ACCELERATED REDUCTION OF MATERNAL AND NEWBORN MORTALITY IN NIGERIA

A ROADMAP FOR ACTION

2019 – 2021

FOREWORD

Despite the remarkable and unprecedented decline in the maternal mortality rate globally during the era of Millennium Development Goals by 45%, Nigeria did not meet the targets for child survival and maternal health. With the higher targets set by the Sustainable Development Goals (SDGs) by 2030, Nigeria has braced up to identify and develop a Road Map for Accelerated Reduction of Maternal and Neonatal Mortality to guide implementation especially in the high burden States.

To this end, the Federal Ministry of Health (FMOH) initiated positive strides towards Universal Health Coverage (UHC), to ensure safe and healthy childbirth experience, which is the right of every woman, regardless of where she resides. To fast track the achievement of the maternal and child health targets of the Sustainable Developmental Goals (SDGs), a Taskforce was commissioned to identify transformative changes in Maternal and Newborn Health (MNH) interventions and programming that are peculiar to different geographic locations, for speedy progress in reducing maternal and newborn deaths. The membership of the Taskforce include: Officials of the Federal Ministry of Health (FMOH); representatives of line Ministries; Departments and Agencies (MDAs); State Commissioners; Society of Gynaecology and Obstetrics of Nigeria (SOGON); Paediatric Association of Nigeria (PAN); MNH Experts; Development Partners; and other relevant stakeholders.

The Road Map for Action on Accelerated Reduction of Maternal and Neonatal Mortality (ARMNM) in Nigeria is the first of its kind, unique in approach and designed to close the gaps in equity, quality and coverage of MNH services. In line with the National Health Act (NHA, 2014), National Health Policy (NHP 2016), the National Strategic Health Development Plan II (NSHDP II, 2018 - 2022) and the Integrated Reproductive Maternal, Neonatal, Child and Adolescent Health plus Nutrition (IRMNCAH + N, 2018 - 2022), this strategic Road Map outlines clear cut measures to guide implementers and stakeholders at all levels to crystallise results on ending preventable maternal and newborn deaths.

The health of women and the future generation is vital to our human capital development and the onus constitutionally lies mostly on the State Governments, individuals and to a lesser extent the Federal Government. It is expected that with synergistic sincere efforts and careful implementation of this roadmap especially in the high burden States, the narrative on maternal and newborn health indices will significantly improve to reposition Nigeria among the comity of nations globally.

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Acronyms

ANC	Antenatal Care
ARMNM	Accelerated Reduction of Maternal and Neonatal Mortality in Nigeria
BEmONC	Basic Emergency Obstetric and Newborn Care
CBO	Community Based Organisation
CEmONC	Comprehensive Emergency Obstetric Newborn Care
CHAN	Christian Health Association of Nigeria
CHEW	Community Health Extension Worker
CPR	Contraceptive Prevalence Rate
CSOs	Civil Society Organisations
DRF	Drug Revolving Fund
ETS	Emergency Transport Scheme
FGD	Focus Group Discussion
FME	Federal Ministry of Health
FMOH	Federal Ministry of Health
FOMWAN	Federation of Muslim Women Association of Nigeria
FP	Family Planning
HCF	Honourable Commissioner of Finance
HCH	Honourable Commissioner of Health
HCW	Health Care Worker
HMB	Health Management Board
HMH	Honourable Minister of Health
HRH	Human Resources for Health
IMAN	Islamic Medical Association of Nigeria
IRMNCAH	Integrated Reproductive, Maternal, Newborn, Child and Adolescent Health
ISS	Integrated Supportive Supervision
ITN	Insecticide Treated Net
KEC CoND	Kano Emirate Council – Committee on Health and Development
KII	Key Informant Interview
KMC	Kangaroo Mother Care
LGA	Local Governmental Authority

