NATIONAL GUIDELINES FOR MATERNAL AND PERINATAL DEATHS SURVEILLANCE AND RESPONSE IN NIGERIA

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MARCH, 2015

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FOREWORD

Reporting and tracking maternal and perinatal deaths and response to reduce preventable deaths remain major challenge in Nigeria. The first 28 days of life – the neonatal period – is a critical time for survival of the child. Every day in Nigeria, about 700 babies die (around 30 every hour). This is the highest number of newborn deaths in Africa, and the second highest in the world. A staggering 33,000 Nigerian women die each year giving birth, and for every maternal death, at least seven newborns die and a further four babies are stillborn. Going by the report of the 2013 DHS report, Nigeria is unable to meet MDGs 4 & 5 as maternal mortality ratio remains 576 per 100,000 live births and neonatal mortality 37 per 1000 live births despite plans to reduce maternal mortality to 250 per 100,000 live births and neonatal mortality to 27 per 1000 by 2015.

It is generally agreed that the causes of maternal , neonatal, infants and under-five mortality are preventable through systematic public health education and strengthening of the health system blocks which deal with the three delays: delay in seeking care, delay to access health care and delay in receiving quality care.Achieving the latter is pivoted on MNH death audits and response to the recommendations made from the audits.

In view of this, the Federal Ministry of Heath, in collaboration with the professional Associations; (Society of Obstetricians and Gyneacologists of Nigeria (SOGON) and Paediatric Association of Nigeria (PAN), as well as Nigerian Society of Neonatal Medicine (NISONM), Development partners and other stakeholders in reproductive, maternal and child health in Nigeria, provided technical support to the development of this guideline and tools to routinely track all maternal and perinatal deaths in Nigeria. Effective conduct of these audits with result in improved care for women and their babies. This will improve the knowledge and skills of health care provider in providing quality maternal and newborn care during birth and immediately after. The guideline and the tools provide direction and instructions required for the establishment of Maternal Perinatal Deaths Surveillance Response in Nigeria. The prompt response to the recommendations made during the audits of the maternal and perinatal deaths will improve quality of care reduce maternal and newborn deaths significantly in Nigeria.

The unprecedented success of the development process was made possible by the contributions from a number of individuals and organisations. I wish to acknowledge the technical expertise of the Lead Consultant, Dr. Oladipo Shittu and his team; members of the National Reproductive and Child Health, Technical Working Groups under the leadership of Prof A.O Ladipo and Prof Okolo respectively; and our development partners namely World Health Organisation(WHO), United Nations Population Fund (UNFPA) , United Nations Children Fund (UNICEF), Evidence for Action, Partnership for Transforming Health System (PATHS2/DFID) Action Network in Nigeria, Jhpiego, Save the Children in Nigeria, Safe Motherhood branch of the Reproductive Health Division and New Born branch of the Child Health Division of Department of Family Health, Federal Ministry of Health.

I highly recommend this document for all stakeholders: Federal Health Institutions, State Government, Government Agencies, Development Partners, Non-Governmental Organisations and Faith-based Health Institutions. I hope that it will be put to practical use at all levels across the country.

Dr Khaliru Al-hassan
Hon. Minister of Health, Federal Republic of Nigeria
March,2015

ACKNOWLEDGEMENT

The Federal Ministry of Health, in collaboration with Development Partners, has developed the National guidelines for the conduct of Maternal and Perinatal Death Surveillance and Response (MPDSR) in Nigeria as recommended by World Health Organization in 2004. The development of this document is a major breakthrough for reduction of preventable maternal and newborn deaths in Nigeria.

The Ministry would like to extend its sincere thanks and gratitude to organizations and persons who contributed considerable time and effort in ensuring the development of this National guideline. Special thanks go to the Society for Obstetrics and Gynecologists of Nigeria (SOGON) and Nigeria Society of Neonatal Medicine (NISONM) for their hard work, technical input and leading the process for the institutionalization of Maternal and Perinatal Death Surveillance and Response in Nigeria.

I commend the support of our Development partners notably WHO, UNICEF, UNFPA, Evidence for Action, Save the Children for the time and resources committed to the development of this policy document. My appreciation goes to all other partners for their technical inputs during the process for the development of this National guideline for the conduct of MPDSR in Nigeria.

My gratitude also goes to the staff of Safe Motherhood branch of Reproductive Health Division and Newborn branch of Child Health Division of the Department of Family Health, under the able leadership of Dr. Kayode Afolabi and Dr Bose Adeniran respectively for their commitment and concerted efforts in ensuring that this Policy document which is long overdue becomes a reality.

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ABBREVIATIONS

ANC	Antenatal Care
APN	Association of Pathologists of Nigeria
APHPN	Association of Public Health Physicians of Nigeria
CBCA	Criterion-Based Clinical Audits
CBMDSR	Community-Based Maternal and Perinatal Death Surveillance and Response
CBMPDR	Community-Based Maternal and Perinatal Death Review
CEMD	Confidential Enquiries on Maternal Death
CHEW	Community Health Extension Worker
CHO	Community Health Officer
CMD	Chief Medical Director
CSO	Civil Society Organization
DPHC	Department of Primary Health Care
FCT	Federal Capital Territory
FIGO	International Federation of Gynaecology and Obstetrics
FMOH	Federal Ministry of Health
HOD	Head of Department
HMIS	Health Management Information System
JCHEW	Junior Community Health Extension Worker
LGA	Local Government Area
LOGIC	Leadership in Obstetrics & Gynaecology for Impact and Change
MA	Medical Audits
M & E	Monitoring and Evaluation
MDG	Millennium Development Goals
MDR	Maternal Death Review
MDSR	Maternal Death Surveillance and Response
MNCH	Maternal, Newborn and Child Health
MMR	Maternal Mortality Ratio
MPDR	Maternal and Perinatal Death Review
MPDSR	Maternal and Perinatal Death Surveillance and Response
NDHS	National Demographic Health Survey
NCWS	National Council of Women Societies
NGO	Non-Governmental Organization
NHIS	National Health Insurance Scheme
NPopC	National Population Commission
NPHCDA	National Primary Health Care Development Agency
NMCN	Nursing and Midwifery Council of Nigeria
PAN	Paediatric Association of Nigeria
PHC	Primary Health Center
PDR	Perinatal Death Review
PMR	Perinatal Mortality Rate
PNA	Paediatric Nurses Association
RH	Reproductive Health
SMOH	State Ministry of Health
SOGON	Society of Gynaecology and Obstetrics of Nigeria
SONM	Society of Neonatal Medicine
SPHCDA	State Primary Health Care Development Agency
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
UN	United Nations
VA	Verbal Autopsy
VVF	Vesico-Vaginal Fistula
WHO	World Health Organization
WRA	Women of Reproductive Age

INTRODUCTION

The expected medical and social outcome of every intended pregnancy is to have a healthy mother with a baby that is endowed with full potentials for its own existence and survival. This outcome is cherished in Nigeria that is home to one-in-five Africans, with its population of over 175 million[1], an estimated 1% of global population. Incidentally, the country accounts for a disproportionate 10% of global maternal deaths[2]; with the death of 33,000 women each year, and for every maternal death at least seven newborns die and a further four babies are stillborn. If the country's quest of attaining the Millennium Development Goals 4 & 5 by 2015 and be ranked among the top 20 leading global economies by 2020 are to remain on course, these mortalities must be sharply reduced.

Recent global estimates suggest that annual pregnancy-related deaths of more than 4.3 million continue to outstrip the combined burden of deaths from AIDS, Tuberculosis and Malaria of 3.9 million, despite international efforts[4]. Almost 99% of these deaths occur in the developing countries while Sub-Sahara Africa accounts for more than half of all. A similar pattern applies to perinatal deaths. A major reason for the wide disparity in these burdens of maternal and perinatal deaths across countries rest in the manner the problem is confronted. Whereas known evidence-based interventions are deployed into preventing maternal and perinatal deaths in the developed countries, this is less applicable to their developing counterparts. Secondly, for every maternal and perinatal death that occurred in the former, a review is carried out to understand and identify gaps in services that warranted the death with a view to preventing a recurrence. This medical audit process, which compels the health system to reflect on what might have gone wrong at each maternal death, is non-existent in many developing countries including Nigeria[5].

Researches on maternal and perinatal mortality in Nigeria and elsewhere have shown that the leading causes of both are linked and are preventable. In Nigeria, the common causes of maternal deaths are haemorrhage, infections, hypertensive diseases, obstructed labour and unsafe abortion. Similarly, most perinatal deaths result from perinatal hypoxia, preterm delivery and infection[2]. Although these factors prevail in both developed and developing countries, the issues are compounded in the latter by the socio-cultural milieu, poverty, lack of essential amenities and deficient health care services. Although these sporadic surveys have given these broad insights into the determinants of maternal and perinatal deaths, their findings fall short of the needed information for preventing future deaths in the different locations and settings of Nigeria where large number of death of mothers and newborns occur.

In 2004, the WHO, in a landmark publication titled "Beyond the Numbers", recommended that all countries that had not established medical auditing systems for the reduction of maternal deaths[4],should do so without further delay. Whereas many countries have since responded and have also embarked on perinatal death reduction, Nigeria's response has been limited. The impediments to Nigeria's effort were soon identified and targeted by a synergy of efforts of the International Federation of Gynaecology & Obstetrics (FIGO) and the Society of Gynaecology & Obstetrics of Nigeria (SOGON) through *their Leadership in Obstetrics & Gynaecology for Impact and Change (LOGIC)* initiative. This initiative's effort at "improving policy and practice by strengthening FIGO member associations and using their position and knowledge to facilitate and contribute to these improvements, leading to better maternal health for under-served populations in low- and middle-resource countries", assembled Nigerian stakeholders on maternal health between March and July 2012 to develop a pilot medical audit process that will engender meaningful analysis of maternal deaths for the improvement of maternal health across the country, and subsequently included perinatal death review. Lessons learnt from this pilot will inform its scale up to dwell on every maternal and perinatal death and "Near Misses" in the country.

[1]http://en.wikipedia.org/wiki/Demographics of Niger#Population. Accessed on April 21, 2014.
[2]Federal Ministry of Health. Saving newborn lives in Nigeria: Newborn health in the context of the Integrated Maternal, Newborn and Child Health Strategy. 2nd edition. Abuja. Federal Ministry of Health, Save the Children, Jhpiego (2011)
[3]WHO, UNFPA, The World Bank. Trends in maternal mortality: 1990-2008. Geneva. World Health Organization; 2010
[4]WHO (2004) Beyond the Numbers: Reviewing maternal deaths and complications to make pregnancy safer.
[5]WHO (2013) Maternal death surveillance and response: technical guidance information for action to prevent maternal death.

BACKGROUND

Nigeria has the largest population in Africa with a currently estimated population of over 175 million people[1], increasing at 3.1 percent annually (2006 census). The total population of female aged 15-49 years, which constitute women of reproductive age, represents 51 percent of the total population of women; while adolescent girls aged 15-19 constitute over 11 percent of the same population[6]. These segments of the population are major contributors to fertility as explained by the prevailing high Total Fertility Rate of 5.5; which ranges from as low as 4.7 in the urban to as high as 6.2 in the rural areas[7].

Based on the 2013 NDHS, 13.7percent of teenage girls in Nigeria are already mothers or pregnant with their first child and most of these girls lack access to appropriate health care arrangements for safe conditions during pregnancy, labour and delivery and the post-partum and neonatal period.

The glimpse at the healthcare responsiveness of women during the reproductive years are aptly portrayed by their Antenatal care (ANC) attendance, use of skilled supervision at childbirth, quality of health care provider(s) and place of delivery. As reported by the recent 2013 NDHS[7], 61 percent of pregnant women consulted a skilled healthcare provider (doctor, nurse, midwife) at least once for antenatal care for their most recent births, in the five years preceding the survey; while the 2008 NDHS report had shown that 36 percent of pregnant women never received ANC at all.

For delivery care, the 2013 NDHS revealed that 38 percent of births were supervised by skilled health provider while only 36 percent of these births took place in health facility. By rural/urban comparison, 67 percent of mothers in the urban had their births assisted by skilled attendants, against 23 percent of their rural counterparts.

Also, data on births, as presented by 2013 NDHS, showed that 64.2 percent of births in Nigeria still occurred outside healthcare facilities. These poor levels of essential service utilization contribute to the currently high national maternal mortality ratio of 576/100,000 live births and neonatal death rate 37/1000 live births[7].

This persistence of high maternal and perinatal mortality calls for a review of existing strategies. Adopting the Maternal and Perinatal Death Surveillance and Response (MPDSR), which is a veritable process of identifying both direct and indirect causal factors of these deaths, will enhance the efforts at preventing further deaths and provide more credible data than currently exists.

The country's health system has two broad categories: the public and the private-for-profit facilities. The public health facilities are stratified into three levels: the primary, secondary and tertiary. These are respectively operated by the Local Government Area, State and Federal Governments. It is estimated that the private sector accounts for about 72% of the secondary level health care facilities in Nigeria[8].

[6]National Population Commission (2006). 2005 Population Census of the Federal Republic of Nigeria. Abuja, National Population Commission.

[7]Nigeria Demographic and Health Survey 2013. Preliminary Report. National Population Commission Abuja, Nigeria. Measure DHS. ICF International, Calverton, Maryland, USA.

RATIONALE

Recently, the UN Commission on Information and Accountability of the Global Strategy for Women and Children's Health recommended the implementation of an accountability framework that is based on national oversight, accurate and comprehensive monitoring of results, regular multi-stakeholder review of data and responses, as well as all the key features of traditional surveillance and response systems. Significant reduction of maternal and perinatal mortality will require counting every case and collection of information to permit an effective response that prevents future deaths.
The vision 'no woman should lose her life when giving birth' reflects the human rights perspective on maternal mortality and would require that 90% of causes of maternal deaths (when diagnosed and treated in a timely manner), be avoided. Knowing the level of maternal and perinatal mortality is not enough; we need to understand the underlying factors that led to the deaths. Each maternal and perinatal death or case of life-threatening complication has a story to tell and can provide indications on practical ways of addressing its causes and determinants.

