant women - Increase provision of comprehensive HIV services as part of ANC package. - Districts should conduct routine IPC assessment and capacity building at all levels of care - Utilise the ambulances attached to the EMS departments to ensure timely referrals to the next level of health care. - Implement recommendations from the death reviews to address the associated avoidable factors	Regions with highest IMMR: Bugisu, Bunyoro, Busoga, and Kampala Cities with highest IMMR: Hoima, Mbale, Jinja, Masaka, Fort Portal, Mbarara, Soroti, Gulu, Arua, Lira, and Kampala Regions with increase in IPMR: Acholi, Bukedi, and Kigezi Regions with highest MSB burden: Kampala, Acholi, Bunyoro, Busoga, North Central, west Nile and South Central Regions with highest FSB burden: Bunyoro, Kampala, Busoga, Karamoja and North Central Regions with highest ENND burden: Kampala, Acholi and Kigezi Regions with highest mortality above national average due to: Haemorrhage: South Central, Bukedi, West Nile, Lango, North Central, Ankole, Bunyoro Hypertensive disorders: Kampala, Ankole, Tooro, Teso Indirect causes: Karamoja, Teso, Acholi, West Nile Puerperal sepsis: Bugisu, Bunyoro, North Central, Kampala, Ankole Abortion complications: Lango, Kigezi, Acholi, Bugisu Anaesthetic complications: West Nile, Tooro, Karamoja, Kigezi



Addressing Delays in Care to Improve Maternal and Newborn Survival

Building block	Issue/Gap	Recommendation	Targeted Region
Health Information systems	Maternal: Suboptimal death notification and review rates.	- The Regional LMNS should provide targeted support to the districts and health facilities to achieve 100% death notification and review rates. - Engage stakeholders at all levels to support the effective implementation of response actions identified during the review process. - Strengthen regional data utilisation through engaging the regional biostatisticians to routinely generate analytics to guide discussions during meetings and resource allocation	Regions with suboptimal notification and reviews: Tooro, Bugisu, North Central, and South Central
	Perinatal: Low death notification and review rates	- Through the Regional LMNS, targeted support to the low performing districts and health facilities to achieve 100% death notification and review rates. - Encourage active participation of both paediatric and obstetric teams during the review of perinatal deaths to improve the proportion of MSBs and FSBs reviewed.	Regions with lower notification: Kampala, South central and Tooro, Regions with lower Reviews: Bunyoro, North central, south central and Tooro.
Health workforce	Inadequate surgical skills among the newly recruited medical officers Inadequate resuscitation skills for both obstetric and newborn complications Inadequate skills in the administration and management of anaesthetic complications Knowledge and skills gaps in the management of obstetric and newborn complications	- The consultants at RHH should provide regular onsite mentorship in surgical skills to the newly recruited medical officers at General Hospitals and HC IVs. - Scale up the onsite training using the EMOTIVE bundle approach at all levels - MOH needs to follow up on the implementation of the approved staffing structure at all levels of service provision - Strengthen the newborn care networks within the LMNS platform led by the regional paediatricians	Regions with Haemorrhage above national average: South Central, Bukedi, West Nile, Lango, North Central, Ankole, Bunyoro
Leadership and governance	Maternal: Maternal deaths among the adolescents	- Strengthen multisectoral Collaboration and coordination against teenage pregnancy through establishing District committees on adolescent health - Scale up iDARE approach at community level to curb the teenage pregnancy rate - Involvement of the political and administrative leaders at district level in LMNS activities for ownership and accountability of response actions	Regions with highest IMMR among adolescents: Bunyoro, Kampala, Karamoja, North Central, Teso Regions that have not yet involved political and administrative leaders



Addressing Delays in Care to Improve Maternal and Newborn Survival

Building block	Issue/Gap	Recommendation	Targeted Region
Medical Products and Technologies	Inadequate stock of iron, folic acid and fansidar, which leads to suboptimal management of anaemia and malaria during pregnancy	- Fansidar, iron and folic acid should be removed from the credit line and be supplied in adequate quantities to health facilities - Mobilise more resources to procure adequate quantities of Non-pneumatic Anti-shock Garments (NASG) for management of PPH - Engage the private sector to supplement on the efforts of the government in availing adequate quantities of medicines, supplies, and equipment for maternal and newborn care services.	All regions
Health Financing	Insufficient budget allocation to support delivery of quality MNH services	- MOH should continue to engage parliamentary health committee on increasing resource allocation for reproductive health services - Districts should monitor the utilisation of PHC funds in improving the quality of MNH service provision	All regions



APPENDICES

Appendix 1: Case Studies

Life's Early Battle: The Victory of a Preterm Warrior from Incubator to Inspiration

Key Issues:

The inspiring journey of a preterm, capacity building and Collaboration, overcoming adversity of preterm with determination in the Acholi Sub-region.

Authors:

Nicholas Sebuliba Kirirabwa¹, Francis Ojok¹, Casta Robert Ouma², Daniel Kamy¹, Baifa Arwinyo³, Rita Akello¹, Anita Komukama¹, Emmanuel Okello¹, Keith Baleeta¹, Judith Aloyo¹, Augustine Muhwezi¹

Affiliations:

1. USAID Uganda Health Activity
2. Kitgum General Hospital
3. Gulu Regional Referral Hospital/Acholi LMNS Platform

Introduction:

Everlyn Aloyo, a 31-year-old who was 25 weeks pregnant, was bitten by a snake. Upon reaching Kitgum Matidi Health Center III for treatment, she went into preterm labour. The midwives' assessment revealed that Everlyn had a history of delivering underweight babies. Kitgum Matidi HC III does not have a Neonatal Intensive Care Unit (NICU), posing a significant risk to Everlyn's baby, who was delivered weighing only 500 grams. She was immediately referred to Kitgum General Hospital's (KGH) NICU, located 35 km from her home. This referral was facilitated by the staff at Kitgum Matidi HCIII, who had been trained by the USAID Uganda Health Activity (UHA) in pregnancy risk screening. At KGH, the extremely low-birthweight baby received specialized care, including oxygen therapy,

continuous positive airway pressure (CPAP), and management of hypothermia (low body temperature), which was crucial for the baby's survival and recovery.

Evelyn stayed at the NICU for 40 days (about 1 and a half months), caring for her baby, whose weight increased from 500g to 1.1kg during this period comprehensive specialized care given to her baby to address medical and nutrition problems and ensure she thrives. Specialized care was given at the NICU rather than the general paediatric ward due to the need for close monitoring. The baby was initially placed in a radiant warmer and later transferred to an incubator until discharge. Treatment included management for dehydration, provision of donated breast milk (averaging 65 ml daily for two weeks), and

oxygen therapy via CPAP for two weeks due to respiratory distress syndrome- a serious condition that primarily affects premature infants, especially those born before their lungs have fully developed. It occurs when the baby's lungs are not able to produce enough surfactant, a substance that helps keep the

air sacs in the lungs open. The baby was also transfused with 10 ml of packed red cells on day 5 to treat anaemia and was given vitamin K to prevent bleeding disorders. Evelyn's positive attitude was crucial; she actively observed NICU cleanliness and encouraged other mothers to do the same.