LLIN	Long Lasting Insecticide Treated Net
LTR	Life Time Risk
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MDA	Ministerial Department and Agencies
MDCN	Medical and Dental Council of Nigeria
MMR	Maternal Mortality Rate
MNH	Maternal and Newborn Health
MDSR	Maternal Death Surveillance Response
MPDSR	Maternal and Peri Natal Death Surveillance Response
mMSS	modified Midwife Service Scheme
NANNM	National Association of Nigerian Nurses and Midwives
NBS	National Bureau of Statistics
NCH	National Council of Health
NE	North East
NGO	Non-Governmental Organisation
NW	North West
NHIS	National Health Insurance Scheme
NMR	Newborn Mortality Rate
NPC	National Population Commission
NPHCDA	National Primary Health Care Development Agency
NURTW	National Union of Road Transport Workers
PAN	Paediatric Association of Nigeria
PHC	Primary Health Care
PNC	Postnatal Care
PPH	Post Partum Haemorrhage
RH	Reproductive Health
SMOH	State ministry of Health
SOGON	Society of Gynaecology and Obstetrics of Nigeria
SPHCDA	State Primary Health Care Development Agency

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1. Orientation and Context

1.1 Introduction

Nigeria has one of the highest maternal and neonatal mortality rates in the world with over 40,000 maternal deaths occurring yearly. The lifetime risk of dying in pregnancy and childbirth of 1 in every 22 women is higher than almost anywhere else in Africa or indeed, the world.[1] Despite Nigeria's level of economic development, she has not recorded a commensurate rapid progress in saving the lives of women and newborns from preventable deaths during pregnancy and delivery.[2]

In Nigeria, the risk of maternal and newborn death is higher among women in the Northern States as compared to women in other parts of the country. This is clearly depicted in the high maternal mortality rate of the North Eastern region, which is three times higher than the national average.[3] **For Nigeria to achieve the Sustainable Development (SDG) targets for maternal and neonatal health (MNH) in 2030, the number of maternal deaths should be reduced by more than 90% to less than 3000 per year.** Presently, the gains and improvement in health outcomes for women and newborns has been too small and too slow for the efforts expended. At the current scale and pace of maternal and newborn services and coupled with the pace of rapid population growth, it is worrisome whether Nigeria will achieve the SDG targets or be anywhere close to other countries of similar size and wealth, in 2030.

The status quo must be changed as Nigeria has what it takes: sound strategies and policies in place such as the economic recovery and growth plan (ERGP) that encourages investment in women and the future generation; a package of low cost and effective evidence-based maternal and newborn health interventions and in principle, available resources, that if used efficiently, would yield a transformative impact on health. **What is missing? High-level, persistent political commitment; predictable disbursement of financial resources and sustained unwavering focus on implementation compounded by human resource challenges.**

Consequently, this Roadmap aims to support the acceleration of political commitment of government at all levels particularly State Governments. It highlights the actions most essential to increasing both the demand for quality services and their supply. It focuses on the political, financial, social and other actions needed to support the delivery of the right care at the right time even in the most hard to reach areas which, in the first phase, includes six high burden states, namely Jigawa, Katsina, Yobe, Zamfara, Kebbi and Sokoto .

The Roadmap is structured into in four sections: the first summarises the current landscape for maternal and newborn health including relevant strategies, the situation analysis and severity of maternal and newborn mortality in the six states with comparison to two 'control'

[1] World Bank Data Bank: https://data.worldbank.org/indicator/SH.MMR.RISK accessed on 15 August 2018. The World Bank statistics identify the lifetime risk for women in Nigeria (the whole country) as 1 in 22. Given the much higher rates of mortality in the northern States, the lifetime is probably much higher. Only two other countries in the world have a higher lifetime risk: Chad (1 in 18) and Sierra Leone (1 in 17). Somalia is on a par with Nigeria at 1 in 22. By comparison, Niger is 1 in 23 and DRC is 1 in 24. For the whole of Sub-Saharan Africa, it is 1 in 36 and on average, for all lower middle income countries, it is 1 in 130.

[2] World Bank Data Bank: https://data.worldbank.org/indicator/NY.GDP.PCAP.CD accessed on 15 August 2018. The World Bank statistics show Nigeria's GDP per capita in current US$ is $1,967. The average for all lower middle income countries is US$ 2188 where lifetime risk of dying in pregnancy averages 1 in 130 women.