The Maternal and Perinatal Death Surveillance and Response (MPDSR) approach provides the means to understand the underlying causes and factors that lead to maternal and perinatal deaths and develop solutions to save the lives of others. It provides evidence of where the main problems in overcoming maternal and perinatal morbidity and mortality may lie, produce an analysis of what can be done in practical terms and highlight the key areas requiring recommendations for health sector and community action as well as guidelines for improving clinical outcomes.

EXPERIENCES ON MPDSR IN NIGERIA

Although this is the first national effort at establishing the MPDSR process in Nigeria, a number of states have been involved in various pilot schemes to establish MDR processes in their respective domains as far back as 2009. Drawing support from various international agencies, Ebonyi, Katsina, Yobe, Zamfara and Ogun states and the FCT have attained varying levels of implementation of the MDR process. On the other hand, states like Lagos, Delta, Ondo and Jigawa have drawn inspiration and resources from within to start-up their own processes. None of these initiatives has yet included perinatal components and neither are surveillance and response processes for maternal deaths commenced.

The development of these guidelines therefore has the prospect of streamlining these diverse efforts for more effectiveness and efficiency, in readiness for the desired nation-wide coverage. It will also address the gap of surveillance and response on perinatal deaths.

DEFINITIONS & EXPLANATION OF TERMINOLOGIES

Maternal Death
This is "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes".

Pregnancy-related Death
This is "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death".

[5]Federal Ministry of Health. Integrated Maternal, Newborn and Child Health Strategy. Abuja; 2007.

Late Maternal Death
"The death of a woman from direct or indirect obstetric causes; occurring more than 42 days, but less than one year after termination of pregnancy". For example, a woman that died from renal failure three months after delivery that was complicated by eclampsia.

Severe Acute Maternal Morbidity (SAMM or "Near-miss")
"Any pregnant or recently delivered woman (within six weeks after termination of pregnancy or delivery), in whom immediate survival is threatened and who survives by chance or because of the hospital care she receives". Examples are: Women with VVF or ruptured uterus from prolonged obstructed labour.

Perinatal death
A death that occurred around the time of birth; it includes both still births and early neonatal deaths.

The perinatal period
This commences at 28 completed weeks of gestation and ends seven completed days after birth.

Stillbirth
This is death prior to the complete expulsion or extraction from its mother of a fetus/baby of 1000 grams or 28 weeks gestation; the death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles.

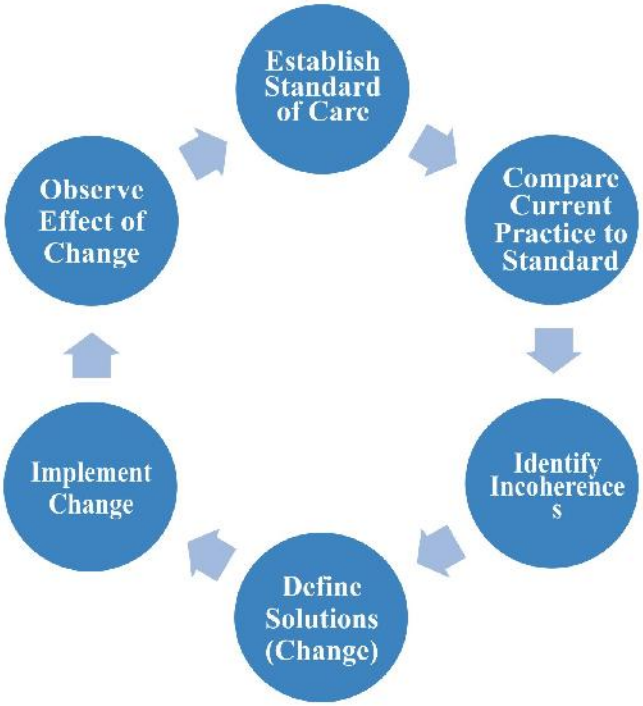
Early neonatal deaths
These are deaths of newborn babies occurring during their first seven days of life.

Live birth
This is the complete expulsion or extraction from its mother of a fetus/baby of 1000 grams or 28 weeks gestation which after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each fetus/ baby of such a birth is considered live birth.

Medical Audits (MA)
"It is a systematic and critical analysis of quality of care which includes procedures for diagnosis, treatment, care and outcomes for patients". It is purposed for appraising the extent to which individual patients were served or not served with specified standards of care. The process consequently reveals any substandard practices within the facility which when remedied, lead to improvements in quality of care and services and preserves the lives of patients.
Before MA can be established in a facility, it is necessary that the service providers be trained and acquainted with the standard protocols and guidelines for service provision, which must themselves be evidence-based, because it is on their backdrop that each case management is audited. Good record keeping is another prerequisite to beneficial MA.
Its practice rests on the following principles:

- A constant quest for service improvement based on audit results.
- Upholding of evidence-based practices.
- The MA process is not punitive; "no blame" is apportioned to anyone thereof.
- There is respect of confidentiality throughout the process; "no name" is used.

MA takes the form of a process that involves the following cycle of events (Figure 1):



This MA process is used to study clinical practice, severe morbidities or maternal deaths; its adaptation for these purposes includes the following:

1. Verbal Autopsy (VA) – conducted at the community level to audit maternal and/or perinatal deaths;
2. Maternal Death Review (MDR), Severe Acute Maternal Morbidity Review ("Near miss") and Criterion-based Clinical Audits (CBCA) at health care facility level; and
3. Confidential Enquiries into Maternal Deaths (CEMD) at state, zonal or national levels.

The Maternal and Perinatal Death Reviews (MPDSR)

"This is a qualitative, in-depth investigation into the causes of, and circumstances surrounding maternal and perinatal deaths which occur in health care facilities." Recorded information and interviews conducted to "re-create" and understand the series of events that occur leading to a maternal or perinatal death, with a view to identifying avoidable and remediable factors that will prevent maternal and perinatal deaths and improve maternal and perinatal health in future.

It is purposed to characterize the cause and circumstances of each maternal and perinatal death at facility, state and national levels, with a view to determining strategies for preventing future recurrence.

The principles of the MPDSR are as follows:

- It entails reviewing all the maternal and perinatal deaths that occur in each health facility;
- Its conduct involves the people who were directly involved in managing the deceased.
- Its conduct is multidisciplinary and should be institutionalized to constitute a regular feature of hospital functions.

Before establishing an MPDSR process, it is essential that some prerequisites be established because of the differences between MPDSR and traditional clinical review processes, which include:

- Clinicians involved in maternal and perinatal health care must be cooperative and willing to participate and make accurate reportage on their cases.
- The MPDSR process must engender confidentiality and impartiality all the time, no information on the platform must be disclosed outside the team.

- All participating staff must know that the process does not involve apportioning blame on anybody.
- All participants must have advance knowledge of the anonymous conduct of the entire process.
- The MPDSR process involves "no name, no blame" in its conduct and outcome.

The institutionalization of the MPDSR is widely acclaimed for having many advantages that include:

- Improvement of professional performances of clinical staff;
- Improve allocation of resources for improved services; as a result of the process of monitoring previous recommendations
- Better cost-effectiveness as a method of medical audit
- Serving as valuable advocacy tool for garnering increased participation of the community, government and other stakeholders in health care.

Maternal Death Surveillance and Response (MPDSR)

This is a form of continuous surveillance that links the health information system and quality improvement processes from local to national levels, which includes the routine identification, notification, quantification and determination of causes and avoidability of all maternal deaths, as well as the use of this information to respond with actions that will prevent future deaths. The primary goal of MPDSR is to eliminate preventable maternal mortality by obtaining and strategically using information to guide public health actions and monitoring their impact (WHO)[5].

Maternal and Perinatal Death Surveillance and Response (MPDSR)

This is a form of continuous surveillance that links the health information system and quality improvement processes from local to national levels, which includes the routine identification, notification, quantification and determination of causes and avoid ability of all maternal and perinatal deaths, as well as the use of this information to respond with actions that will prevent future deaths.

GOALS OF MPDSR

The goal of this initiative is to eliminate preventable maternal and perinatal deaths.

The primary goal of MPDSR is to eliminate preventable maternal and perinatal mortality by obtaining and using information on each maternal and perinatal death to guide public health actions and monitor their impacts. MPDSR expands on ongoing efforts to provide information that can be used to develop programmes and interventions for reducing maternal and perinatal morbidity and mortality and improving access to and quality of care that women and babies receive during pregnancy, delivery, and the puerperium. MPDSR aims to provide information and data that will lead to specific recommendations and actions and improve the evaluation of their effectiveness.

SPECIFIC OBJECTIVES OF MPDSR

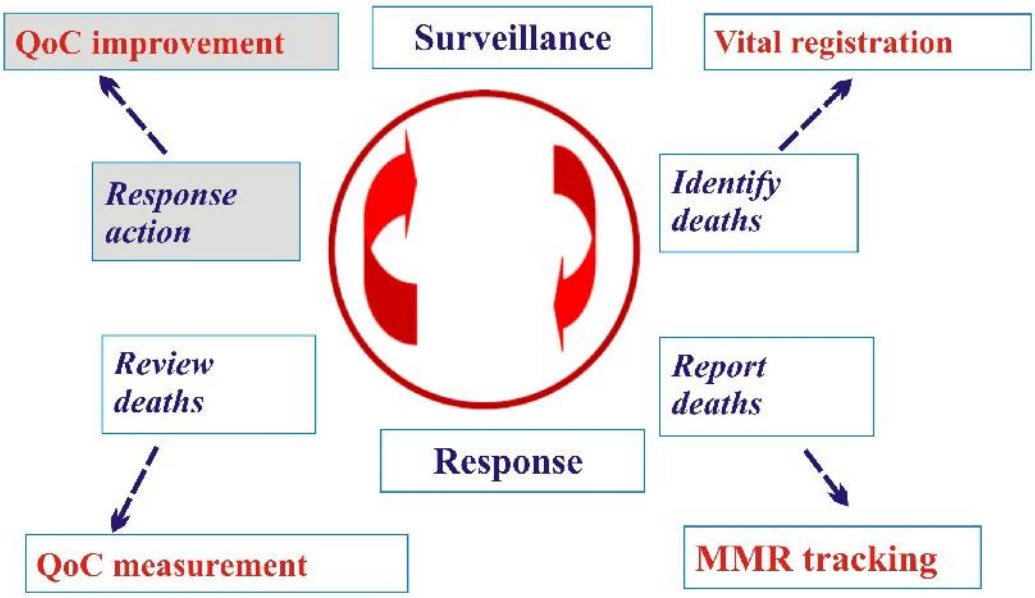
1. To notify and collect accurate data on all maternal and perinatal deaths in the country, including:
   a) Notify on every maternal and perinatal death
   b) Number, identify and report all maternal and perinatal deaths; and
   c) Determine the causes of death, contributing factors and review all maternal and perinatal deaths (using facility records, verbal autopsies);

2. To analyze and interpret data collected, in respect of:
   a) Trends in maternal and perinatal mortality;
   b) Causes of death (medical) and contributing factors (quality of care, barriers to care, non-medical factors e.g. socio-cultural, religious factors, health seeking behaviour, etc.);
   c) Avoidability of the deaths, focusing on those factors that can be remedied;
   d) Risk factors, groups at increased risk, and maps of maternal and perinatal deaths;
   e) Demographic and socio-political and religious factors.

3. To use the data to make evidence-based recommendations for action to decrease maternal and perinatal mortality. Recommendations will be on applicable subjects, such as:
   a) community education and involvement;
   b) timeliness of referrals;
   c) access to and delivery of services;
   d) quality of care;
   e) training needs of healthcare personnel or protocols use;
   f) deployment of resources where they are likely to have impact;
   g) regulations and policy;
   h) Billing and cost of care, emergency services; and
   i) Advocacy for MNCH interventions.
4. To disseminate findings and recommendations to civil society, health personnel, and Decision/Policy makers to increase awareness about the magnitude, social effects and preventability of maternal and perinatal mortality.
5. To ensure actions take place, by monitoring, evaluating and reporting the implementation of recommendations.
6. To inform programmes on the effectiveness of interventions and their impact on maternal and perinatal mortality, including feedbacks.
7. To allocate resources more effectively and efficiently by identifying specific needs.
8. To enhance accountability for maternal and perinatal health.
9. To improve maternal and perinatal mortality statistics and move towards attaining complete civil registration and vital statistic records.
10. To guide and prioritize research related to maternal and perinatal mortality.
11. To strengthen referrals and linkages between and across the levels of care.

Additionally, MPDSR presents a rare opportunity for gathering information and allows for its strategic use in guiding public health actions and monitoring the impact of those actions. Effective implementation of MDPSR can directly impact the quality of care and improve maternal and perinatal health outcomes (Figure 2).

Figure 2: Showing the Relationship between Maternal and Perinatal Death Surveillance (MPDSR) and Maternal and Perinatal Death Review (MPDR) Cycle of Activities



Government accountability for maternal and perinatal health requires periodic and transparent dissemination of key results, particularly maternal and perinatal mortality, and its discussion with stakeholders, including civil society. The use of stories generated from the MPDSR process to increase awareness of women and their needs is one way to use evidence to support the garnering of more or different resources. The evidence and stories behind the maternal and perinatal deaths are the ingredients for powerful and effective advocacy for saving mothers' and babies' lives.

TARGET AUDIENCE

These guidelines are intended for use by individuals and organizations that are involved in promoting maternal, newborn and child health (MNCH) across the country, including:

- Policy makers in all the three arms of government and at the three tiers of political administration;
- Health systems and facility administrators;
- MNCH service managers and providers (Doctors, Midwives & Nurses, Laboratory Officers, CHEWS and Pharmacists);
- Non-Governmental Organizations (NGOs)
- Lawyers;
- Women's Groups and
- Community leaders

PROPOSED PHASES OF ESTABLISHMENT OF MPDSR IN NIGERIA

This document presents the philosophies, strategies and methods that were articulated by Nigerian stakeholders in maternal and perinatal health for the establishment and operation of a Maternal and Perinatal Surveillance and Response (MPDSR) process in Nigeria. The Federal Ministry of Health acknowledged the existence of some forms of ongoing medical audits in the country, including: facility-based clinical reviews, community and facility-based surveys, the efforts of the National Primary Health Care Development Agency (NPHCDA) at establishing medical audits in Primary Health Care Centres (PHCs) and of some state governments.