Collaborative Efforts

While in the KGH NICU the baby-faced numerous complications, including Anaemia, Vitamin k deficiency bleeding disorders, respiratory distress syndrome, Jaundice and persistent hypothermia Intensive Kangaroo Mother Care (KMC)- a method of caring for preterm or low birth weight infants through skin-to-skin contact by placing a baby on the caregiver's chest, allowing for warmth and bonding. This method was emphasized from the time of referral via a boda boda (motorbike), and in the NICU, the baby was further supported with a radiant warmer. Due to the baby's high-risk status, the unit assigned a nurse during each shift to monitor the baby closely for vital signs, including temperature, pulse, respiratory rate, oxygen saturation, dehydration status, anaemia, jaundice, and abdominal distension and intervene as needed. The paediatrician conducted daily reviews until the baby reached one month old.

Due to a snake bite and giving birth prematurely at 25 weeks, the mother was unable to produce sufficient breast milk because of inadequate hormonal production. To ensure the baby received the necessary nutrition, the NICU team implemented a breast milk donation initiative, which provided the prescribed volume of oral feeds (averaging 65 ml daily) on time. The NICU paediatrician expressed gratitude for UHA's support, through 3 follow-up home visits for the baby's growth monitoring after discharge and the ongoing technical assistance from other paediatricians via the Ministry of Health (MOH) Acholi Local Maternity and Newborn System (LMNS) platform. UHA collaborates with district health teams and the Acholi

LMNS to strengthen facility teams' ability to deliver interventions to vulnerable populations in the region. This initiative involves site support visits to health facilities such as Kitgum Matidi HCIII. While at home, Evelyn continued exclusive breastfeeding, practiced KMC, monitored growth, maintained hygiene for both the baby and her, and adhered to the treatment prescribed by the NICU at KGH.



Joyful Evelyn, with her resilient warrior, at home in Kitgum Matidi after a challenging NICU hospitalization at Kitgum General Hospital -Photo Credit: Nicholas Kirirabwa

Achievements

USAID UHA's integrated mentorship and capacity-building program prioritizes the identification, retention, and response to newborn risks in antenatal, maternity, and newborn care. This is achieved through the implementation of integrated family health skills mentorship, which includes newborn care (such as KMC), risk screening in ANC and maternity, quality improvement initiatives (like the baby matrix), and support for timely SMART PORTAL actions, MPDSR review recommendations, facility performance reviews, and prompt consultations and referrals. USAID UHA, MOH and partners have contributed to reduction in the high maternal mortality ratio in Acholi region from 107 per 100,000 live births in FY2022/2023 to 68 per 100,000 live births in FY2023/2024. Similarly, the maternal mortality ratio in Kitgum district reduced from 158 per 100,000 live births in FY2022/2023 to 83 per 100,000



Dr Casta and Nurse Emily of Kitgum General hospital during follow up home visit at Evelyn's home in Kitgum Matidi -Photo Credit: Nicholas Kirirabwa

live births in FY2023/2024. Over the same period, the perinatal mortality rate in Kitgum district reduced from 26 per 1,000 to 24 per 1,000 and the Preterm survival trends at KGH improved from 83% (96) to 88% (134).

Next Steps

USAID UHA in Collaboration with MOH and other partners will continue to strengthen health worker capacity through data-

driven interventions to tackle high perinatal mortality rates and enhance newborn health outcomes.

Pull-out Quote:

"At first, when this happened, I surrendered everything to God. In my mind, I thought this baby wouldn't survive by the time we reached the hospital, since we travelled on a motorbike amidst strong winds. I was

advised to practice KMC (he was on my bare chest as we travelled), we would ride and stop along the way to check if he was still alive." says Evelyn

Background Information:

The USAID Uganda Health Activity (UHA) aims to increase the survival and well-being of vulnerable populations and improve the overall health system resilience in 76 priority districts and five cities in seven diverse sub-regions of the country.

UHA provides technical assistance to strengthen the regional Local Maternity and Neonatal Systems, which facilitate improved consultation and coordination of

MNH service delivery, better management of obstetric and newborn emergencies, enhancement of timely referrals, and implementation of maternal and perinatal death review recommendations. These approaches align with the USAID CDCS focus on improving the quality of family healthcare services, particularly those targeting children under the age of five, maternal healthcare, maternal and child nutrition, reproductive healthcare, and family planning initiatives.

The Identification Retention And Response (IRR) Collaborative

Authors:

Arnold Muwonge Kizito¹, Chris Ebong¹, Elizabeth Namagala¹, Rosette Birungi², Richard Mugahi¹

Affiliation:

1. Ministry of Health
2. FHI 360

Introduction:

In the last two MPDSR reports, profiling the maternal deaths revealed that majority of the women attended ANC and delivered in the health facility, despite this major gain, analysis exposed huge gaps in the quality of care being received by the women attending ANC clinics. Firstly, there was inadequate screening leading to **failure** to identify women with risk, secondly the current ANC processes do not allow longitudinal tracking of women attending ANC leading to **failure** to keep women with risks in care, the third area, is **failure** to provide appropriate care to women with risks despite them being identified and attend the ANC clinic

These three Failures-3Fs prompted the MoH to design a nationwide QI initiative dubbed the IRR collaborative that aimed to improve identification of high-risk women attending ANC, retain(R) women with high-risk conditions in care and appropriately respond(R) to women with high-risk conditions. It is against this background that MoH initiated a QI



Review of the Longitudinal ANC register being used by Bugono HCIV to document high risk pregnancies in the High-risk pregnancy clinic

intervention, initially as a collaborative of 30 districts that quickly evolved into a key intervention being implemented across all levels of health care.

Methods:

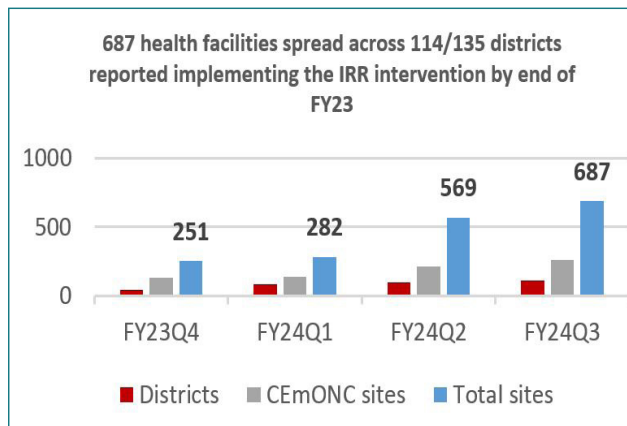
At national level, a coordination mechanism was established to steer roll-out of this intervention, the roles included training, development of tools, coordinate learning. An orientation meeting for /140 regional MCH QI coaches and ADHOs was organised, and this was followed by regional level orientation

meetings for all midwives and medical officers. A weekly virtual meeting was held every Friday at which each region shared their progress and challenges. trainings, coaching, mentorship, support supervision visits and learning sessions were also organised.



Description of intervention:

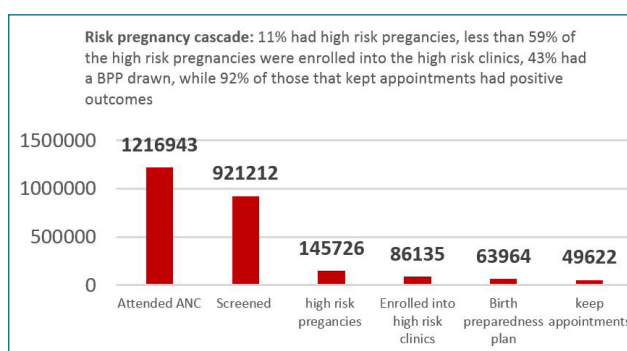
Every ANC participating ANC clinic is required to intensify screening ANC women for pregnancy related risks. All those identified with history or presence of High BP ($\geq 160/110$ mmgh), Proteins in Urine, Anaemia, History of APH/PPH, Previous scar, Co-morbidity like Hypertension, DM, Poor BPP, IUFD and estimated fetal weight ≥ 4 were categorised as high risk and should be referred to a doctors ANC (high risk) clinic where an individualised management plan is drawn.