[3] The North East region has 1,549 maternal deaths per 100,000 live births while the Nigeria country ratio is 560 per 100,000 live births. Maternal Health in Nigeria: Facts and Figures, African Population and Health Research Centre, Nairobi. 2017. http://aphrc.org/wp-content/uploads/2017/06/APHRC-2017-fact-sheet-Maternal-Health-in-Nigeria-Facts-and-Figures.pdf

states that are relatively faring better (Kaduna and Oyo). The second section builds on above foundation to lay out the theory of change and identify the critical drivers needed to accelerate change. The third section focuses on the Roadmap for Action and the fourth highlights strategies for accountability.

1.2 The Current Landscape: A Rapid Appraisal

A recent situation analysis (synthesis in Annex B) identified the leading direct and indirect causes of maternal and newborn mortality in the six high burden states. Although the complex web of causes, determinants and factors leading to maternal deaths varied among the states, the analysis clearly identified the most common circumstances under which the majority of women and newborn deaths occur, viz:

- **Lack of knowledge among women, their families and communities** on the importance of antenatal care (ANC), institutional delivery and family planning, resulting in **low attendance at health services; cost, distance and transport** difficulties are also contributory;
- Poor patronage of healthcare services because the **health staff are thought to be rude and uncaring** to women;
- **Lack of skills, equipment, tools and drugs among health staff**[4];
- **Poor state of facilities -** dilapidated, closed at night, lack of electricity and water;
- **Referral services are slow and unreliable** so life-saving care is not administered on time.

Table 1 below provides a snapshot of maternal and newborn mortality in the six states including a small sample of determinants (education and women's decision-making power). The best and least well performing state in each column is marked in green and red respectively.

The table shows a clear association between education, contraceptive prevalence, lower fertility and women's decision-making power on one hand and reduced maternal and newborn mortality on the other hand. For instance, although there are methodological differences in the calculation of the maternal mortality ratio in each state, the two control states of Oyo and Kaduna appear to have lower mortality burden compared to the other high burden states, however they also record a higher socio-economic status, educational level and fertility control among their women. The control states lead the other states on almost all selected development indicators.

The table further illustrates that the percentage of the 2017 budget allocated for health across the country is significantly variable and nationally falls short of the 2001 commitments to the Abuja Declaration which recommended the allocation of at least 15% of public budgets to health.[5] It should be noted that the budget estimates reflect the intention to spend and not the actual amount of allocated funds released. This means that, in many states – if not most, the actual money spent on health is lower than the amount budgeted.

[4] For example, oxytocin (used to stop bleeding which causes 26% of all maternal deaths) was available in only 40% and 22% of Primary Health Centres (PHCs) in the NE and NW regions respectively. Magnesium sulphate – a drug that stops or prevents seizures, another major cause of mortality - was available in only 20% and 13 % of PHCs in the NE and NW regions respectively. Even had health staff known what to do, the lack of availability of these two simple, inexpensive and easy to use drugs would have affected their ability to act.

[5] Yusuf M. Adamu, Hamisu M. Salihu, Nalini Sathiakumar, Greg R. Alexander. Maternal mortality in Northern Nigeria: a population-based study. *European Journal of Obstetrics & Gynecology and Reproductive Biology* 2003; 109:153–159.

Table 1: ***Summary of the current situation across a range of indicators in six focus states***

State	MMR	NMR*	Fertility*	CPR*	% females that completed Secondary School**	% women that take decision on their own health**	Adolescent pregnancy rates (%)*	% women delivered in health facilities**	% 2017 budget for health ***	% of budget for health released****
Jigawa	1012 +	37	8.5	1.3	0.8	13.3	32	6.7	12.5	88
Kaduna	1400 ++	28	5.6	24.1	11.4	54.1	28	32.4	NA	NA
Kano	2420 +++	69	7.7	6.3	5	1.4	24	12.9	12	31.17
Katsina	1596 ^	35	7.5	6.3	2.6	33.7	38	9	NA	59
Kebbi	NA	55	7.7	6.3	4.3	2.7	22	8.5	NA	NA
Oyo	262 ^^	42	2.9	34.2	15.2	73.4	5.7	74.7	NA	NA
Sokoto	2151^^^	28	7.3	4.7	2.1	0.9	36	4.7	8	100
Yobe	2849 √	44	6.8	3.5	2.8	7	20	7.6	12	81
Zamfara	1049 √√	35	7.3	5.6	1.4	3.9	46	5	4.6	NA
NW	1026	33	6.3	7.6	4.3	16.2	42	11.5	-	
NE	1549	44	7.3	8.4	4.5	26.3	46	19.5	-	
Nigeria	576**	39	5.5	13.4	10.6	38.7	29	35.8	0.7	-