It also acknowledged the wider inherent benefits of establishing the full range of medical audits across the country but considered it more expedient to start the process with a pilot scheme that will involve all Federal Tertiary Health Facilities, which will occur concurrently with the ongoing efforts of the NPHCDA at the PHC level (Table 1). A review of both schemes after one year interval will inform the scale up of the entire process to the states and the private sector. Information and experiences gathered from states that have already commenced the scheme will also be valuable to this review. These subsequent phases of the scheme will enlist the full involvement of the community outreach efforts of the National Population Commission (NPopC) and the National Health Insurance Scheme (NHIS).

Table 1: Showing the Phases of Maternal Perinatal Death Surveillance Review (MPDSR) Process in Nigeria

Phases of MPDSR Establishment	Coverage	Responsible Offices	Timeline	Source of Funds for
Phase 1 (Pilot)	All Federal Government-owned Tertiary Health Care Facilities	***National Level:*** Office of Honourable Minister of Health	1st Calendar Year	• Development Partners • FMOH
		Facility Level: Offices of Chief Medical Director (CMD)		• Office of CMD • Development partners
Phase 1 (co-pilot)	All Primary Health Centres (PHC facility-based & Verbal Autopsies)	NPHCDA & SPHCDAs		• NPHCDA & SPHCDAs
Phase 2	Expansion to State Government-owned Tertiary & Secondary Health Care Facilities (including all Private-for Profit Hospitals)	***State Ministry level:*** Office of Honourable Commissioner for Health	2nd Calendar Year	• Development Partners • FMOH • SMOH
		Facility Level: Offices of Medical Director		• Office of the Medical Director • Development partners
		PHC Facility Managers		• PHC Manager
Phase 3	All Communities (through Verbal Autopsies)	Community Social Insurance Scheme (NHIS)	3rd Calendar Year	• NHIS
		National population Commission (NPopC)		• NPopC

Prerequisites for Maternal and Perinatal Death Surveillance and Response

The Stakeholders Group on MPDSR adjudged that before a national scheme could be successfully established, it will be necessary to ensure the following: favourable policy, ownership and leadership by the FMOH and SMOHs, availability of resources for implementation, training and data management. In this regard, it identified the participation of the following stakeholders as critical: Office of the President/First Lady, National Assembly, Federal Ministry of Health, Federal Ministry of Women Affairs, National Primary Health Care Development Agency (NPHCDA), National Council of Women's Societies (NCWS), Society of Gynaecology and Obstetrics of Nigeria (SOGON), Paediatric Association of Nigerian (PAN), Nigerian Society of Neonatal Medicine (NISONM), Nigerian Society of Anaesthetists (NSA), Association of Pathologists of Nigeria (APN), Paediatric Nurses Association (PNA), Association of Public Health Physicians of Nigeria (APHPN), Nursing and Midwifery Council of Nigeria (NMCN), Development Partners; Civil Society Organizations and the Media.

General Characteristics of Nigerian MPDSR Scheme

The Nigerian MPDSR scheme should have the following characteristics:

- The review process will comprise both Facility-Based Reviews and Verbal Autopsies at the community level on every maternal and perinatal death. Analysis of the deaths shall be done at facility, state and national levels to track their characteristics and causation, proffer and track the implementation of recommendations for preventing a recurrence.
- The reviews and verbal autopsies will relate to maternal and perinatal deaths as clearly defined above.
- This described process will be pre-tested to ensure that the format and forms are acceptable and easy to use.
- After the pretesting period (not more than six months) it will be introduced to all the pilot phase facilities.

- The pilot phase in reference will involve: the conduct of facility-based reviews in all Federal Government-owned University Teaching Hospitals and Medical Centers across the country and the deployment of Verbal Autopsy at the community level in sites covered by the NPHCDA scheme, and will both span a period of one year. Best practices from both will inform the programme's scale up.
- The review process will involve holding regular local meetings at which cases will be discussed and local recommendations for action made. On a standardized form, anonymous summary of all cases will be sent in a timely manner to the state and national Maternal and Perinatal Death Surveillance and Review (MPDSR) Committees.

NATIONAL LEVEL MPDSR

A broad-based and diverse MPDSR committee should be established as one of the roll-out plans. Active involvement of and support from health providers is critical, particularly for understanding and identifying solutions for the problems that contribute to maternal and perinatal deaths in health facilities. There is also the need to engage the government for providing legal protection for families, communities, service providers and professional organizations for their role in ensuring medical practice is aligned to accepted standards.

Development of a costed implementation plan at all levels of health care implementing MPDSR is needful for a comprehensive and sustainable process.

National MPDSR Steering Committee membership

This committee shall be domiciled in the office of the Honorable Minister of Health, who will appoint its chairman (a reputable Obstetrician, nominated by the Society of Gynaecology & Obstetrics of Nigeria (SOGON)) and a co-Chair (a reputable Paediatrician, nominated by the Paediatric Association of Nigeria (PAN)/Nigerian Society of Neonatal Medicine (NISONM)). The committee secretary will be the Head, Reproductive Health Division, and Department of Family Health, Federal Ministry of Health. The other members of the committee will be as follows:

• Hon. Minister of Health nominee	(Chairman)
• Hon. Minister of Health nominee	(Co-Chair)
• Head, Reproductive Health Division	*(Secretary)
• Newborn Desk officer (FMOH)	
• Representatives of:	
○ Ministry of Women's Affairs	
○ Office of First Lady	
○ National Council of Women's Societies	
○ National Bureau of Statistics	
○ NPHCDA	
○ Development Partners	
• Representatives of National Professional Associations of:	
○ Obstetrics and Gynaecology	
○ Paediatrics / Neonatal Medicine	
○ Anaesthesia	
○ Pathology	
○ Haematology	
○ Midwifery	
• Identified CSO in Maternal and Perinatal health	
•	

*The MPDSR Desk Officer shall be of the rank of at least Assistant Director, and shall compile all MPDSR reports from all the Federal Tertiary Health Facilities and present same at Steering Committee meetings.

National MPDSR Steering Committee Appointment & Terms of Membership

1. Members will be nominated by their national professional groups or oversight organizations
2. Members should serve for a term of two years which is renewable once. The Chairman and co-chair should have a term of 3 years renewable once
3. Renewal of tenure shall be based on performance on the committee

National MPDSR Steering Committee Terms of Reference

The terms of reference are to:

1. Be responsible and accountable for the smooth operation of MPDSR in Nigeria and its regular review and publications.
2. Track accumulated data on notifications on maternal and perinatal deaths.
3. Collate reports on all maternal and perinatal deaths; ensure consistency of reporting and follow up none reporters.
4. Appoint a technical sub-committee to analyze the reports in clinical depth and make recommendations.
5. Make appropriate recommendations to the Honourable Minister of Health, for prompt dissemination and implementation.
6. Monitor implementation of recommendations.
7. Issue annual reports on key findings and recommendations.
8. Arrange training and awareness raising workshops.
9. Develop and test suitable materials.
10. Anticipate future possible expansion and plan in good time.

National MPDSR Steering Committee Resources

Resources will be required by the committee to convene and hold meetings, to process reports assembled from facilities across the country and to generate and disseminate its reports. These resources are expected to be provided for by FMOH budgets and appropriation. However, being a new scheme that is yet to be in the ministry's operational plan, initial support should come from Government and Development Partners.

National MPDSR Steering Committee Meeting Format

Meetings shall be convened by the Committee chairman, to hold quarterly. It will deliberate on submissions of its Technical Sub-Committee which would have met earlier to analyze accumulated data on notifications on maternal and perinatal deaths and reports assembled from all MPDSR facilities. Minutes of all meetings shall be recorded by the secretary. The agenda of every committee meeting should include the following:

- Deliberation on minutes of the preceding meeting.
- Reminder on MPDSR code of conduct.
- Updates on action points/recommendations made at the previous meeting.
- Presentation of the report of the Technical Sub-Committee for deliberations on all recently assembled MPDSR reports from the facilities.
- Compilation of recommendations, with specification of destination of the recommendations.

National MPDSR Steering Committee Technical Sub-Committee

This unit shall be chaired by the Secretary of the Steering Committee (the FMOH MPDSR Desk Officer) and shall include technical persons from outside the fold that the Steering Committee deems necessary to involve. Essential to its activity will be, the representative of the Department of Health Planning Research & Statistics and of Public Health Department, who keep records of notifications sent on maternal and perinatal deaths.

Code of Conduct for Steering Committee Members

Every member must pledge to abide by the code of conduct of the MPDSR process at their inauguration and they must be reminded at all meetings. The pledge is as follows:

"I, …….(name), agree to:

Respect the rules of good conduct during meetings reviewing deaths and near-miss cases in our facility:

1. Arrive on time for meetings.
2. Respect everyone's ideas and ways of expressing these.
3. Respect the confidentiality of the discussions in the group.
4. Participate actively in discussions.
5. Accept discussion and disagreement without verbal violence.
6. Agree not to hide useful information or falsify information which could allow the understanding of the case (s) and
7. Try (as much as possible as it is not easy) to accept that my own actions may be questioned.

STATE LEVEL MPDSR

At the state level, this committee (MPDSR) shall be domiciled in the office of the Permanent Secretary, State Ministry of Health, who will appoint its chairman (a reputable Obstetrician; co-Chair, a reputable paediatrician). The coordinator for reproductive health or maternal and child health in the state shall be the secretary. The other members of the committee will be as follows:

Box 2: Showing Membership of State MPDSR Steering Committee

- Chair appointed (Obstetrician) by Permanent Secretary for health
- Co-Chair (Paediatrician)
- State Coordinator of Reproductive Health(Secretary)
- Director Primary Health Care
- Director Department of Planning Research and Statistics
- Director Nursing Services
- Executive Secretary Hospital Management Board
- State Primary Health Care Development Board
- Local Government Service Commission
- Chief Pharmacist
- Chief Pathologist/Head of Laboratories & Blood Transfusion services
- Representative of State Chapter of NCWS
- Representative of State Action Network for Maternal Survival

The Terms of Reference for State level MPDSR Committee

1. Be responsible for planning and establishing the mechanism for the MPDSR at State level.
2. Identify and plan what type of review to undertake.
3. Track accumulated data on notifications on maternal and perinatal deaths.
4. Provide oversight and consultation to the local assessors.

5. Review the cases on an ongoing basis.
6. Provide support for scaling up MPDSR process to the whole state.
7. Synthesize the data, interpret the results, make recommendations for action and prepare a report.
8. Prepare annual report and plan the dissemination of the report.
9. Make recommendations to the state government on ways to reduce avoidable maternal and perinatal deaths.
10. Monitor implementation of recommendations and appropriate state response to maternal and perinatal deaths
11. Constitute a Sub-Committee, similar to the one described for Federal level that will deliberate on data of notifications on maternal and perinatal deaths, reports on MPDSR from health facilities and present same to the main committee in processed forms

FACILITY LEVEL MPDSR

In order to achieve successful implementation of the MPDSR at the facility level, the following considerations should be regarded as:

- Resources for implementation.
- Favourable policy for implementation.
- Training and re-training needs.
- Resistance to change.
- Data collection, collation and remittance.

Its successful conduct will therefore rest on the participation of the following stakeholders: Hospital Administration, Obstetricians, Nurses/Midwives, Anaesthetists, Pathologists, Haematologists, Neonatologists, Intensive care, Public health physicians, Pharmacists, and Clients.

General Characteristics of the Facility-Based MPDSR

This scheme shall be operated under the office of the Chief Medical Director (or its equivalent) of the hospital, who could personally chair it or designate his Chairman, Medical Advisory Committee (or Director of Clinical Services) to do so on his behalf. Resources for its operation shall be provided by his office.

Preparations for Establishment of Facility MPDSR

Before MPDSR mechanism is established in any facility, it is essential that the following precautions be taken:

1. All hospital staff involved in MNCH services should be re-acquainted with existing National Standards, Guidelines & Protocols that are relevant to the services they render. These include:
    a. National Obstetric Protocol.
    b. National standard Treatment Guidelines.
    c. Life-Saving Skills Manual.
    d. Modified life-saving skills Manual.
    e. Expanded life-saving skills Manual.
    f. Protocol on the treatment of Preeclampsia/Eclampsia.
    g. Protocol on the prevention & treatment of postpartum haemorrhage.
    h. Essential Newborn Care Protocol.
    i. Neonatal Resuscitation.
    j. The Kangaroo Mother Care.
2. The entire hospital should be sensitized on the MPDSR scheme. They should be made to understand that the MPDSR process does not replace the existing hospital clinical audits.

3. The process of notification on maternal and perinatal deaths should be initiated as soon as they occur. Such information should be sent to the Disease Surveillance Information Officer at the Local Government Health Department and the State Ministry of Health.
4. All the Facility MPDSR Committee members should be trained on the tenets and methods of the MPDSR.

Facility MPDSR Committee membership

The members of the committee shall comprise the following:

Box 3: Showing the Membership of Facility MPDSR Committee

Facility level (Tertiary and Secondary levels)
• Chairman, Medical Advisory Committee /Director of Clinical Services//Head of Hospital – Chairman
• Head, Obstetrics& Gynaecology - Secretary
• Head of Department :
o Nursing/Midwifery
o Paediatrics
o Pathology
o Preventive medicine
o Anaesthesia
o Haematology & Blood bank
o Labour/Maternity ward
o Neonatal ward
o Medical Records
o Medical Social Welfare
o Pharmacy
o Legal unit
o Staff directly involved in the management of the case.
o MPDSR Officers*
o Member of a local Women's Group

*The MPDSR officers shall be nominees of the HODs of Obstetric and Gynaecology and Paediatrics who will respectively assemble and present maternal and perinatal death cases to the committee.

Box 4: Showing the Membership of PHC-Level MPDSR Committee

Facility level (Primary Health Care Facility level)
• The Officer-in-charge of the facility
• The ward focal person
• Pharmacy Technician
• Medical Record officer
• Chairman, Ward Development Committee
• Community Woman leader
• Invited Community member

Facility MPDSR Committee Appointment & Terms of Membership

All the members of the committee shall be appointed by the Chief Medical Director/Medical Director/ Medical Officer in charge/ Director PHC of the health facility, who shall also include any other persons that the committee deems to be valuable to its functions. Membership of the committee shall be on the basis of the respective offices and designations held in the facility, as outlined above.