Results: Intervention coverage:

In addition to the 212 collaborative sites in 32 districts, 114/135 districts are currently implementing the IRR intervention. Coverage of high-risk ANC clinics currently stands at 67% (258/358) across the regions with lower coverage in south central, north central and the greater Bunyoro regions.

The rapid spread of the intervention was driven by firm leadership from the MoH that spilled into the district health teams, partner support and the numerous orientation and training sessions that were available to the frontline providers.



Risk Pregnancy Cascade:

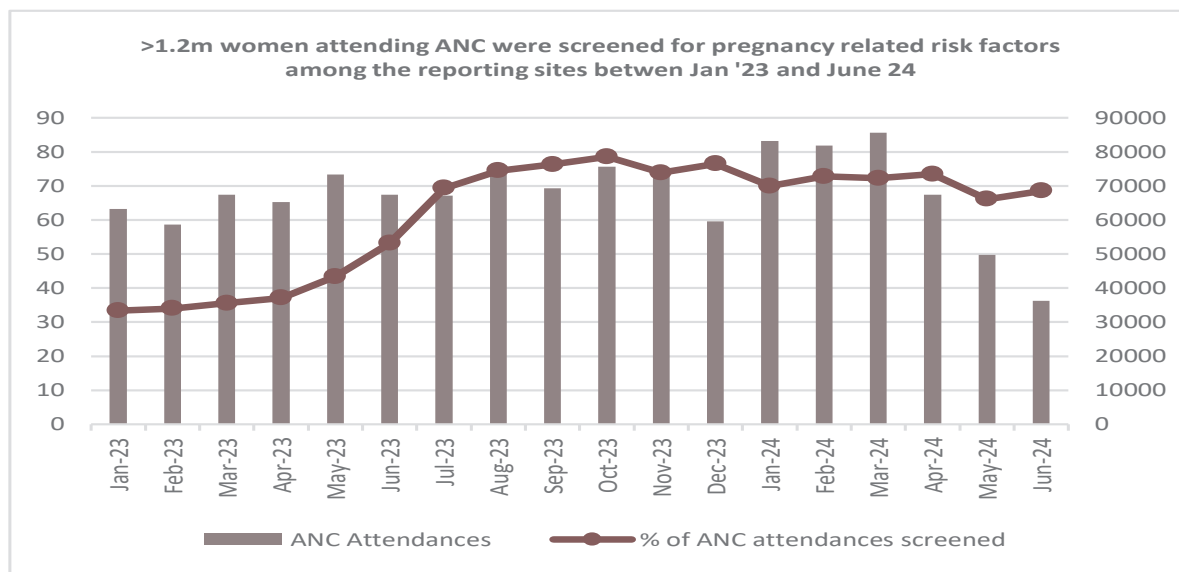
23% of the women attending ANC in the period were found to carry a high-risk pregnancy related condition, less than 50% of

the high-risk pregnancies were enrolled into the high-risk clinics, 92% of those that kept appointments registered positive outcomes.

Risk Identification:

The collaborative sought to improve identification of pregnant women carrying risk factors, the key intervention floated to achieve this was introduction of a 'pregnancy risk screening tool' which was administered as a guide/reminder in general ANC clinics by midwives to identify women with pregnancy

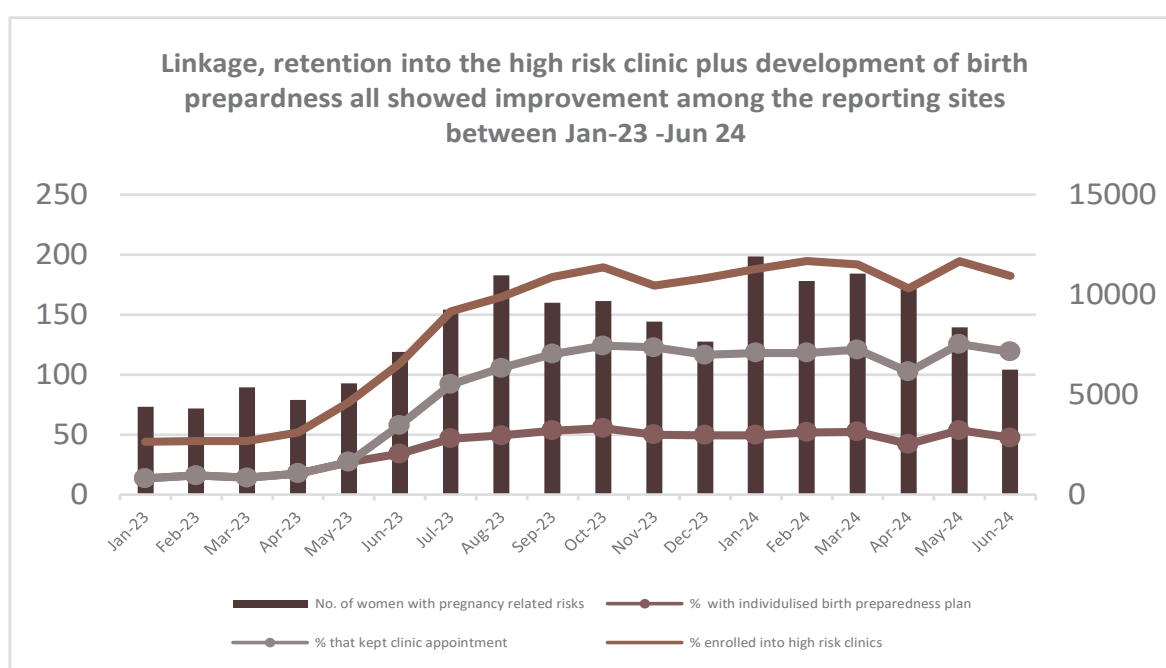
related risks. The tool included a decision guide that categorised women as high/low risk, this determined whether the woman would be referred to a CeMNC site or continue in general ANC. Screening increased by 33% among the sites reporting on the collaborative.



Enrolment and Retention:

Linkage of women identified with risk pregnancies to a doctor's care remains a key aspect of the intervention. Overall, enrolment increased from 31% to 63% in the 18 months. Tracking appointment keeping started in May '2 and over the 13 months the proportion of high-risk pregnant women that kept their clinic appointments increased to 71%. To facilitate linkage and retention facilities instituted the following changes- 1) establishment of high-risk clinics with known and well communicated

operational days. 2) selected facilities in Karamoja, Kigezi and Kampala implemented a scheme where a doctor would conduct the high-risk ANC clinic at the high volume but distant lower facilities 3) information sharing between the Hub and its spoke facilities on number of women referred versus those that reached. 4) The longitudinal ANC register was introduced, and some sites introduced appointment books to keep track of clinic appointments.





Birth and emergency preparedness & Planning

The proportion of high-risk women with a BEPP, drawn with a doctor was the immediate outcome being tracked for this intervention, overall performance on this indicator improved

from 11to about 50% through building capacity to develop the BEPPs, empowering women to appreciate the value and demand for them.