NA: Not available

Sources

+ Sharma V, Brown W, Kainuwa MA, Leight J, Bjorkman N. Sharma et al. High maternal mortality in Jigawa State, Northern Nigeria estimated using the sisterhood method. BMC Pregnancy and Childbirth 2017; 17:163.

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+++ Adamu Y, Salihu HM, Sathiakumar N, Alexander GR. Maternal mortality in Northern Nigeria: a population-based study. *European Journal of Obstetrics & Gynecology and Reproductive Biology* 2003;109:153–159.

^ Available at: https://www.vanguardngr.com/2017/12/katsina-records-340-maternal-deaths-annually-daura-tops-chart-report/

^^ Available at: https://www.nurhitoolkit.org/program-cities/ibadan#.W5BKETknbIU

^^^ Audu LR, Ekele B. A ten year review of maternal mortality in Sokoto, Northern Nigeria. West Afr J Med 2002; 1) 74-6.

√ Kullima AL, Kawuwa MB, Audu BM, Geidam AD, Mairiga AG. Trends in maternal mortality in a tertiary institution in Northern Nigeria Annals of African Medicine 2009;8(4):221-224.

√√ Doctor HV, Olatunji A, Findley SE, Afenyadu GY, Abdulwahab A, Jumare A. Maternal mortality in northern Nigeria: findings of a health and demographic surveillance system in Zamfara State, Nigeria. Trop Doct. 2012 Jul;42(3):140-3

* National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF). 2017 *Multiple Indicator Cluster Survey 2016-17, Survey Findings Report*. Abuja, Nigeria: National Bureau of Statistics and United Nations Children's Fund.

** National Population Commission (NPC) [Nigeria] and ICF International. 2014. *Nigeria Demographic and Health Survey 2013.* Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF International.

*** Data obtained from the various state Ministries of Health

1.3 Policy Environment

The rapid reduction of maternal and newborn mortality requires a significant boost in the provision of timely, safe, appropriate and effective healthcare services before, during and after childbirth through sustained action. The policy environment in the health system is favourable and through the Federal Ministry of Health, various policies and strategies are in place to create enabling environment for effective implementation of maternal and newborn health interventions at all levels of care, nationally and sub nationally by all stakeholders.

Maternal and newborn health are prioritised in currently existing national health policies and strategies namely, the **National Health Policy 2016** and the **National Strategic Health Development Plan II** (NSHDP II)**.** The main goal in these documents is to reduce maternal and newborn mortality "through the provision of timely, safe, appropriate and effective healthcare services before, during and after child birth" to mothers and the newborns (page 93 of NSHDP II). Additionally, the **Reproductive, Maternal, Newborn, Child and Adolescent Health plus Nutrition Investment Case** (RMNCAH+N, 2017 - 2030**)** prioritises the provision of the basic minimum package of health services (BMPHS) outlined in the National Health Act (NHA, 2014) for women and children, using the basic health care provision fund (BHCPF). The evidence and costs for maternal mortality reduction are well laid out in the RMNCAH+N Investment Case and the **Integrated RMNCAH plus Nutrition Strategy** (IRMNCAH+N, 2018**)** which further identified the high impact interventions for improved maternal and newborn health outcomes.[6,7] Also, the **National Strategy on MNH Quality of Care (QoC) and the Improvement Plan** clearly spells out measures for improving the quality of MNH services. Furthermore, the **National Health Financing Policy and Strategy** is set out "*to ensure that all Nigerians have access to timely, affordable, quality, efficient and equitable healthcare services they need without the risk of impoverishment"*. The Policy has six objectives linked to funds generation, pooling funds, targeted increased expenditure on priorities, strengthening health care financing systems, increasing risk protection and reducing out of pocket expenditure. Addressing these challenges will be crucial to unblocking some of the barriers currently underpinning maternal mortality.[8]