Facility MPDSR Committee Terms of Reference

The terms of reference are:

1. To identify all maternal and perinatal deaths in the hospital and promptly dispatch notifications to the Disease Surveillance Information Officer at the Local Government Health Department and State Ministry of Health.
2. To ensure facility-based MDPSR forms are completed accurately and on time.
3. To retrieve case notes as soon as possible and keep safely.
4. Hold regular MPDSR meetings at which the case(s) will be discussed in a non- threatening manner and to compile a report and recommendations for the local staff and hospital as recommended in the code of conduct.
5. To prepare MPDSR Forms and Committee Session report that is sent to the National/State Steering MPDSR committee within 72 hours.
6. To follow up MDPSR Committee local recommendations to ensure they are implemented.

Facility MPDSR Operations

Facility MPDSR process starts with a maternal and perinatal death and ends with two outcomes: the remittance of a completed form on the woman to the National/State MPDSR Officer, Department of Family Health, Federal Ministry of Health, Abuja (or the State counterpart); and the implementation of the recommendations made by the Facility MPDSR Committee after deliberating on her case.

1. Whenever a maternal or perinatal death occurs, the MPDSR Officers (Obstetric & Gynaecology /Paediatrics Residents or Medical Officers appointed by the head of Obstetric & Gynaecology / Paediatrics departments) should be informed immediately. She/he collects the deceased's case-folder within 24 hours and performs the following within 72 hours:
   a. Completes the MPDSR Form and
   b. Informs the Head of Obstetric & Gynaecology Department and head of Neonatal Unit (Head of Obstetric &Gynaecology Department is also Facility MPDSR Committee Secretary).
2. The MPDSR Secretary completes a maternal/perinatal death notification form and dispatches it to the Disease Surveillance Information Officer at the Local Government Council Health Department and State Ministry of Health, through the office of the head of the health facility.
3. The Maternal/Perinatal death report is presented by the MPDSR Officer at the next 2-4 weekly MPDSR Committee meeting of the hospital.
4. During the review, it is important that bedside causes as well as the underlying contributing factors are identified and analyzed in order to understand why the mother and/or baby died. This will also give an ample opportunity to discover avoidable or remedial factors, including sub-standard care and weaknesses in the health system. The discussion should include an in-depth analysis of the root causes of the identified shortcomings and problems. After deliberation on the Maternal/Perinatal deaths before it, the MPDSR Committee makes recommendations and action plans. The Committee Secretary does the following:
   a. Writes the session report on the meeting
   b. Completes the MPDSR proforma (in triplicates) and
   c. Dispatches both to the MPDSR Desk Officer in the Federal/State Ministry of Health (Department of Family Health) through the Office of the CMD (or his equivalent).

The Types of Death to Track

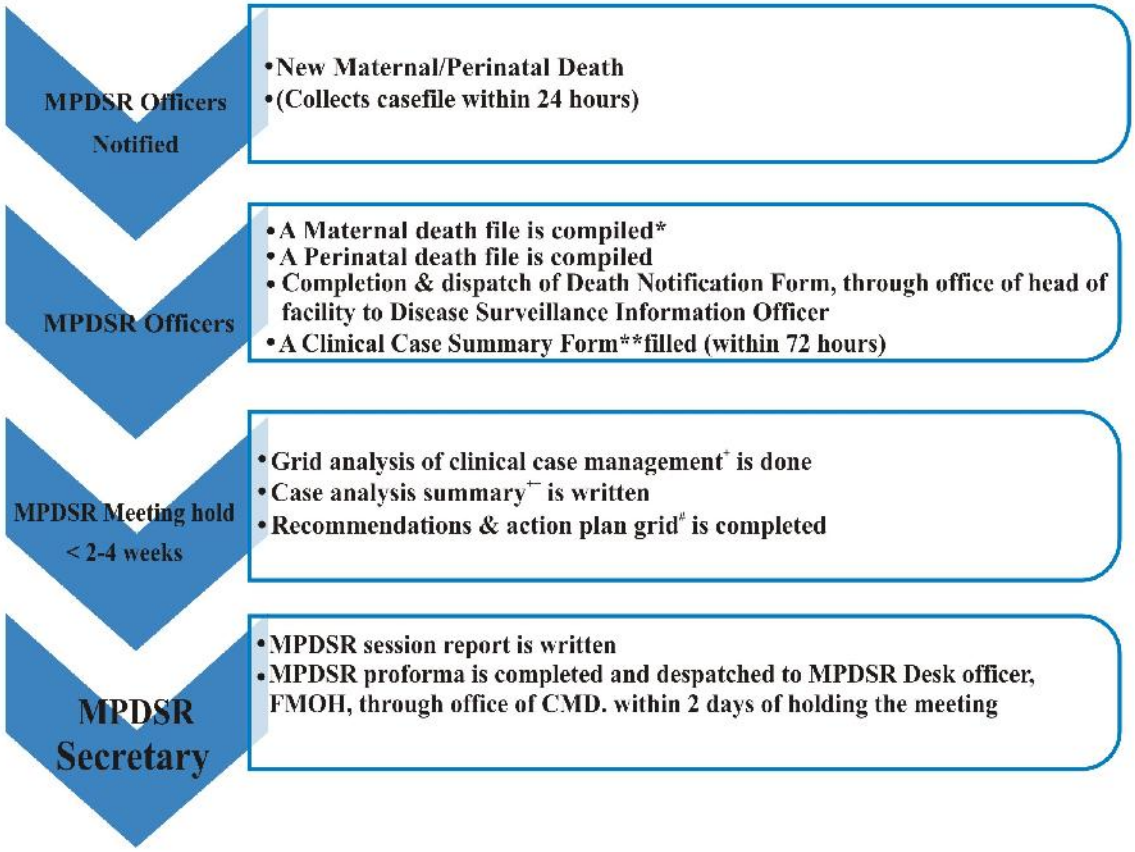
The definition of what constitutes a "maternal and perinatal death" was given in the introductory segment of this text. For avoidance of doubts, a categorization of causes of death is listed in Appendix 1 of these Guidelines for reference.

Identification of Maternal and Perinatal Death in Facilities

The deaths will be identified in the hospital by the MPDSR Officers scouting through the following hospital documents and units:

I. Death certificates.
II. Discharge records.
III. Labour and delivery room.
IV. Obstetric and Gynaecology wards.
V. Intensive Care Unit.
VI. Neonatal Unit.
VII. Operating theatre register.
VIII. Mortuary.
IX. Accident and Emergency Unit.
X. General Medical Ward.
XI. Other innovative methods / places in the hospital.

Figure 3: Showing Sequence of Steps in Operating MPDSR in Health Facilities



Facility MPDSR Committee Meeting Format

Meetings shall be convened by the Committee chairman, to hold regularly at 2-4 weekly intervals, depending on the number of maternal and perinatal deaths incurred in the hospital. It is recommended that each meeting session should deliberate on not more than two cases, for meaningful outcomes. Minutes of all meetings shall be recorded by the secretary. The agenda of each committee meeting should include the following:

- Deliberation on minutes of the preceding meeting.
- Reminder on MPDSR code of conduct.
- Updates on action points and recommendations made at the previous meeting.
- Presentation of the new maternal and perinatal mortality cases (not more than two per session), by the MPDSR Officers, conducting a systematic case analysis, preparing case analysis summary and recommendations.
- Compilation of recommendations, with specification of destinations of the recommendations.
- Completion of the National MPDSR form and
- Planning for next meeting.

Expected Outcomes of Facility MPDSR Committee Meetings

The MPDSR is an active process that derives its effectiveness and success from the positive changes and improvements in quality of care and services that emanate from its recommendations, at facility, community and national levels. It is therefore necessary for all MPDSR committees to pay exceptional attention to the logic of their recommendations, communicate them appropriately and promptly and track their implementation. After each MPDSR meeting, the following outputs are expected:

- Completed National MPDSR forms on each maternal/perinatal death (for remittance within two days by the Committee Secretary through the Chief Medical Director's office to the MPDSR Desk Officer in the Federal/State Ministry of Health);
- Compilation of the Meeting Session Report by the Secretary (for remittance within two days by the Committee Secretary through the Chief Medical Director's office to the MPDSR Desk Officer in the Federal/State Ministry of Health);
- Recommendations for local remedies compiled and sent by the committee secretary to the Chief Medical Director of the hospital (head of health facility).

COMMUNITY-LEVEL MPDSR

Community-Based Maternal & Perinatal Death Surveillance and Response (CBMPDSR)

The family is the smallest unit of human social interaction. When maternal or perinatal deaths occur outside health facilities where trained health care workers exist to provide accurate information and means of deciphering the determinants of the deaths, a change in strategy becomes necessary so as not to compromise the outcome of the MPDSR. It is in this regard that the CBMPDSR is instituted in targeting all maternal and perinatal deaths that occurred in a specified geographical area irrespective of the place of death, be it at home or in transit to a facility. Its implementation is centered on the use of Verbal Autopsy (VA) to source information from relevant persons with a view to reconstructing the events leading to the death of the deceased and enables a compilation of the determinants.

Implementing CBMPDSR requires the cooperation of the family for successful implementation. The community must be fully acquainted and involved in the process including the identification of maternal and perinatal deaths, their follow-up and analysis, as well as discussion of the problems and finding solutions to them.

The establishment of a CBMPDSR committee is necessary to provide a vital platform for community involvement. Such committee must be broad-based and involve representatives of various stakeholder groups in maternal and perinatal health in the death reduction efforts including community leaders, religious authorities, and road transport workers' union.

Box5: Suggested membership of CBMPDSR Committee

- Head of the Ward/Village Development Committee - Chairman
- Secretary of the Ward/Village Development Committee
- Representative of the Community Leader
- Head of the local health facility (PHC, Health Center, Dispensary etc.) - Secretary
- Disease Surveillance Information Officer (or M & E Officer)
- Representative of Women's Group/Market Women Association
- Representative of Transport Workers' Association
- Representative of Christian Association of Nigeria
- Representative of Chief Imam
- Representative of Private Health Care Providers
- A Community Health Extension Worker (the most senior)
- A community TBA representative

Broadly, the CBMPDSR process should ensure the following:

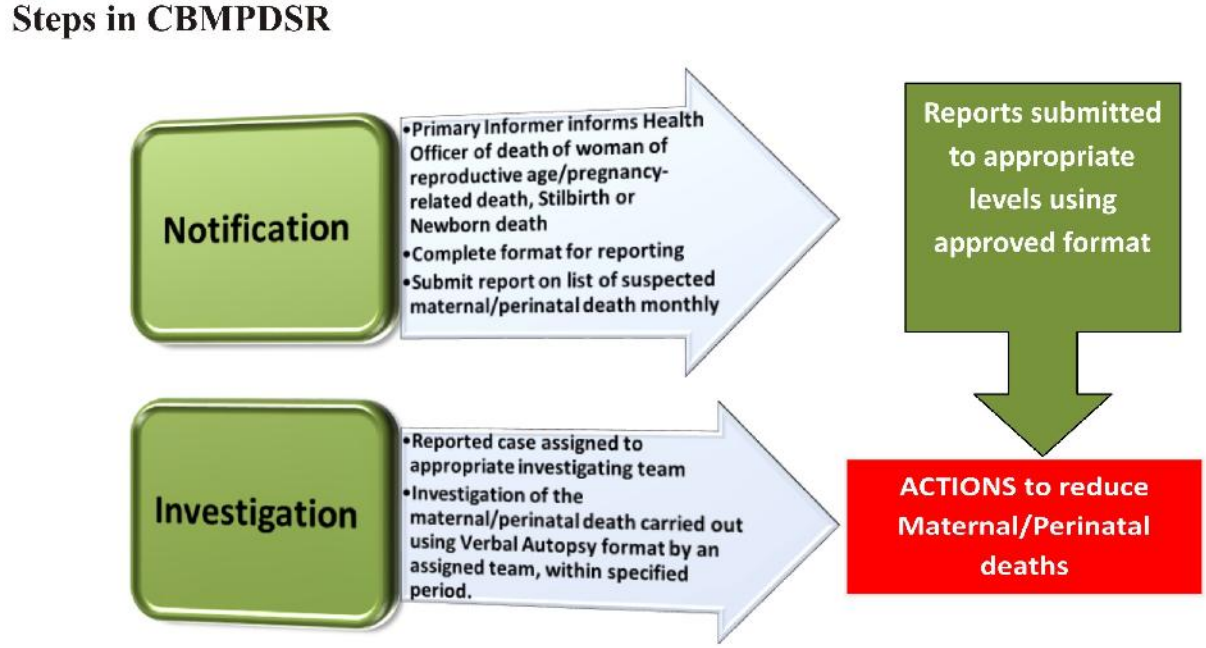
- Identify both medical and contributory causes leading to maternal deaths
- Assess community and family members' perception about the quality and access to health care
- Identify community level barriers (delays in seeking care) that contributed to the maternal/ and or perinatal death
- Health education to create awareness for improved health care seeking behavior.

Steps in carrying out CBMPDSR

The CBMPDSR involves four major steps (4):

1. Notification of any suspected maternal or perinatal death
2. Investigation to ascertain that the reported case is a confirmed maternal death
3. Identify associated causes
4. Provide the basis for recommended action.

Figure 4: Showing Steps in Community-Based Maternal & Perinatal Death Surveillance and Response



1. Early Notification: Appropriate health officer within the community (the Disease Surveillance Information Officer at the Local Government Health Department) must be promptly informed of a suspected maternal death, which practically means the death of any woman of reproductive age (WRA), or of perinatal death, by a community-based informer. The health officers at the community's health facility level are expected to be notified within 24 hours of such death whereas the local government officer (Disease Surveillance Information Officer) should be informed within 7 days. Early notification is critical in that it facilitates early action on the part of stakeholders, reduces delay in ensuring solutions, minimizes potential for loss of information and problem of recall bias from community-based respondents and also, ensures more accurate information, which should lead to more appropriate and effective intervention.