Lessons learnt/Recommendations

1. We observed disparity in set up, operations and package of care delivered in the high-risk ANC clinics, there's therefore need to provide an SoP to guide the operations of the high risk ANC clinics across the country
2. Enrolment and retention of women (especially those identified at spoke facilities) into the high-risk clinics was suboptimal, there's need to outline options for women that find it difficult to access the CEmONC sites
3. Construction and utilisation of ANC risk profiles should be institutionalised to accelerate implementation of responsive interventions,
4. Institutional and individual birth and emergency preparedness holds very valuable potential in improving outcomes for high-risk women and should be promoted.

Data source- <https://qidatabaseug.urc-chs.com/webapp/v9.2/index.html#/>

Establishment of the Designated Resuscitation Teams in Kampala Hospitals

Authors:

Victoria Nakibuuka, Sanyu Nalunga, Ritah Nazziwa, Ritah Nasiima, Joan Nampijja, Babra Namugga, Cissy Nalunkuma, Rhoda Mayega, Kyambadde Ronald, Patrick Baigana Janat Kainza, Racheal Nantenza Immaculate Nabwami, Olivia Nalule Madrine Nambalira Hamim Mponye.

Despite the significant reduction of the global and national infant mortality rates in the last 10 years, the reduction hasn't been proportional with neonatal mortality in Uganda, which highlights the lagging behind in the neonatal health indices. Nsambya Hospital partnered with the ELMA Foundation conducted a 3-year project from 2023 – 2025 to address the major causes of mortality through establishment of a breast milk bank and a dedicated neonatal resuscitation team and improving infection control in Lubaga, Mengo and Nsambya, Kibuli and Naguru hospitals in Kampala. The project contributed to the reduction in the newborn mortality rate (NMR) of 21% in Naguru hospital (from 9.4% to 7.4%) of 11% in Kibuli Hospital from (1.55% to 1.33%) hospital and 25% reduction in Nsambya (4.9% to 3.4%). While there was no reduction in neonatal mortality in both Lubaga and Mengo Hospitals.

This started with trainings of teams in neonatal resuscitation that were followed by mentorships and annual refresher trainings for all the 5 implementation sites, a total of 180 health workers were trained on neonatal resuscitation and stabilization of the newborn babies in the delivery rooms and also provided with resuscitation equipment in 2023 including: Radiant warmers, CPAPS, neopuffs and ambubags. This increased the percentage of the caesarean deliveries that had their babies resuscitated by the neonatal

resuscitation teams was 49% in Lubaga, 48% in Mengo and 68% in Nsambya, 35% Naguru Hospital and 67% Kibuli Hospital.

There was a percentage reduction of asphyxia admissions from 7.1% (2021) to 5.2 % in 2023 for Nsambya Hospital, and from 16.5% (2021) to 7.7% (2024) in Kibuli. However, there was an increase from 5.1% in 2021 to 7.2% in 2023 for Lubaga, and from 8.2% in 2020 to 9.6% for Naguru, Mengo from 5.1% to 7.1%. Overall, the number of babies with hypothermia on admission in the neonatal units reduced in all the five sites.



Review of the Longitudinal ANC register being used by Bugono HCIV to document high risk pregnancies in the High-risk pregnancy clinic

Leveraging On The LMNS Platform for Dissemination of Weekly HMIS033B Data Analytics to improve Perinatal Death Reviews and reduce Perinatal Mortality in Busoga Region

Authors:

Stephen Twinomugisha, Samuel Wasikhe, Annet Naguudi, Felicity Nahataba, Allan Katamba, Augustin Muhwezi, Agrey Bameka

Organisation:

USAID Uganda Health Activity/University Research Co.LLC; Busoga Local Maternity and Neonatal System (LMNS)



Introduction:

Review of DHIS2 data for the FY 2022/23 for Busoga region showed a high institutional perinatal mortality rate of 19.2 deaths/1000 live births (SDG target: <12 deaths/1000 live births). This was also above the IPMR of Uganda at that time (17.8 deaths/1000 live births). At the start of FY 2023/24 and with increased push for reporting, the IPMR rose

to 20 deaths/1000 live births in July-Sept 2023. Perinatal death reporting and review in Busoga region was also not being given focus. As such, working through the LMNS and stakeholders, we set out to utilize the weekly data submitted through HMIS 033b to improve perinatal death reporting, reviews and perinatal mortality generally.

Objective:

To improve perinatal death reviewing from 16% in March 2023 to at least 60% by June 2024 and subsequently reduce institutional

perinatal mortality to less than 15/1000 live births by June 2024 across Busoga region.

Methodology:

Effective the first week of June 2023, and on weekly basis, the HMIS033b data was extracted from the DHIS2 for all the perinatal and maternal deaths reported, entered death review forms crosschecked, line listing done, analysis made and a weekly regional MPDSR report for Busoga region generated.

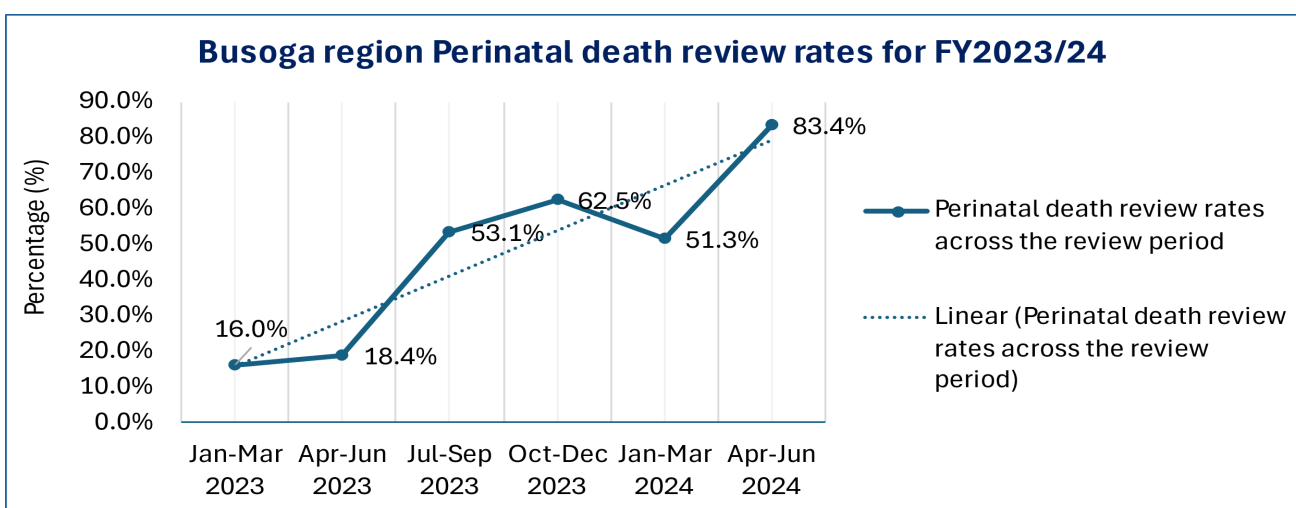
The regional MPDSR report mainly captured the reporting rates and timeliness per district, the reported maternal and perinatal deaths, reviews rates in relation to previous week per district, cumulative numbers of the perinatal and maternal deaths showing facilities with pending reviews, causes of deaths and recommendations.