   The relevant notification form (MPDSR 1) is completed and submitted as part of the notification process. Notification forms are to be completed and submitted monthly.

2. The CBMPDSR Interview: The Verbal Autopsy interview process involves four key steps:
   a. Approaching the household.
   b. Identifying the best respondent/respondents.
   c. Obtaining informed consent.
   d. Conducting the interview).

a. Approaching the household: This involves approaching the members of the household of the deceased with respect and empathy. This should also include introduction of the team of interviewers and the significance of the visit should be clearly explained.

b. Identify best respondent(s) within the family: The essence is to identify the member of the family that could provide undiluted first-hand information regarding the illness/treatment that led to the demise of the woman. Preference should be given to the person that spent the most time with her before she died. This may be difficult; it may therefore involve selecting more than one respondent. The interview time and date may be at the discretion of the respondents who may still be mourning the demise of their loved one.

c. Obtain informed consent: This is a process of seeking the freewill agreement of respondent(s) to be interviewed and it involves reading the informed consent form exactly as it appears and ask the person(s) if they agree to be interviewed. There should be no coercion and individual consent must be obtained. The signed consent should contain signature and date, (or thumb-print if not literate).

d. Conduct the interview: Respondents should be approached positively and professionally. Followed by:
   1. Self-introduction should be done with clear presentation of purpose of exercise.
   2. Confidentiality and privacy in the interview should be ensured
   3. Demonstration of appropriate sensitivity for the situation, local cultures and religious practices.
   4. Establishment of good rapport and use of effective communication and technology.
   5. Preparation to deal appropriately with possible unpleasant emotional reactions of respondents (e.g. anger, demonstration of understanding of their anger).
   6. Conducting the interview diligently and efficiently.

The Investigation Team

The team of Investigators must comprise at least three persons, all of whom should be members of the CBMPDSR Committee. One person is to conduct interview, one to record the proceedings and the third is to coordinate the event. The team must be empathetic and sensitive to the emotion of the family during the interview.

The responsibilities of the investigation team include the following:

- To investigate the suspected maternal death (or perinatal death) using the format for Verbal Autopsy within 3 weeks of notification.
- Make sure all relevant information is captured during the interview. If not, a follow up interview may be required. If needed, another respondent may be involved.
- Assist the Medical Officer/Head of the Health Department in preparation of the MPDSR case summary.
- Hand over the completed verbal autopsy tool to the medical officer/Head of the Health Department for transmission to the next level of authority who will prepare a compiled Line Listing of all confirmed maternal and perinatal deaths in his/her designated area.

Issues in using and implementing verbal autopsy

Verbal Autopsy (VA) is a method of determining individual's causes of death and cause-specific mortality fractions in populations that are without a complete vital registration system. Verbal Autopsy (VA) involves a trained interviewer using a questionnaire to collect information about the signs, symptoms, and demographic characteristics of a recently deceased person from an individual familiar with the deceased. The structured questionnaire used in the process of VA enables the interviewer to elicit signs and symptoms and other pertinent information that can later be used to assign a probable underlying cause of death.

The main purposes of VA, as indicated by WHO are:

- Identify deaths that have occurred in pregnant or recently delivered women, stillbirths and newborns
- Provide broad categories of causes of maternal and perinatal deaths.
- Understand the factors that may have contributed to the deaths.
- Describe the background characteristics of women who died from maternal causes such as age, parity, education and other social variables.
- Offer a tool to be used by national provincial or district health offices to foster action to remove obstacles to high-quality obstetric care and perinatal care for all pregnant women and newborns respectively.

The VA technique is based on the assumption that most causes of death have distinct symptom complexes that can be recognized, remembered and reported by lay respondents. It assumes that it is possible to classify deaths based on the reported information into useful categories of causes of death. Verbal Autopsy is an essential public health tool for obtaining a reasonable direct estimation of the cause structure of mortality at community or population level, although it may not be an accurate method for attributing causes of death at the individual level. A standard VA instrument paired with easy-to-implement and effective analytic methods could help bridge significant gaps in information about causes of death particularly in resource-poor settings. Representativeness of maternal death cases is of less concern if the purpose of the Verbal Autopsy is to understand the factors contributing to maternal mortality, as even the story of one woman might be informative. However, care has to be taken not to overstate or generalize the findings from observations on cases of death.

Implementation of Verbal Autopsy

The key processes in the Verbal Autopsy process is shown in and it's implementation is described below.

a. Identification of maternal and perinatal deaths: To ensure that all maternal and perinatal deaths are identified in a defined population, it is important to conduct verbal autopsies on all reported deaths of women of reproductive age, rather than on only those deaths of women with obvious pregnancies. This is because it may be difficult for community members to identify women that die during early pregnancy or from cases such as ectopic pregnancy or abortion complications. Failure to include all such maternal deaths can result in misleading results.

b. Verbal Autopsy (VA) Interview: Verbal autopsy interviews usually consist of a combination of structured, semi-structured and in-depth interviews. A question-answer format is often used to reconstruct the medical circumstances leading to death, while a more open respondent-led or semi-structured approach is used to arrive at the contributing factors. The data collection process should be carefully selected and well-trained not only to identify the appropriate respondents and to use the VA tools effectively in collecting the required information but also to be skilled in terms of community-entry processes, the demonstration of appropriate culturally accepted behaviour and empathy considering the painful nature of maternal death. The interviewer, while not necessarily be people with medical backgrounds, must also be oriented in some basic notions of the medical conditions and their associated symptoms that may lead to a maternal or perinatal death as part of the training that would be given to them.

c. Assignment of the causes of death: Diagnosis of pregnancy-related or perinatal deaths should preferably not be made at the time of interview, but that a panel of health workers with background professional training and experience – doctors and nurses/midwives –should review the questionnaires at a later stage. A three-person team, with at least one of them being a physician, is recommended to give independent opinions on the maternal or perinatal nature and cause of death. A death is considered pregnancy-related if at least two of the three experts agree. Among all pregnancy-related deaths thus agreed, the diagnosis is considered final if at least two of the three experts agree on the primary cause of death. To aid the process, flowcharts for causes of maternal and perinatal deaths should be made available to such experts.

d. Classification of contributing factors to maternal or perinatal death: The focus is to identify the "avoidable" factors, which should provide the basis for recommendations and actions to reduce the burden of maternal and perinatal death. The three delays model which examines maternal deaths for factors contributing to three different delays , (1) delays in the decision to seek care; (2) delays in arrival at a health facility; and (3) delays in the provision of adequate care, is a useful guide in initiating discussion regarding possible factors relating to each maternal or perinatal death. VA influences policies and actions, a broad-based group, including, health workers, policy makers, administrators and community representatives. The CBMPDSR should be involved intimately in the process of identifying "avoidable" factors.

e. Use the findings for action: The ultimate purpose of verbal autopsy and the CBMPDSR is to influence actions. As such, mechanisms must be put in place to monitor the implementation of recommendations made. The CBMPDSR committee, in particular, must be active in monitoring the implementation.

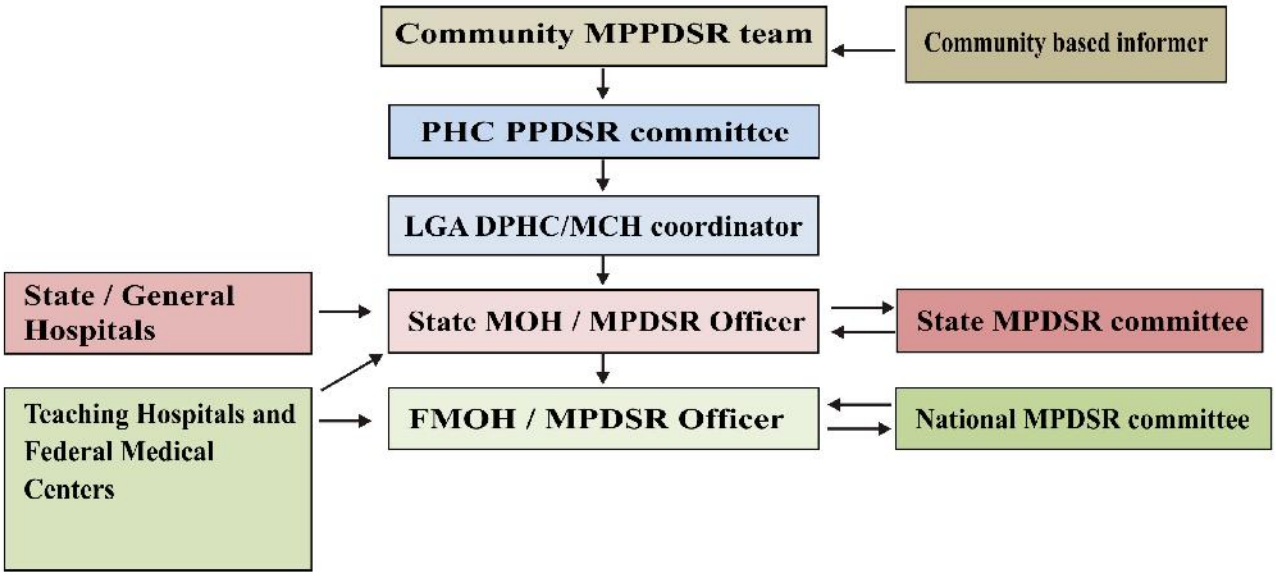
LEGISLATION ON MPDSR

For the MPDSR to become institutionalized in Nigeria, it is pertinent that appropriate enabling laws be enacted by the National and State Assemblies. In this regard, it is envisaged that the process of securing this legislation on the initiative be commenced immediately, especially now that the MDR has been adopted by the National Council on Health. The required laws are for:

1. The insulation of the MPDSR processes and information from general litigation processes. In the event of recourse to litigation by relatives of a deceased mother or newborn, information required must be sourced from outside the MPDSR process; in which even a death inquiry is undertaken.
2. The inclusion of maternal and perinatal deaths as notifiable medical conditions that should be promptly reported to the Disease Surveillance Information Officer.

MONITORING AND EVALUATION

Figure 5. Reporting and Coordinating Mechanism



Monitoring and Evaluation (M&E) of the MPDSR itself is necessary to ensure that the MPDSR system is functioning adequately and improves with time. There is need to emphasize the timeliness of the information and the coverage of the system. Monitoring of the MPDSR system is carried out primarily at the community, LGA, State and National levels.

Data generated from the MPDSR processes should be directly linked, at all levels, to the existing HMIS. The HMIS is an established nationwide Health Information Management System that collects, collates and analyses MNCH and other health care service delivery data at all levels of care in all the 36 states and FCT. Opportunities abound in this system for sustainability through integration of the MPDSR tools into the LGA or State Health Management Information System software (SHMIS). The SHMIS software presently has a space for maternal and perinatal death information which should be explored and expanded to accommodate the MPDSR tools.

In addition to the monitoring indicators that provide a quick snapshot of whether the MPDSR system is improving, a more detailed periodic evaluation is useful particularly if:

1) The indicators demonstrate that one or more of the steps in the MPDSR process is not reaching expected targets, or
2) If maternal and perinatal mortality is not decreasing.

The main purpose of MPDSR is to lead to actions that reduce maternal and perinatal deaths. There should also be a periodic evaluation of the quality of information collated. Therefore, it is particularly important to evaluate MPDSR based on its acceptability, timeliness and data quality.

INTEGRATION AND SUSTAINABILITY

The ultimate means to capture information on all deaths, including maternal and perinatal deaths, is the Civil Registration/Vital Statistics System (CR/VSs) as exists in the developed countries. This MPDSR process can contribute to a resurgent CR/VS system in the country, through the early establishment of synergies with the National Population Commission's (NPopC) effort. In this regard, copies of the MPDSR reports should be sent to the NPopC to facilitate the transition.

Capacity building:

The pre-service and in-service training curricula of the following cadres of health workers should be reviewed to reflect and build their capacity to participate in or conduct comprehensive MPDSR processes. The respective regulatory institutions for Doctors, Nurses/Midwives, and Community Health practitioners (JCHEW/CHEW/CHOs) should be liaised with by the FMOH to achieve this curricula integration of the MPDSR.

APPENDICES

Appendix 1a

Classification of the Types and Primary Causes of Maternal Deaths

Coincidental deaths

No obstetrical cause or medical or mental health cause affecting pregnancy

Motor vehicle accident
Murder
Assault
Assault with rape
Trauma
Accident
Herbal medicine/ traditional practice
Known pre-existing severe or terminal disease and cancer other than Breast, Cervix, Uterus, Ovary, Choriocarcinoma
Others – specify

Indirect deaths

❖ **Pre-existing maternal disease**

Cardiac disease

- *Congenital e.g*
    - Abnormality
    - Primary pulmonary hypertension
    - Marfans syndrome
    - Cardiomyopathy
- *Acquired*
    - Mixed mitral valve disease
    - Other rheumatic heart disease
    - Artificial valve complications
    - Arrhythmias
    - Cardiomyopathy of pregnancy
    - Myocardial infarction/ischemia
- *Chronic/pre-existing hypertension*
- *Unknown/sudden cardiac death*

Endocrine

- Diabetes mellitus
- Thyroid disease
- Others

Gastrointestinal Tract

- Liver disease (excluding HELLP, acute fatty liver of pregnancy or rupture from eclampsia which are Direct deaths)
- Stomach ulcer/others
- Intestine
- Pancreatitis
- Obstruction
- Others

Central Nervous System

- Cerebrovascular accident
- Intracranial bleed / aneurysm
- Cerebral thrombosis
- (unless due to eclampsia in which case it is Direct)
- Epilepsy
- Others

Respiratory

Asthma
Others (specify)

Haematological

Anemia
Thrombocytopaenia
haemoglobinopathies
Others(specify)

Genito-urinary

- Malignancies
  - Breast
  - Ovary
  - Cervix
  - Uterus
  - Choriocarcinoma

Auto-Immune

- SLE
- Collagen disease
- Others

Others

- **Suicide** in pregnancy or after delivery from puerperal psychosis / depression
- **Anaphylactic shock** from medications other than anaesthetic agents or analgesia used in hospital

Non genital tract infections and AIDS e.g.

- Pneumonia
- Dengue
- HIV or Acquired Immune Deficiency Syndrome (AIDS)
- Tuberculosis
- Bacterial endocarditis
- Pyelonephritis, urinary tract infection
- Appendicitis
- Malaria
- Meningitis
- Cholera
- Others

Direct deaths

❖ **Early pregnancy**

❖ **Ectopic pregnancy**

- Pregnancy less than 20 weeks
- Extra uterine pregnancy (more than 20 weeks)

❖ **Abortion/miscarriage**

- Septic abortion
- Miscarriage
- Uterine trauma
- Unsafe abortion
- Trophoblastic disease
- Complication of legal termination of pregnancy (TOP)

❖ **Pregnancy-related sepsis**

In early pregnancy before 20 weeks gestation

- Related to septic abortion/ miscarriage
- Ascending chorioamnionitis
- Others

After 20 weeks gestation but before delivery

- Amniotic fluid infection with ruptured membranes
- Amniotic fluid infection with intact membranes

After delivery

- Puerperal sepsis following normal delivery
- Puerperal sepsis following caesarean section
- Puerperal sepsis following vaginal delivery after obstructed labour
- Puerperal sepsis following caesarean section after obstructed labour
- Others – specify

Others - please specify

❖ **haemorrhage**

❖ **Antepartum**

- Abruptio placentae
- Abruptio placentae with hypertension
- Placenta praevia
- Others – specify

❖ **Postpartum haemorrhage**

Retained placenta; placenta accreta, increta or percreta
Uterine atony - due to uterine over distension (multiple pregnancy, polyhydramnios)
Uterine atony due to prolonged labour
Ruptured uterus - with previous caesarean section
Ruptured uterus - without previous caesarean section
Inverted uterus
Other uterine / genital tract trauma – specify
Intraoperative haemorrhage
PPH after caesarean section

- **Hypertensive disorders of pregnancy**
  - Pre-eclampsia- Eclampsia
  - HELLP syndrome
  - Rupture of the liver
  - Acute fatty liver
  - Others – specify
- **Anaesthetic complications**
  - Complications general anaesthesia
  - Complications epidural block
  - Complications spinal block
  -
- **Anaphylactic shock**
  - anaesthetic agents or analgesia used in hospital
- **Amniotic fluid embolism** (proved by autopsy otherwise count as pulmonary embolism or unknown)
- **Pulmonary Embolism**
  - Pulmonary embolus
  - Cerebral vein thrombosis
- **Acute collapse – cause unknown**
- **Others - cause unknown**

Appendix 1b

Classification of the Types and Primary Causes of Perinatal Deaths

INFORMATION ON MOTHER

Maternal Bio Data: (See appendix 2 and 3)

INFORMATION ON FOETUS / NEW-BORN

STILL BIRTHS (FOETAL DEATHS > 28WEEKS GESTATION / = > 1000GM)

- State of Mother during Labour:

  Fever: Yes [ ] No [ ]

- Duration of labour:

  State of Membranes at onset of labour:

  Intact [ ] Ruptured [ ]

- Duration of rupture of membranes (hours):
- Time of foetal death:

  Before labour (Macerated) [ ]; During labour (Fresh) [ ]

EARLY NEONATAL DEATHS: (LIVE BIRTH BUT DIED WITHIN 7 DAYS OF BIRTH)

- Duration of labour (hours): .....
- State of Foetal Membranes at onset of labour:

  Intact [ ] Ruptured [ ]

- Duration of rupture of membranes (hours):
- State of Mother during Labour:
- Fever:

  Yes [ ] No [ ]

- Sex of Baby:

  M [ ] F [ ]

Place of delivery of Baby

Home [ ] TBA [ ] Hospital [ ] other place [ ]

Condition at birth: Time of rupture of foetal membranes (hours):

State of liquor: Clear[ ] Cloudy [ ]

Maternal intra- partum fever: Yes [ ] No [ ]

APGAR SCORES:

1 min [ ] 5mins [ ]

Birth weight: Gestational Age (Weeks) [ ]

Admission to hospital:

Admitted from home: Yes [ ] No [ ]

Referred from hospital: Yes [ ] No [ ]

Date of Admission:

Age (Completed days of life) on Admission: ----------

Morbidities:

Condition on Admission:

Colour: Pink [ ] Bluish [ ] Yellow skin [ ]

Respiratory difficulty Yes [ ] No [ ]

Convulsions Yes [ ] No [ ]

Neck retraction Yes [ ] No [ ]

Bulging Anterior fontanel Yes [ ] No [ ]

Abdominal DistensionYes [ ] No [ ]

Skin Pustules Yes [ ] No [ ]

Vomiting Yes [ ] No [ ]

Condition during Admission:

Convulsions [ ] No [ ]

Respiratory difficulties [ ] No [ ]

Feeding difficulties [ ] No [ ]

Vomiting [ ] No [ ]

Diarrhea [ ] No [ ]

Infections [ ] No [ ]

Jaundice [ ] No [ ]

Others:

Admission Diagnosis:

Treatment received:

Duration of Admission (Days):

Date of Death:

Age at Death (completed days of life):

Diagnosis at death:

Appendix 2

FEDERAL MINISTRY OF HEALTH

MATERNAL DEATH REVIEW FORM 1 - NOTIFICATION

(MPDSR FORM 1)

GENERAL INSTRUCTIONS:

- This form must be completed by the attending officer in the health facility or community based informer for all maternal deaths including abortions and ectopic gestation related deaths, in pregnant women or within 42 days after termination of pregnancy irrespective of duration or site of pregnancy
- This form must be completed immediately after death by the last person who attended to the patient, and submit to the head of the health Facility or person responsible for maternal health in the LGA for onward transmission to the appropriate health authorities – in the State and/or the Federal Ministry of Health within 24 hours.

1. Date of Death being reported (dd/mm/yy):.....
2. Time of Death being reported.....
3. Date of Admission to Facility (if on admission) (dd/mm/yy): .....
4. Name of Facility where death occurred: .....
5. Local Government Area: .....
6. State: .....
7. Place where death occurred: (Tick √ one box)
   a. [ ] Tertiary Health Institution b. [ ] General Hospital
   c. [ ] Primary Health Care Centre d. [ ] Faith based Institution
   e. [ ] Private for profit f. [ ] TBA's place
   g. [ ] On the way/ before arrival to health facility h. [ ] Home
   i. [ ] Other (specify) .....
8. Ownership of Facility: (Tick √ one box)
   a. [ ] Federal Government b. [ ] State Government
   c. [ ] Local Government Council d. [ ] Faith –based
   e. [ ] Private f. [ ] others (specify) .....
9. Patient Identity: .....
10. Case Note No.(if hospitalized):.....
11. Age (years): .....
12. Gravidity(Total numbers of previous pregnancies): .....
13. Parity(Total numbers of previous deliveries): .....
14. Suspected cause of death: (Tick √ one box)
   a. [ ] Haemorrhage b. [ ] Pre-eclampsia / eclampsia
   c. [ ] Puerperal sepsis d. [ ] Prolonged/Obstructed labour
   e. [ ] Ruptured uterus f. [ ] Complications of abortions
   g. [ ] Ectopic pregnancy h. [ ] Others (specify) .....
15. At the time of death, was the baby delivered? (Tick √ one box)
   a. [ ] Yes b. [ ] No
16. Condition of the baby at the time of delivery (Tick √ one box)
   a. [ ] Alive b. [ ] Fresh Still birth
   c. [ ] Macerated still birth d. [ ] Not applicable

Name of Person reporting: .....: Designation: .....
Telephone numbers.....
Emails.....
Address: .....
Signature: ..... Date: .....

Appendix 3

FEDERAL MINISTRY OF HEALTH
HEALTH -FACILITY BASED MATERNAL DEATH REVIEW
(MPDSR FORM 2)

GENERAL INSTRUCTIONS:

- This form must be completed by MDR Officer at health facility level for all maternal deaths including abortions and ectopic gestation related deaths, in pregnant women or within 42 days after termination of pregnancy irrespective of duration or site of pregnancy

SECTION 1: HEALTH INSTITUTION/FACILITY WHERE DEATH OCCURRED.

1. Name and location of Facility where death occured: .....
2. Local Government Area: .....
3. State .....
4. Type of facility: (Tick √ one box)
   a. [ ] Tertiary Health Institution b. [ ] General Hospital
   c. [ ] Primary Health Care Centre d. [ ] Faith based health facility
   e. [ ] Private Health facility f. [ ] TBA's place
   g. [ ] Others (specify) .....
5. Ownership of Facility: (Tick √ one box)
   a. [ ] Federal Government b. [ ] State Government
   c. [ ] Local Government Council d. [ ] Faith –based
   e. [ ] Private f. [ ] Others (specify) .....

SECTION 2. SOCIO-DEMOGRAPHIC DETAILS OF DECEASED.

6. Patient Identity: (State/LGA/Town/ Hospital/Year/Serial No.) .....
7. Hospital No. /Case Note No.(if hospitalized): .....
8. Age (years): .....
9. Residence: (Tick √ one box)
   a. [ ] Rural b. [ ] Urban
10. Marital Status: (Tick √ one box)
    a. [ ] Married b. [ ] Not married c. [ ] Divorced
    d. [ ] Separated e. [ ] Widowed
11. Educational level (Completed): (Tick √ one box)
    a. [ ] None b. [ ] Primary c. [ ] Secondary
    d. [ ] Higher e. [ ] Don't Know
12. Occupation: .....
13. Occupation of spouse/partner : .....
14. Religion: (Tick √ one box)
    a. [ ] Christianity b. [ ] Islam c. [ ] Traditional African Religion
    d. [ ] Others (specify) .....
15. Ethnic Group: (Tick √ one box)
    a. [ ] Hausa / Fulani b. [ ] Yoruba c. [ ] Igbo
    d. [ ] Others (specify) .....

SECTION 3: PAST MEDICAL, SURGICAL AND OBSTETRICS/GYNAECOLOGICAL HISTORY

16. Any existing medical condition(s) (Tick √ one or more boxes)
    a. [ ] Hypertension b. [ ] Diabetes c. [ ] Anaemia d. [ ] HIV/AIDS
    e. [ ] Hepatitis f. [ ] Sickle cell disease g. [ ] Tuberculosis h. [ ] Heart condition
    i. [ ] Others (specify) .....

17. Past Surgical Operations/cervical tear repairs: (Tick √ one or more boxes)
a. [ ] Cesarean Section b. [ ] Myomectomy c. [ ] MVA
d. [ ] D and C e. [ ] Laparatomy f. [ ] Diagnostic Laparoscopy
g. [ ] Hysterotomy h. [ ] Hysteroscopy i. [ ] Cervical tear repair
j. [ ] Other (specify) .....
18. No. of previous life births .....
19. No. of previous Still births .....
20. No. of previous miscarriages/ abortions .....
21. No. of previous ectopic pregnancies .....

SECTION 4: ADMISSION AT FACILITY WHERE DEATH OCCURRED OR FROM WHERE IT WAS REPORTED

22. Date of Admission to Facility (if on admission) (dd/mm/yy): .....
23. Time of Admission (--/-- am/pm) : .....
24. Admitted from: (Tick √ one box)
a. [ ] Another facility b. [ ] Home c. [ ] Other (specify) .....
25. If referred from another facility, please indicate name of facility:.....
26. If referred from another facility, please indicate distance (Km) : .....
27. Condition on Admission: (Tick √ one box)
a. [ ] Stable b. [ ] Critically ill c. [ ] Dead on Arrival (DOA)
28. Reason for admission: (Tick √ one box)
a. [ ] Ante partum haemorrhage b. [ ] Post partum Haemorrhage
c. [ ] Obstructed/prolonged labour d. [ ] Ruptured Uterus
e. [ ] Puerperal Sepsis f. [ ] Pre-eclampsia/eclampsia
g. [ ] Complications of abortion h. [ ] Ectopic pregnancy
i. [ ] Others (specify) .....
29. Pregnancy Status at Admission: (Tick √ one box)
a. [ ] Before 28 weeks gestation b. [ ] After 28 weeks gestation c. [ ] Intrapartum
d. [ ] Postpartum

SECTION 5: ANTENATAL CARE (ANC) - (If early pregnancy death move to Section 6)

30. Was index pregnancy planned? (Tick √ one box) a. [ ] Yes b. [ ] No c. [ ] Don't know
31. Did she receive ANC? a. [ ] Yes b. [ ] No c. [ ] Don't know
32. Place where Antenatal Care (ANC) was provided: (Tick √ one box)
a. [ ] Tertiary Health Institution b. [ ] General Hospital
c. [ ] Primary Health Care Centre d. [ ] Faith based health facility
e. [ ] Private Health facility f. [ ] Health Centre
g. [ ] TBA's place h. [ ] Church
i. [ ] No ANC
33. Gestational Age at commencing ANC .....
34. Total No. of ANC visits: .....
35. Who was the main ANC provider? (Tick √ one box)
a. [ ] Obstetrician/Gynaecologist – Consultant b. [ ] Obstetrician/Gynaecologist – Resident
c. [ ] Medical Officer d. [ ] Midwife
e. [ ] Nurse f. [ ] CHEW
g. [ ] TBAs h. [ ] Others (specify) .....
36. Did she have the following ANC risks or complications? (Tick √ one or more boxes)
a. [ ] Hypertension b. [ ] Diabetes c. [ ] Anaemia d. [ ] HIV/AIDS
e. [ ] Proteinuria f. [ ] Sickle cell disease g. [ ] Malaria h. [ ] APH
i. [ ] Previous uterine scar j. [ ] Multiple gestation k. [ ] Abnormal lie l. [ ] UTI.
m. [ ] Premature Rupture Of Membrane n. [ ] Others (specify) .....

37. Other Comments on ANC period including complications:

.....

.....

.....

.....

.....

.....

.....

.....