The generated report was shared on weekly basis with stakeholders through the LMNS WhatsApp forum (has 1,024 members) and to all DHOs and ADHOs MCH. The report was also shared in the weekly LMNS virtual learning meetings, where it was included as

a mainstay item on the agenda.

The generated reports were also used to drive technical support accorded to facilities. The 15 facilities identified to be reporting 82% of perinatal deaths were specifically targeted for low dose high frequency mentorships. These mentorships focused on the aspects that influence perinatal survival such as high-risk pregnancy risk clinic operations, monitoring of labour, management of obstetric complications, newborn resuscitation and referral system.

For the Apr-June 2024 period, there was intensified follow up of implementation of actions by the facilities after the Weekly MPDSR reports got shared. Additionally, orientation and distribution of BABIES matrix boards to 18 CEMONC facilities was done in that quarter, and it equally impacted Newborn care improvements.

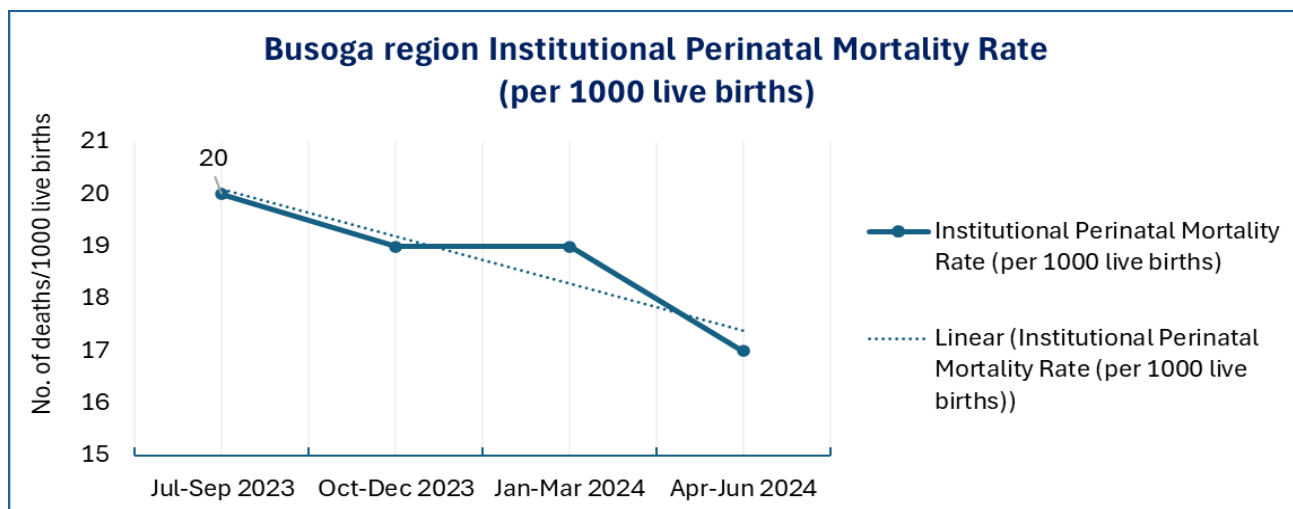


Results:

Perinatal death review for Busoga region rose from **16%** for Jan-Mar 2023, to 18.4% in Apr-June 2023, to 53.1% for July-Sept 2023, then 62.5% for Oct-Dec 2023, 51.3% for Jan-Mar 2024 and **83.4%** for Apr-June 2024.

Also, the Institutional Perinatal mortality rate reduced from 20 deaths/1000 live births in

July-Sept 2023 to 19 deaths/1000live births for Oct-Dec 2023, to 19 deaths/1000 live births for Jan-Mar 2024 and 17deaths/1000 live births for Apr-June 2024. The additional engagement of active follow up on implementation of recommendations that was done in the Apr-June 2024 had significant impact.



Conclusion:

To reduce perinatal mortality, it was found crucial that one improves perinatal death reviewing and follow up of actions set during the MPDSR meetings. One of the effective strategies that worked for Busoga region was the regular sharing of local Weekly data analytics. The analytics were based on the HMIS033b data and shared with stakeholders within the region. It contributed to significant rise in perinatal death reviewing from **16% in March 2023 to 83.4% by end of June 2024**

and reduced IPMR from **20 deaths/1000 live births in July-Sept 2023 to 17 deaths/1000 live births for Apr-June 2024.**

Additional strategies being explored to improve the quality of perinatal death reviewing and reduce mortality further especially with improved high risk pregnancy management, intrapartum care and immediate post-partum care.

Table : District Deep-dives FY2023/2024

Region	Local Government	Deliveries	Maternal deaths	Maternal deaths among 100,000 deliveries	Livebirths	Total Births	Fresh still births (#)	Macerated still births (#)	Newborn deaths - 0-7 days (#)	Perinatal deaths Reported (#)	IPMR/ 1000	FSBR/ 1000	MSBR/ 1000	ENND/ 1000	MDN (HMIS 004)	PDN (HMIS 019)	MDR (HMIS 020)	PDR (HMIS 017)
Karamoja	Abim	6,724	5	59	6,663	6,709	32	14	20	66	9.8	4.8	2.1	3.0	100%	94.6	100	92.9
West Nile	Adjumani	12,116	5	41	11,831	11,946	65	50	31	146	12.2	5.4	4.2	2.6	40%	64.9	40	51.9
Acholi	Agago	9,353	6	64	9,298	9,407	44	65	60	169	18.0	4.7	6.9	6.5	100%	97.2	100	89.8
Lango	Alebtong	7,845	3	38	7,799	7,831	17	15	6	38	4.9	2.2	1.9	0.8	100%	90	100	80
Lango	Amolatar	7,413	4	54	7,122	7,291	144	25	11	180	24.7	19.8	3.4	1.5	100%	102.8	100	105.6
Karamoja	Amudat	3,490	2	57	3,462	3,509	30	17	11	58	16.5	8.5	4.8	3.2	100%	88.1	100	55.9
Teso	Amuria	9,772	4	41	9,387	9,530	73	70	51	194	20.4	7.7	7.3	5.4	100%	39.6	100	28.2
Acholi	Amuru	6,640	0	0	6,664	6,716	28	24	13	65	9.7	4.2	3.6	2.0		71.8		97.2
Lango	Apac	7,620	7	92	7,714	7,799	45	40	31	116	14.9	5.8	5.1	4.0	114%	85.1	100	88.6
West Nile	Arua City	14,658	22	150	14,316	14,661	170	175	23	368	25.1	11.6	11.9	1.6	114%	34.3	100	57.3
West Nile	Arua	3,809	5	131	3,765	3,831	27	39	28	94	24.5	7.0	10.2	7.4	100%	56.2	80	14.2
Bukedi	Budaka	13,863	3	22	14,557	14,629	38	34	7	79	5.4	2.6	2.3	0.5	133%	85.7	100	68.8
Bugisu	Bududa	10,850	1	9	10,796	10,840	28	16	20	64	5.9	2.6	1.5	1.9	100%	94.1	100	76.5
Busoga	Bugiri	13,254	10	68	12,921	13,167	136	110	38	284	21.6	10.3	8.4	2.9	140%	62.7	110	62.4
Busoga	Bugweri	5,847	0	0	5,765	5,810	15	30	15	60	10.3	2.6	5.2	2.6		67.9		105.4
Ankole	Buhweju	3,251	0	0	3,241	3,264	12	11	3	26	8.0	3.7	3.4	0.9		96.3		96.3
North Central	Bulkwe	14,961	7	33	14,879	15,066	94	93	56	243	16.1	6.2	6.2	3.8	100%	58.2	85.7	43.4
Teso	Bukedea	8,308	1	12	8,323	8,366	18	25	11	54	6.5	2.2	3.0	1.3	100%	1.6	0	3.2
South Central	Bukomansimbi	3,954	0	0	3,951	4,000	19	30	3	52	13.0	4.8	7.5	0.8		0		0
Bugisu	Bukwo	4,334	3	69	4,281	4,314	20	13	5	38	8.8	4.6	3.0	1.2	133%	102.8	100	102.8
Bugisu	Bulambuli	7,559	2	26	7,502	7,581	65	14	4	83	10.9	8.6	1.8	0.5	100%	87.5	50	73.2
Bunyoro	Bulisa	4,002	5	125	3,799	3,852	35	18	21	74	19.2	9.1	4.7	5.5	100%	83.6	100	94
Tooro	Bundibugyo	9,984	3	30	9,732	9,811	32	47	45	124	12.6	3.3	4.8	4.6	100%	68.1	100	89
Tooro	Bunyangabu	8,099	2	25	7,745	7,788	18	25	20	63	8.1	2.3	3.2	2.6	100%	63.2	100	61.4
Ankole	Bushenyi	12,096	4	33	11,991	12,083	39	53	66	158	13.1	3.2	4.4	5.5	125%	74.4	125	64.1
Bukedi	Busia	17,647	16	91	17,372	17,546	109	65	51	225	12.8	6.2	3.7	2.9	88%	59.6	93.8	52.6
Bukedi	Butaleja	10,822	3	28	10,785	10,857	29	43	4	76	7.0	2.7	4.0	0.4	100%	62.9	66.7	58.6