SECTION 6: LABORATORY/RADIOLOGICAL INVESTIGATIONS DONE – Please attach the results

38. Haematology – PCV, Hb, -	a. [ ] Yes	b. [ ] No	c. [ ] Don't know
39. Haematology – Genotype, Blood group	a. [ ] Yes	b. [ ] No	c. [ ] Don't know
40. Urinalysis	a. [ ] Yes	b. [ ] No	c. [ ] Don't know
41. Syphylis screening and confirmation	a. [ ] Yes	b. [ ] No	c. [ ] Don't know
42. HIV test	a. [ ] Yes	b. [ ] No	c. [ ] Don't know
43. Electrolyte and Urea	a. [ ] Yes	b. [ ] No	c. [ ] Don't know
44. Hepatitis B screening and confirmation	a. [ ] Yes	b. [ ] No	c. [ ] Don't know
45. Abdominal/Pelvic Ultrasound Scan	a. [ ] Yes	b. [ ] No	c. [ ] Don't know

SECTION 7: LABOUR AND DELIVERY

46. Pregnancy outcome: (Tick √ one box)

a. [ ] Undelivered b. [ ] delivered –live birth c. [ ] delivered- still birth
d. [ ] Miscarriage e. [ ] Induced abortion f. [ ] ectopic pregnancy

47. Where did she deliver? (Tick √ one box)

a. [ ] Tertiary Health Institution b. [ ] General Hospital
c. [ ] Primary Health Care Centre d. [ ] Faith based health facility
e. [ ] Private Health facility f. [ ] Health Centre
g. [ ] TBA's place h. [ ] On her way to hospital
i. [ ] At home i. [ ] Not applicable

48. How was she delivered? (Tick √ one box)

a. [ ] Undelivered b. [ ] Normal Vaginal c. [ ] Forceps delivery
d. [ ] Vacuum delivery e. [ ] Caesarean Section f. [ ] Destructive Operation
g. [ ] Laparatomy

49. If laboured, was Parthograph used? (Tick √ one box) a. [ ] Yes b. [ ] No c. [ ] Don't know

50. If laboured, what was the length of the 1st stage? .....

51. If laboured, what was the length of the 2nd stage? .....

52. If laboured, what was the length of the 3rd stage? .....

53. Main attendant at delivery: (Tick √ one box)

a. [ ] Obstetrician/Gynaecologist – Consultant b. [ ] Obstetrician/Gynaecologist – Resident
c. [ ] Medical Officer d. [ ] Midwife
e. [ ] Nurse f. [ ] CHEW
g. [ ] TBAs h. [ ] Self
i. [ ] Others (specify) .....

54. Gestational Age at delivery: .....

55. Complications in labour and delivery? (Tick √ one or more boxes)

a. [ ] Haemorrhage b. [ ] Infections c. [ ] Pre-eclampsia/Eclampsia
d. [ ] Prolonged labour e. [ ] Obstructed labour f. [ ] Others (specify) .....

56. Other Comments on labour and Delivery:

.....

.....

.....

.....

.....

SECTION 8: POSTPARTUM AND POST ABORTAL PERIOD

57. Postpartum /Postabortal complications: (Tick √ one or more boxes)
    a. [ ] Haemorrhage b. [ ] Infections c. [ ] Pre-eclampsia/Eclampsia
    d. [ ] Depression e. [ ] Others (specify) .....

58. Other Comments on Postpartum / postabortal care including complications:

.....
.....
.....
.....
.....
.....
.....

SECTION 9: NEONATAL INFORMATION

59. Birth Weight (kg) .....
60. Apgar Score at 1 minute .....
61. Apgar Score at 5 minutes .....
62. Outcome for newborn: (Tick √ one box)
    a. [ ] Alive b. [ ] Fresh Still birth c. [ ] macerated- still birth
    d. [ ] Neonatal death

SECTION 10: PROCEDURES/INTERVENTIONS

63. Interventions in early pregnancy: (Tick √ one or more boxes)
    a. [ ] Evacuation b. [ ] Laparotomy c. [ ] Hysterectomy
    d. [ ] Blood transfusion e. [ ] Nil f. [ ] Others (specify) .....
64. Interventions in the Antenatal period: (Tick √ one or more boxes)
    a. [ ] Blood Transfusion b. [ ] External Cephalic version c. [ ] Induction of labour
    d. [ ] Magnesium Sulphate e. [ ] Antibiotics f. [ ] Nil
    g. [ ] Others (specify) .....
65. Interventions in Intrapartum period: (Tick √ one or more boxes)
    a. [ ] Instrumental delivery b. [ ] Symphysiotomy c. [ ] Caesarean section
    d. [ ] Blood transfusion e. [ ] Hysterectomy f. [ ] Magnesium Sulphate
    g. [ ] Antibiotics h. [ ] Nil i. [ ] Others (specify) .....
66. Interventions in Postpartum period: (Tick √ one or more boxes)
    a. [ ] Evacuation b. [ ] Laparotomy c. [ ] Hysterectomy
    d. [ ] Blood transfusion e. [ ] Manual removal of placenta f. [ ] Magnesium Sulphate
    g. [ ] Antibiotics h. [ ] Misoprostol i. [ ] Nil
    j. [ ] Others (specify) .....
67. Anaesthetics and Intensive care management (Tick √ one or more boxes)
    a. [ ] Nil b. [ ] Local c. [ ] Spinal
    d. [ ] Epidural e. [ ] General f. [ ] Intensive Care
    g. [ ] Invasive monitoring h. [ ] Others (specify) .....

SECTION 11. TIME AND CAUSES OF DEATH

68. Date of death (dd/mm/yy): .....
69. Time of death (--/-- am/pm) : .....
70. Period : (Tick √ one box)
    a. [ ] First trimester b. [ ] Second trimester c. [ ] Third trimester
    d. [ ] Labour/delivery e. [ ] Post partum
71. Place where death occurred: (Tick √ one box)
    a. [ ] Health Institution/facility b. [ ] On the way to Hospital c. [ ] Home
    d. [ ] Others (specify) .....
72. Primary underlying cause of death (indicate ICD 10 code):- see WHO classification

.....

73. Final cause of death (indicate ICD 10 code):- see WHO classification

.....

74. Contributory (or antecedent) causes: specify – (indicate ICD 10 codes)

.....

.....

75. Autopsy performed? (Tick √ one box) a. [ ] Yes b. [ ] No

If yes, please attach a copy of the report.

SECTION 12. CASE SUMMARY

76. Please supply a short summary of the events surrounding the death.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

SECTION 13. IN YOUR OPINION, WERE ANY OF THESE FACTORS PRESENT? (Tick √ one box)

77. Delay in woman seeking help?	a. [ ] Yes	b. [ ] No
78. Refusal of treatment or Admission?	a. [ ] Yes	b. [ ] No
79. Lack of transport from home to health care facility?	a. [ ] Yes	b. [ ] No
80. Lack of transport between health care facilities?	a. [ ] Yes	b. [ ] No
81. Health services communication breakdown?	a. [ ] Yes	b. [ ] No
82. Lack of facilities, equipment or consumables?	a. [ ] Yes	b. [ ] No
83. Lack of human resources?	a. [ ] Yes	b. [ ] No
84. Lack of expertise, training or education?	a. [ ] Yes	b. [ ] No
85. Delays in giving care?	a. [ ] Yes	b. [ ] No

86. Comments on other potential avoidable factors, missed opportunities and substandard care:

.....

.....

.....

.....

.....

.....

.....

SECTION 14: THIS FORM IS COMPLETED BY-

NAME: .....

ADDRESS: .....

.....

.....

RANK: .....

TELEPHONE: .....

E-MAIL: .....

SIGNATURE: .....

Appendix 4

FEDERAL MINISTRY OF HEALTH
MATERNAL AND PERINATAL DEATHS REVIEW: RECOMMENDATIONS & ACTION PLAN FORM (MPDSR FORM 3)

GENERAL INSTRUCTIONS:

- This form must be completed by MPDSR Committee Secretary at all levels following every maternal death reviewed. Information includes recommendations and mapped out implementation plan and actions.

1. Facility reporting.....
2. LGA.....
3. State.....
4. Identification number.....
5. Hospital number.....
6. Date of Death.....
7. Medical cause of Death.....

S/N	ISSUES IDENTIFIED	LEVEL (HF,LGA,ST,FED)	ACTION REQUIRED	BY WHOM	TIMELINE

Appendix 5

FEDERAL MINISTRY OF HEALTH
MPDSR quarterly summary report form: RESPONSE TRACKING
(MPDSR FORM 4)

GENERAL INSTRUCTIONS:

- This form must be completed by MPDSR Officer at Federal , State or Health facility level to track response to recommendations made for all maternal deaths including abortions and ectopic gestation related deaths, in pregnant women or within 42 days after termination of pregnancy irrespective of duration or site of pregnancy.

S/No.	Date of Death	Facility	Town	LGA	State	Hospital No	ID No	Cause of Death	Recommen-dation	Response	Remark

Appendix 6

FEDERAL MINISTRY OF HEALTH
MDR FORM IDENTIFICATION NUMBER CODING INSTRUCTION
(MPDSR FORM 5)

STATE = Have first 3 letters

Follow by

LGAs= Have first 3 letters

Followed by

Town/ Village= Have first 3 letters

Followed by

Facility or Community= Have first 3 letters

Followed by

Month= In two digits

Followed by

Year= Last two figures

Followed by serial numbers for the year= Three decimal figure

For example

A maternal death occurred in Dutse PHC in Abuja,FCT on 6th of June 2014. This was the fifth death that year.

The patient identification number is MDR/FCT/BWA/DUT/PHC/06/14/005

Appendix 7

FEDERAL MINISTRY OF HEALTH

PERINATAL DEATHS NOTIFICATION FORM (MPDSR Form 6)

GENERAL INSTRUCTIONS:

- This form must be completed for all perinatal/Newborn deaths (including stillbirths and neonatal deaths).
- This form must be completed immediately after death by the last person who attended to the patient.
- A copy should be submitted to the LGADSNO Officer , who will report to the LGA M&E officer and the MCH coordinator of the State Ministry of Health (SMOH).
- Coding must be done at hospital level with code of HF (first 4 letters), LGA and state and MD individual code number for each deceased.

DETAILS OF THE DECEASED AND MOTHER

1. PND Case Number: ☐☐☐☐ /☐☐ /☐☐ /☐☐☐

2. File Number (health facility): ☐☐☐☐☐☐☐☐☐☐

3.	Physical Address or locality where mother lived: (LGA, Name of village, Code)
4.	Family Contact No:

5. Age of mother (years): ☐☐ (estimate if age is unknown)
6. Locality where death occurred: LGA:_____State:_____
7. Place where death occurred: (√ one box)

a. ☐ Tertiary Teaching Hospital
b. ☐ Federal Medical Centre
c. ☐ General Hospital
d. ☐ Primary Health Care Centre
e. ☐ Stand alone Maternity Unit
f. ☐ TBA
g. ☐ Home
h. ☐ On the way/before arrival at H/F
i. ☐ Others (specify)

8. Ownership of health facility: (√ one box)

a. ☐ Federal MOH
b. ☐ State MOH
c. ☐ Private
d. ☐ LGA
e. ☐ Faith-based
f. ☐ Other

9. Name of Health Facility: _____
10. Primary cause of death: _____
11. Final cause of death: _____
12. Modifiable Contributing factors:

13. Classification of perinatal/Newborn death (√ one box)

14. Birth weight: ☐☐☐☐ grams
15. Gestation at birth: ☐☐ weeks
16. Date of Birth
17. Date of Admission: ☐☐ /☐☐/☐☐
18. Date of Death ☐☐ /☐☐/☐☐

19. Name of Reporting Officer:_____
20. Designation:_____
21. Date: ☐☐ /☐☐/☐☐
22. Signature: _____

Appendix 8

FEDERAL /STATE MINISTRY OF HEALTH

HEALTH FACILITY BASED PERINATAL /NEONATAL DEATH REVIEW FORM (MPDSR FORM 7)

GENERAL INSTRUCTIONS:

- This form must be completed for all perinatal deaths (including stillbirths and neonatal deaths within first 28 days after birth).
- The MPDSR Officer should complete the MPDSR form 7 within 48 hours.
- The Health Facility Maternal and Perinatal/Neonatal Death Review Committee must complete the form within 1 month and/follow up on the implementation of the action plan within 3 months.
- The original form should stay at health facility level and a copy submitted to the LGA DSNO who will report to the LGA M&E officer and submit to the MCH coordinator of the State Ministry of Health (SMOH).
- Federal and State hospitals should submit copies of the form to the MCH coordinator of the SMOH.
- The code must be the same as on the notification form, PNDR 1,

PND Case Number: ☐☐☐☐/☐☐/☐☐ /☐☐☐ (First 4 characters of name of HF / Month / Year / Case no.)

1. DETAILS OF MOTHER

1.2 File No.: ☐☐☐☐☐☐☐☐☐☐☐☐ (Hospital file of mother)

1.3 Age of mother (years): ☐☐ (if unknown: estimate)

1.4 Physical Address or locality where mother lives: (LGA, Name of village/town/ area)

1.5 Telephone No.:

1.6 Marital status of mother:

☐ Married ☐ Single ☐ Divorced ☐ Widowed ☐ Separated

1.7 Educational level (completed):

☐ None ☐ Primary ☐ Secondary ☐ Higher ☐ Others (specify): .....

1.8 Ethnic group

☐ Hausa ☐ Yoruba ☐ Igbo ☐ Others (specify): .....

1.9 Pregnancy condition at time of death:

Gravida☐☐ Para☐☐ Gestation at delivery (weeks) ☐☐

2. ADMISSION AT FACILITY WHERE DEATH OCCURRED

2.1 Date of admission of mother to facility: ☐☐/☐☐/☐☐ (dd/mm/yy)

2.2 Time: ☐☐:☐☐ am/pm

2.3 Date of admission of newborn from home: ☐☐/☐☐/☐☐ (dd/mm/yy)

2.4 Time: ☐☐:☐☐ am/pm

2.5 Admitted from:

☐ Health Facility ☐ TBA ☐ Home ☐ Others (specify): .....

Name of referring facility (if applicable): .....