Region	Local Government	Deliveries	Maternal deaths	Maternal deaths among 100,000 deliveries	Livebirths	Total Births	Fresh still births (#)	Macerated still births (#)	Newborn deaths - 0-7 days (#)	Perinatal deaths Reported (#)	IPMR/ 1000	FSBR/ 1000	MSBR/ 1000	ENND/ 1000	MDN (HMIS 004)	PDN (HMIS 019)	MDR (HMIS 020)	PDR (HMIS 017)
South Central	Butambala	7,275	8	96	7,077	7,246	118	51	44	213	29.4	16.3	7.0	6.2	88%	33.2	75	9.5
Bukedi	Butebo	4,162	2	48	4,108	4,134	8	18	4	30	7.3	1.9	4.4	1.0	100%	54.8	100	29
North Central	Buvuma	2,779	0	0	2,746	2,766	12	8	4	24	8.7	4.3	2.9	1.5		14.3		0
Busoga	Buyende	14,089	4	35	14,131	14,190	23	36	13	72	5.1	1.6	2.5	0.9	100%	75.8	100	112.9
Lango	Dokolo	7,448	2	27	7,418	7,472	22	32	14	68	9.1	2.9	4.3	1.9	100%	98.6	100	90
Tooro	Fort Portal City	9,889	31	313	9,415	9,615	101	99	81	281	29.2	10.5	10.3	8.6	97%	23.3	83.9	37.6
South Central	Gomba	4,157	0	0	4,164	4,173	1	8	4	13	3.1	0.2	1.9	1.0		0		0
Acholi	Gulu City	14,529	24	158	14,078	14,414	135	201	275	611	42.4	9.4	13.9	19.5	100%	83.1	104.2	103.8
Acholi	Gulu	3,010	0	0	3,005	3,026	9	12	7	28	9.3	3.0	4.0	2.3		103.8		68.4
Bunyoro	Hoima City	9,277	58	625	8,904	9,269	214	151	245	610	65.8	23.1	16.3	27.5	97%	88.9	91.4	37.8
Bunyoro	Hoima	5,734	2	35	5,597	5,638	21	20	2	43	7.6	3.7	3.5	0.4	100%	54.1	1	20.5
Ankole	Ibanda	9,488	6	63	9,310	9,443	65	68	48	181	19.2	6.9	7.2	5.2	117%	90.4	116.7	88.3
Busoga	Iganga	19,115	21	105	19,039	19,380	150	191	153	494	25.5	7.7	9.9	8.0	100%	86.4	95.2	95.6
Ankole	Isingiro	19,453	5	26	19,257	19,467	135	75	33	243	12.5	6.9	3.9	1.7	80%	54.5	0.8	68.2
Busoga	Jinja City	13,395	54	403	13,060	13,413	177	176	246	599	44.7	13.2	13.1	18.8	63%	51.2	101.9	57.1
Busoga	Jinja	6,774	2	30	6,720	6,784	26	38	21	85	12.5	3.8	5.6	3.1	100%	46.2	50	60.2
Karamoja	Kaabong	5,067	7	138	5,067	5,118	38	13	34	85	16.6	7.4	2.5	6.7	100%	98.6	100	89
Kigezi	Kabale	10,867	13	129	10,725	10,848	58	65	139	262	24.2	5.3	6.0	13.0	108%	99.3	107.7	92.9
Tooro	Kabarole	4,354	3	69	4,138	4,156	6	12	10	28	6.7	1.4	2.9	2.4	100%	79.2	100	70.8
Teso	Kaberamaido	4,890	2	41	4,886	4,929	15	28	15	58	11.8	3.0	5.7	3.1	100%	78.7	100	72.1
Bunyoro	Kagadi	13,456	7	52	13,089	13,329	126	114	33	273	20.5	9.5	8.6	2.5	71%	3	100	42
Bunyoro	Kakumiro	14,601	1	0	14,392	14,594	105	97	30	232	15.9	7.2	6.6	2.1	100%	44.9	100	44.9
Teso	Kalaki	3,927	0	0	3,893	3,947	33	21	43	97	24.6	8.4	5.3	11.0		97.9		93.8
South Central	Kalangala	1,358	5	368	1,310	1,350	23	17	7	47	34.8	17.0	12.6	5.3	80%	30	80	2.5
Busoga	Kaliro	7,185	1	14	7,077	7,141	29	35	50	114	16.0	4.1	4.9	7.1	100%	68.7	100	67.2
South Central	Kalungu	8,850	4	45	8,765	8,874	40	69	18	127	14.3	4.5	7.8	2.1	100%	54.5	100	7.6
Kampala	Kampala	85,904	183	214	85,577	87,184	689	918	1575	3182	36.5	7.9	10.5	18.4	93%	25	98.9	64.8
Busoga	Kamuli	18,928	21	111	18,289	18,577	143	145	153	441	23.7	7.7	7.8	8.4	33%	28.7	100	76.9
Tooro	Kamwenge	13,755	7	51	13,734	13,808	36	38	23	97	7.0	2.6	2.8	1.7	57%	73.7	57.1	31.3
Kigezi	Kanungu	9,015	8	89	8,955	9,053	46	52	76	174	19.2	5.1	5.7	8.5	100%	103	100	103.6

Region	Local Government	Deliveries	Maternal deaths	Maternal deaths among 100,000 deliveries	Livebirths	Total Births	Fresh still births (#)	Macer-ated still (#)	Newborn deaths - 0-7 days (#)	Perinatal deaths Reported (#)	IPMR/ 1000	FSBR/ 1000	MSBR/ 1000	ENND/ 1000	MDN (HMIS 004)	PDN (HMIS 019)	MDR (HMIS 020)	PDR (HMIS 017)
Bugisu	Kapchorwa	6,113	5	82	5,874	5,968	48	46	17	111	18.6	8.0	7.7	2.9	100%	93.9	100	90.4
Teso	Kapelebyong	3,377	1	30	3,143	3,154	5	6	6	17	5.4	1.6	1.9	1.9	100%	61.1	100	11.1
Karamoja	Karenga	2,368	1	42	2,279	2,312	25	8	11	44	19.0	10.8	3.5	4.8	100%	76.2	100	59.5
Tooro	Kasese	29,729	21	71	29,177	29,478	144	157	77	378	12.8	4.9	5.3	2.6	105%	73.8	100	45.8
North Central	Kassanda	11,204	4	36	11,358	11,540	78	104	26	208	18.0	6.8	9.0	2.3	50%	0	50	0
Teso	Katakwi	8,229	8	97	8,035	8,123	37	51	40	128	15.8	4.6	6.3	5.0	100%	83.7	87.5	64.3
North Central	Kayunga	14,445	24	166	14,049	14,256	119	88	70	277	19.4	8.3	6.2	5.0	92%	74.6	100	63.6
Ankole	Kazo	5,140	1	19	5,139	5,162	12	11	4	27	5.2	2.3	2.1	0.8	100%	56.5	100	56.5
Bunyoro	Kibadale	5,974	1	17	5,782	5,899	54	63	24	141	23.9	9.2	10.7	4.2	100%	38.2	100	49.3
North Central	Kiboga	8,648	12	139	8,508	8,661	85	68	49	202	23.3	9.8	7.9	5.8	100%	67.1	100	67.6
Bukedi	Kibuku	8,839	1	11	8,691	8,727	13	23	4	40	4.6	1.5	2.6	0.5	100%	86.7	100	75.6
Bunyoro	Kikuube	13,205	2	15	13,112	13,251	71	68	38	177	13.4	5.4	5.1	2.9	0%	21.1	0	29.9
Ankole	Kiruhura	10,229	1	10	10,244	10,263	11	8	6	25	2.4	1.1	0.8	0.6	100%	32.4	100	30.9
Bunyoro	Kiryandongo	11,870	4	34	11,669	11,844	85	90	62	237	20.0	7.2	7.6	5.3	100%	54.3	100	57.8
Kigezi	Kisoro	10,365	3	29	10,312	10,431	56	63	41	160	15.3	5.4	6.0	4.0	100%	96.3	100	94.4
Tooro	Kitagwenda	5,613	1	18	5,612	5,630	5	13	4	22	3.9	0.9	2.3	0.7	0%	0	100	44.4
Acholi	Kitgum	8,547	7	82	8,462	8,634	59	113	41	213	24.7	6.8	13.1	4.8	100%	106.8	100	103.9
West Nile	Koboko	9,272	9	97	9,135	9,278	76	67	55	198	21.3	8.2	7.2	6.0	100%	45.5	88.9	76.4
Lango	Kole	8,354	0	0	8,449	8,482	23	10	11	44	5.2	2.7	1.2	1.3		85		70
Karamoja	Katido	7,361	4	54	7,323	7,388	37	28	19	84	11.4	5.0	3.8	2.6	150%	103.7	175	75.3
Teso	Kumi	10,452	6	48	10,377	10,496	47	72	32	151	14.4	4.5	6.9	3.1	100%	80.7	100	69.3
Lango	Kwania	7,871	1	13	7,685	7,751	28	38	74	140	18.1	3.6	4.9	9.6	100%	97.6	0	89.3
Bugisu	Kween	5,690	0	0	5,499	5,525	15	11	4	30	5.4	2.7	2.0	0.7		104		104
North Central	Kyankwanzi	6,339	0	0	6,265	6,323	33	25	12	70	11.1	5.2	4.0	1.9		100		39
Tooro	Kyegegwa	18,036	1	6	17,965	18,157	139	53	25	217	12.0	7.7	2.9	1.4	0%	11.8	0	14.5
Tooro	Kyenjojo	17,765	9	51	17,344	17,536	104	88	27	219	12.5	5.9	5.0	1.6	56%	21.7	44.4	34.8
South Central	Kyotera	10,062	3	30	10,024	10,150	62	64	31	157	15.5	6.1	6.3	3.1	67%	44	100	43.3
Acholi	Lamwo	6,061	0	0	6,054	6,117	27	36	23	86	14.1	4.4	5.9	3.8		86.7		89.2
Lango	Lira City	12,307	12	98	12,162	12,445	142	141	20	303	24.3	11.4	11.3	1.6	142%	108.9	166.7	93.3
Lango	Lira	5,633	0	0	5,578	5,635	31	26	5	62	11.0	5.5	4.6	0.9		81.7		107.2

Region	Local Government	Deliveries	Maternal deaths	Maternal deaths among 100,000 deliveries	Livebirths	Total Births	Fresh still births (#)	Macerated still births (#)	Newborn deaths - 0-7 days (#)	Perinatal deaths Reported (#)	IPMR/ 1000	FSBR/ 1000	MSBR/ 1000	ENND/ 1000	MDN (HMIS 004)	PDN (HMIS 019)	MDR (HMIS 020)	PDR (HMIS 017)
Busoga	Luuka	5,482	1	18	5,354	5,407	28	25	5	58	10.7	5.2	4.6	0.9	100%	64	100	58
North Central	Luwero	22,967	14	61	22,835	23,152	144	173	40	357	15.4	6.2	7.5	1.8	100%	43.6	92.9	49.7
South Central	Lwengo	7,668	6	78	7,552	7,620	35	33	12	80	10.5	4.6	4.3	1.6	33%	0	16.7	0
South Central	Lyantonde	4,555	11	241	4,368	4,467	53	46	36	135	30.2	11.9	10.3	8.2	118%	100.9	100	90.5
West Nile	Madi-Okollo	5,545	2	36	5,486	5,529	22	21	21	64	11.6	4.0	3.8	3.8	100%	60.7	150	25
Bugisu	Manafwa	7,005	3	43	6,980	7,027	35	12	7	54	7.7	5.0	1.7	1.0	100%	102	100	66
West Nile	Maracha	6,334	1	16	6,269	6,351	35	47	40	122	19.2	5.5	7.4	6.4	100%	76.5	100	88.3
South Central	Masaka City	12,442	39	313	12,138	12,486	154	194	283	631	50.5	12.3	15.5	23.3	110%	55.1	89.7	87.5
South Central	Masaka	2,494	0	0	2,475	2,480	3	2	12	17	6.9	1.2	0.8	4.8		87.5		10.9
Bunyoro	Masindi	10,572	3	38	10,081	10,284	100	103	42	245	23.8	9.7	10.0	4.2	100%	28.8	200	54.7
Busoga	Mayuge	13,329	6	53	13,195	13,372	91	86	37	214	16.0	6.8	6.4	2.8	83%	86.5	85.7	92.1
Bugisu	Mbale City	17,477	79	452	17,131	17,656	238	287	44	569	32.2	13.5	16.3	2.6	89%	129.5	82.3	108.8
Bugisu	Mbale	11,460	2	17	11,638	11,686	22	26	4	52	4.4	1.9	2.2	0.3	100%	94.1	100	70.3
Ankole	Mbarara City	15,819	47	310	15,367	15,761	174	220	125	519	32.9	11.0	14.0	8.1	102%	16.4	100	106.9
Ankole	Mbarara	3,770	1	27	3,757	3,782	13	12	7	32	8.5	3.4	3.2	1.9	100%	127.6	100	73.7
Ankole	Mitooma	6,952	1	14	6,945	6,966	10	11	5	26	3.7	1.4	1.6	0.7	100%	104	100	64
North Central	Mityana	13,373	11	90	12,458	12,662	110	94	32	236	18.6	8.7	7.4	2.6	9%	75	109.1	66.1
Karamoja	Moroto	3,335	8	240	3,317	3,370	37	16	62	115	34.1	11.0	4.7	18.7	125%	100	112.5	84.6
West Nile	Moyo	3,326	4	90	3,220	3,271	25	26	25	76	23.2	7.6	7.9	7.8	100%	73.9	100	60.9
South Central	Mpigi	9,920	4	50	9,832	9,936	42	62	14	118	11.9	4.2	6.2	1.4	100%	56.8	100	18.9
North Central	Mubende	16,673	28	150	16,480	16,796	161	155	105	421	25.1	9.6	9.2	6.4	86%	14.2	78.6	9
North Central	Mukono	24,961	17	68	24,913	25,143	98	132	62	292	11.6	3.9	5.2	2.5	100%	64.8	76.5	34.5
Karamoja	Nabiratuk	3,124	0	0	3,020	3,032	8	4	5	17	5.6	2.6	1.3	1.7		110.5		115.8
Karamoja	Nakapipirit	3,118	0	0	3,087	3,122	23	12	6	41	13.1	7.4	3.8	1.9		82.9		60
North Central	Nakaseke	8,635	8	93	8,404	8,563	68	91	23	182	21.3	7.9	10.6	2.7	88%	97.4	50	18.5
North Central	Nakasongola	7,031	2	28	6,919	7,058	63	76	11	150	21.3	8.9	10.8	1.6	0%	16.9	0	2.4
Busoga	Namayingo	6,816	2	29	6,749	6,834	47	38	22	107	15.7	6.9	5.6	3.3	150%	87.8	100	79.6
Bugisu	Namisindwa	11,478	1	9	11,374	11,432	40	18	7	65	5.7	3.5	1.6	0.6	100%	55.2	100	22.4
Busoga	Namatumba	7,000	0	0	6,981	7,033	23	29	5	57	8.1	3.3	4.1	0.7		96.5		101.8
Karamoja	Napak	6,019	3	66	5,984	6,065	53	28	34	115	19.0	8.7	4.6	5.7	100%	81.1	100	78.3