2.6 Foetal Heart Rate on admission: ☐ Absent ☐ Normal ☐ Abnormal (>180 or < 100)

2.7 Condition of mother on admission:

☐ Stable ☐ Critically ill ☐ Dead on arrival (DOA)

2.8 Date of death: ☐☐/☐☐/☐☐ (dd/mm/yr)

2.9 Time of death: ☐☐:☐☐ AM/PM

2.10 Pregnancy stage at time of death:

☐ Before onset of labour ☐ Intra partum ☐ Postpartum

3. ANTENATAL CARE

3.1 Did she receive antenatal care? ☐ Yes ☐ No (skip to section 4)
3.2 If "Yes," total number of visits: ☐
3.3 Any complication (s) identified: ☐ Yes ☐ No
3.4 If "Yes" specify: .....
3.5 Any action taken on identified danger signs? ☐ Yes ☐ No
3.6 If "Yes", tick all that apply:

☐ Referred ☐ Anaemia treatment ☐ Treatment of hypertension
☐ Malaria treatment ☐ Treatment of PROM ☐ Treatment of syphilis (VDRL +)
☐ PMTC of HIV ☐ Treatment of infection ☐ Tetanus vaccination of mother …
☐ Others (specify): .....

4. DELIVERY AND PUERPERIUM

4.1 Time of rupture of membranes to delivery: ☐ (hrs/days)
4.2 condition of liquor: ☐ Clear fresh meconium, ☐ foul Meconium-stained ☐ Blood-stained
4.3 Date of delivery: ☐☐/☐☐/☐☐ (dd/mm/yy)
4.4 Time of delivery: ☐☐:☐☐ AM/PM
1. Duration of labour: Less than 12 hours[ ]; 12 to 24 hours [ ]; More than 24 hours [

4.5 Was a partograph used during labour? ☐ Yes ☐ No
2. Duration of labour: Less than 12 hours[ ]; 12 to 24 hours [ ]; More than 24 hours [ ]
Did she have problems during labour or delivery of this baby? Yes [ ] No
If yes, what was/ were the problems?

4.6 Locality where patient delivered (level of facility): (√ one box)

☐ Home ☐ MCH ☐ PHC / CHC ☐ General Hospital ☐ FMC/Teaching Hospital
☐ On the way before arrival at facility ☐ Others (specify): .....

4.7 Mode of Delivery: (√ appropriate boxes)

☐ SVD ☐ Vacuum ☐ Forceps ☐ Caesarean section
☐ Breech ☐ Destructive delivery ☐ Others (specify):

4.8 Delivered by: (√ one box)

☐ Specialist (Obs&Gyn) ☐ Medical officer ☐ Midwife
☐ Nurse ☐ S CHEW ☐ J CHEW ☐ CHO
☐ . ☐ TBA ☐ Other (specify): .....

4.9 Was the baby weighed after delivery? ☐ Yes ☐ No
4.10 If "Yes", Birth weight: ☐☐☐☐ grams

4.11 Was the Apgar score determined at delivery? ☐ Yes ☐ No
If no, did the baby cry at birth
4.12 If "yes": 1 min Apgar score: ☐☐ 5 min Apgar score: ☐☐
4.13 Newborn resuscitation done with bag and mask? ☐ Yes ☐ No

4.14 Did baby cry immediately after birth? Yes [ ] No [ ]
4.15 Did the baby have any bruise or marks of injury at birth? Yes [ ] No [ ]
4.16 Was the baby able to suck breast well after delivery? Yes [ ] No [ ]
4.17 Did the baby have any problem before baby died? Yes [ ] No [ ]
What was/ were the problem(s)?

a. Convulsion Yes [ ] No [ ]

b. Unconscious Yes [ ] No [ ]

c. Neck retraction Yes [ ] No [ ]

d. Bulging fontanelle Yes [ ] No [ ]

e. Inability to open the mouth Yes [ ] No [ ]

f. Jaundice Yes [ ] No [ ]

g. Bleeding Yes [ ] No [ ]

h. Skin rashes containing pus Yes [ ] No [ ]

i. Fever Yes [ ] No [ ]

j. Cough Yes [ ] No [ ]

k. Difficult breathing Yes [ ] No [ ]

l. Fast breathing Yes [ ] No [ ]

m. Stop breathing Yes [ ] No [ ]

n. Cold to touch Yes [ ] No [ ]

o. Discharge from cord Yes [ ] No [ ]

p. Others(Specify):.....

.....

4.18 Was care sought during the illness? Yes [ ] No [ ]
If yes, list Facilities Home [ ]; Traditional birth attendant [ ]; Herbal home [ ]; Church [ ]; Health [ ]; facility [ ]; Others [ ](specify)
.....
.....

4.19 Where did this child die?
Home [ ]; Traditional birth attendant [ ]; Herbal home [ ]; Church [ ]; Health [ ]; facility [ ]; Others [ ](specify)
.....

4.20 Outcome for new-born: (√ one box):
☐ Fresh SB ☐ Macerated SB ☐ Early Neonatal Death (ENND) Neonatal Death.
If NND:

4.21 Time of death: ☐☐:☐☐ am/pm

4.22 Date of death: ☐☐/☐☐/☐☐(dd/mm/yy)

Reported cause of Death

5. CAUSE OF DEATH (Identified by the Reviewers)

5.1 Final Cause of Death (√ appropriate boxes):

☐ Birth asphyxia
☐ Birth trauma
☐ Sepsis
☐ Neonatal tetanus
☐ Dehydration due to diarrhoea
☐ Congenital abnormality
☐ Intra-uterine death with unknown reason

☐ Respiratory Distress Syndrom
☐ Neonatal aspiration
☐ Hemolytic disease of the newborn
☐ Neonatal Jaundice
☐ Necrotizing Enterocolitis.
☐ Other (specify): .....

5.2 Primary Cause of Death (√ appropriate boxes):

☐ Spontaneous premature birth
☐ Intrapartum asphyxia
☐ Congenital abnormality
☐ Maternal infection
☐ Shoulder dystocia
☐ Prolonged or obstructed labour
☐ Hypertensive disorders / (pre)-eclampsia
☐ Antepartum haemorrhage
☐ Pre-existing maternal disease
☐ Breech delivery
☐ Cord problems (prolapse, knot, entanglement)
☐ Other (specify); .....

6. ASSOCIATED FACTORS THAT CONTRIBUTED TO DEATH

(√ Appropriate boxes, to be extracted as far as possible from records)

Factors	**Causes**	**Yes**	**No**	**Remarks** (use back of page if necessary)
6.1 Health worker factors	Lack of necessary midwifery/obstetric/NC skills			
	Delay in deciding to refer / consult senior staff			
	Partograph not used during labour			
	Prolonged labour with no/ delayed intervention			
	Inadequate monitoring of FHR during labour			
	Inadequate newborn resuscitation			
	Multiple referrals without stabilization			
	Inadequate monitoring of newborn after birth			
	Prolonged abnormal observations without action			
	Inadequate response to maternal disease/complications			
	No response to positive syphilis test during ANC			
	No or inadequate response to PROM			
	Inadequate management of premature labour			
	Wrong or missed diagnosis			
	No or inadequate treatment			
	Delay in starting treatment			
	Others (specify)			

6.2 Admin. Factors	Communication problem between health facilities			
	Transport problem between health facilities			
	Lack of qualified staff			
	Absence of skilled staff on duty			
	Lack of essential drugs			
	Lack of essential equipment, incl. resuscitation			
	Lack of laboratory facilities			
	Non availability of blood			
6.3 Patient/ Family Factors	No antenatal care (ANC)			
	Late booking of ANC or infrequent visits			
	Failure to recognise danger signs			
	Delay in decision making or getting permission			
	Preference for care at home or by TBA			
	Unsafe traditional/cultural practice			
	Use of traditional medicine			
	Unsafe medical treatment			
	Refusal of treatment – non-compliance to advice			
	Inappropriate response to rupture of membranes			
	Inappropriate response to poor foetal movements			
	Transport problem from home to health facility			
	Financial constraints			
6.4 Community factors	Failure to recognise danger signs			
	Failure to accept limitations			
	Use of traditional medicine			
	Transport problems			
	Delay in deciding to refer			
6.5 Other factors (specify)				

7. CASE SUMMARY AFTER ASSESSMENT OF PERINATAL DEATH BY REVIEW COMMITTEE

(Provide a detaileda short summary of the events surrounding the death including quality of care at all levels of care and at different times (antenatal care, intra-partum care, newborn care). Use back of page if necessary.

8. FACILITY MATERNAL & PERINATAL DEATH REVIEW COMMITTEE ACTION PLAN TO IMPROVE FUTURE CARE

(use back of form if more space is needed)

Level of Care	Proposed Activities	Proposed Time Frame	Responsible Person
Hospital			
Health Centre			
TBA			
Family/ Community			

9. FORM COMPLETED BY:

10.1 Name:_____10.2 Designation: _____
10.3 Telephone: ☐☐☐☐☐☐☐☐☐☐
10.4 E-mail: _____
10.5 Date: ☐☐/☐☐/☐☐ (dd/mm/yy)

10.6 Signature: _____

10.7 Name Chair Person Review Committee:_____
10.8 Designation: _____
10.9 Date: ☐☐/☐☐/☐☐ (dd/mm/yy)

10.11 Signature: _____(Chairperson of Review Committee)

APPENDIX 9
GRID ANALYSIS OF MATERNAL DEATH CASES PRESENTED TO THE FACILITY MPDSR COMMITTEE

In the chain of events described below, note for which one dysfunctions appeared and explain why it is a dysfunction (by comparing with standards of good practices):

1. ITINERARY BEFORE ADMISSION

1. If referred patient:
   - Were conditions of transfer adequate regarding mode of transport (ambulance), qualified escort, and first treatment (e.g.: intravenous line in place) and time to reach the hospital.
   - Was there a referral letter? Understandable? Useful? Applying clinical standards of best practices?
2. If not referred but having complication:
   - Was decision to seek for hospital care taken in time?
   - Was itinerary followed by the patient adequate regarding mode of transport and time to reach the hospital?

2. ADMISSION

1. Reception:
   - Was admission process given to the patient adequate, regarding the timing and the first aid provided regarding the patient condition (e.g. if necessary: rapid call for qualified assistance, supportive first cares)?

3. DIAGNOSIS

1. If complication was already present at admission, were the following adequately performed?
   - First examination of the patient in terms of reactivity and in terms of standards.
   - Diagnosis at admission regarding the available information.
   - Time to make diagnosis regarding the standards.
   - Management given on admission regarding the diagnosis and the standards of care.
2. If the complication occurred after admission:
   - Was time to make diagnosis acceptable regarding the standards?
   - Was the management correct regarding the patient's condition and the standards of care?
   - Was the management correct regarding the patient's condition and the timing between the diagnosis and the treatment?
3. In both cases:
   - Were the necessary investigations for diagnosis done (all, none or some of them) regarding the standards?
   - Was the time to carry out the investigations acceptable according to the patient condition?
   - If applicable, were the results from investigations utilized accordingly?
   - Were unnecessary investigations requested/performed?

4. TREATMENT

1. Was adequate treatment (full) given for the complication regarding the diagnosis and the standards of care?
2. If applicable, was the time interval between the diagnosis and the surgical treatment acceptable according to the standards?
3. Was the medical treatment given made without delay, after the diagnosis was made?
4. Was clear and daily instructions on how the treatment should be administered given and noted?

5. PATIENT MONITORING

1. Were clear instructions to monitor vital signs and other parameters given and noted?
2. If applicable, were adequate instructions given regarding the standards of care (what to be monitored, frequency and duration)?
3. Were monitoring of vital signs and other parameters performed according to instructions given or according to standards of care?
4. How complete or incomplete were the records found regarding the diagnosis and the standard of care on the deceased?

6. INFORMATION IN PATIENT FILE

1. Were all necessary information expected by the standard of care present in the patient's file?

7. CASE SUMMARY:

1. The main problems identified in the case management.
2. The positive and strong observations in the case management.
3. The main causes of dysfunctions/mismanagement identified.
4. The medical cause of death and the contributing factors.

Appendix 10
TERMS OF REFERENCE FOR THE MPDSR SUB - COMMITTEES

*Terms of Reference of the Technical Sub – Committee of the National MPDSR Steering Committee

(i) Give expertise in maternal and newborn health and provide supportive services to the National MPDSR Steering Committee
(ii) Discuss with different development partners their likely support, including technical assistance for implementation;
(iii) Make specific and practical recommendations for strengthening MPDSR;
(iv) Examine all recent experience with Maternal and Perinatal Deaths Surveillance and Response or similar surveys in Nigeria;
(v) Make appropriate recommendations on required capacity building of officers to implement MPDSR
(vi) Technical Sub-Committee meet before every National MPDSR Sub Committee quarterly meeting to analyze MPDSR reports assembled from all MPDSR facilities
(vii) May co-opt other members within or outside the steering committee as it deems fit

*Term of Reference of the M&E Sub – Committee of the National MPDSR Steering Committee.

(viii) Examine the recent surveys periodically and assess their accuracy, quality assurance procedures, content, and data analysis and dissemination procedures;

(ix) Work closely with donors and implementing partners to develop specific and practical plans and protocols that would provide results for robust MPDSR at all levels;
(x) Periodically summarize key data and make recommendations in comprehensive reports so that it can be used by managers and policy makers on quality of care;
(xi) Assess capacities of key M&E institutions for undertaking the MPDSR at all levels;
(xii) Propose key actions required for M&E systems strengthening required to report credible and verifiable data;
(xiii) Suggest how MDPSR can be linked to NHMIS and the DHIS.
(xiv) Liaise between MPDSR National Steering Committee and relevant agencies like NBS etc.

*Terms of Reference for Advocacy Sub - Committee.

The strategies that will be adopted to achieve the goals and objectives of the MPDSR in Nigeria through advocacy include:

I. Establish a sustainable MPDSR implementation by constantly ensuring political will at all levels of governance through advocacy.
II. Work with the states advocacy sub - committee to facilitate establishment and sustainability of state MPDSR.
III. Increase access to QUALITY maternal and child health in Nigeria.
IV. Rapidly scale up implementation of MPDSR at the state level through advocacy in collaboration with state MPDSR advocacy sub committee.
V. Protect the implementation of MPDSR through effective awareness creation and SUPPORT FOR proper legislation.

*These terms of reference could be adapted by all levels of MPDSR sub-committee. It is not rigid as any could be added or removed.