Region	Local Government	Deliveries	Maternal deaths	Maternal deaths among 100,000 deliveries	Livebirths	Total Births	Fresh still births (#)	Macerated still births (#)	Newborn deaths - 0-7 days (#)	Perinatal deaths Reported (#)	IPMR/ 1000	FSBR/ 1000	MSBR/ 1000	ENND/ 1000	MDN (HMIS 004)	PDN (HMIS 019)	MDR (HMIS 020)	PDR (HMIS 017)
West Nile	Nebbi	13,532	15	103	13,417	13,657	90	150	63	303	22.2	6.6	11.0	4.7	100%	85.7	100	95.8
Teso	Ngora	5,911	1	17	5,592	5,666	39	35	24	98	17.3	6.9	6.2	4.3	100%	44.8	100	47.1
Tooro	Ntoroko	2,488	2	80	2,450	2,482	13	19	8	40	16.1	5.2	7.7	3.3	100%	108.6	50	97.1
Ankole	Ntungamo	17,910	8	45	19,112	19,266	62	92	26	180	9.3	3.2	4.8	1.4	88%	61.7	87.5	50.9
Acholi	Nwoya	6,409	3	47	6,347	6,441	31	63	30	124	19.3	4.8	9.8	4.7	100%	108.9	100	108.1
West Nile	Obongi	3,544	2	56	3,402	3,452	21	29	22	72	20.9	6.1	8.4	6.5	100%	48.3	100	10.3
Acholi	Omoro	6,057	1	17	5,982	6,023	15	26	23	64	10.6	2.5	4.3	3.8	100%	90.6	100	71.9
Lango	Otuke	3,910	1	26	3,882	3,898	12	4	8	24	6.2	3.1	1.0	2.1	100%	96.3	100	85.2
Lango	Oyam	18,034	23	128	17,590	17,763	88	85	154	327	18.4	5.0	4.8	8.8	100%	87.8	100	87.2
Acholi	Pader	6,002	4	67	5,941	5,989	27	21	19	67	11.2	4.5	3.5	3.2	100%	100	100	93.9
West Nile	Pakwach	6,583	2	30	6,566	6,618	25	27	17	69	10.4	3.8	4.1	2.6	100%	71.3	100	50.6
Bukedi	Pallisa	13,829	11	80	13,654	13,848	96	98	70	264	19.1	6.9	7.1	5.1	100%	98.5	100	78.6
South Central	Rakai	8,243	2	24	8,200	8,309	46	63	6	115	13.8	5.5	7.6	0.7	100%	25.9	50	25
Kigezi	Rubanda	7,865	2	25	7,801	7,821	11	9	7	27	3.5	1.4	1.2	0.9	100%	104	100	108
Ankole	Rubirizi	3,734	0	0	3,717	3,740	10	13	5	28	7.5	2.7	3.5	1.3		100		100
Kigezi	Rukiga	2,984	1	34	2,974	2,997	9	14	9	32	10.7	3.0	4.7	3.0	100%	100	100	100
Kigezi	Rukungiri	14,213	8	56	14,180	14,288	28	80	118	226	15.8	2.0	5.6	8.3	100%	109.6	100	109
Ankole	Rwampara	2,816	0	0	2,803	2,815	6	6	2	14	5.0	2.1	2.1	0.7		84.6		76.9
South Central	Sembabule	6,432	4	62	6,374	6,425	21	30	8	59	9.2	3.3	4.7	1.3	100%	66.1	100	57.1
Teso	Serere	12,228	5	41	12,230	12,262	15	17	10	42	3.4	1.2	1.4	0.8	140%	56.1	120	61
Ankole	Sheema	9,472	3	32	9,442	9,520	26	52	22	100	10.5	2.7	5.5	2.3	100%	100	100	98
Bugisu	Sironko	11,717	1	9	11,611	11,678	25	42	5	72	6.2	2.1	3.6	0.4	100%	80.9	100	102.9
Teso	Soroti City	7,790	16	205	7,822	7,996	95	79	31	205	25.6	11.9	9.9	4.0	144%	145.4	143.8	50
Teso	Soroti	6,245	0	0	6,289	6,327	20	18	8	46	7.3	3.2	2.8	1.3		68		150.3
West Nile	Terego	8,058	4	50	7,988	8,079	39	52	38	129	16.0	4.8	6.4	4.8	25%	27.6	100	28.5
Bukedi	Tororo	21,939	15	169	21,742	21,958	127	89	84	300	13.7	5.8	4.1	3.9	93%	81.9	100	73.1
South Central	Wakiso	58,046	23	52	57,773	58,449	345	331	138	814	13.9	5.9	5.7	2.4	57%	2.6	91.3	36.1
West Nile	Yumbe	24,750	10	40	24,348	24,509	77	84	56	217	8.9	3.1	3.4	2.3	80%	81.4	70	47.5
West Nile	Zombo	9,145	5	55	9,037	9,153	55	61	29	145	15.8	6.0	6.7	3.2	100%	119.7	80	83.9