The **Nigeria Newborn Action Plan** is a national policy focused on the prevention of newborn mortality through a package of high priority interventions to reduce newborn mortality including, the promotion of facility delivery, strengthening community interventions, provision of quality care for the newborn especially small and sick babies and infection prevention.[9] The **National Policy on Health and Development of Young People and Adolescents** aims to promote the health and development of young people and adolescents through strategies ranging from the provision of information, counselling and health care services; creating healthy, safe and supportive environment for young people; health promotion for behavioural change and capacity building for young people to maximise their development.[10] Other relevant strategies and plans include the **National Task Shifting Policy** which contains concrete recommendations to address significant human resource constraints through strengthening capacity of lower cadre healthcare providers such as

[6] FMOH 2018. National Strategic Health Development Plan II.
[7] FMOH 2017. Investment case 2017 to 2030. Reproductive, maternal, newborn child, adolescent health and nutrition.
[8] FMOH (2016). National Health financing policy, Abuja.
[9] FMOH 2016. Nigeria Every Newborn Action Plan: A plan to end preventable newborn deaths in Nigeria. Abuja: Federal Ministry of Health; 2016.
[10] FMOH 2007. National policy for the health and development of young people and adolescents in Nigeria.

Community Health Extension Workers (CHEWs) to provide routine maternal and newborn care services (including referral).

In summary, there is a catalogue of well-considered, practical and focused strategies that should guide service delivery for the reduction of maternal and newborn mortality. What is needed is the leadership to implement these strategies, resources to fund them and the political will to sustain implementation. **Women and children die not because we do not know what to do but because of lack of political will to implement the plans**. The central plank of the roadmap therefore builds on existing strategies to provide further clarity on implementation particularly at state levels and also generate renewed vigour and momentum to deal with key impediments to achieving results for women and newborns.

2. The Political Economy of Maternal and Neonatal Mortality

2.1 Political Economy of Health

Public policy does not strongly link health outcomes to economic growth of the state or nation. Women constitute a major part of the public and particularly the private workforce in Nigeria, thus contributing massively to the economy growth and wealth of the state. Ending preventable maternal and newborn deaths and helping households reduce health costs at the point of care, especially emergency or catastrophic expenditure, is a critical and important means to safe-guarding household wealth for economic investment by healthy women-workforce.

Many of the health financing factors that underpin maternal mortality are by nature political economic challenges due to weak institutional and regulatory arrangements, poorly functioning systems, weak accountability and inefficient management. Unlike infrastructural development, the political agenda to a large extent, has not prioritised human capital development through provision of good maternal and neonatal health services as critical index of good governance and economic growth. Persistent maternal deaths are not yet a top political issue and making progress on saving maternal and newborn lives is not linked to multiple political terms nor demanded from political candidates and leaders in a sustained way. In some places, there is still gross political complacency about health in general and preventable maternal and newborn deaths in particular. This trend needs to change if progress is to be made and sustained. **Hence, the need for all political authorities to be convinced that addressing the issues on maternal and newborn death for socio-economic growth is a vital part of their public function and an index of good governance and sustained development.**

2.2 Gender and Women's Empowerment

Women in northern Nigeria suffer from a range of linked challenges that curtail their socio-economic development. These include restrictions on their freedoms as individuals which limits their choices, autonomy and opportunities as both children and adults. Freedom on several interrelated levels include: political freedom (transparency in relations between people); freedom of opportunity, freedom to participate in the economy and freedom of protection from poverty. When any of these freedoms are missing, poverty, lack of choice and lack of autonomy can result.

Poverty, in turn, renders the individual vulnerable to coercion of all manner and exclusion from economic choices and protections. Thus, poverty goes beyond income, especially income at the household level and includes poverty of opportunity (especially economic and educational opportunities), poverty of participation and poverty of self-determination.[11] This is particularly the case in relation to girls and women who often lack agency, autonomy and personal control over their own lives. Poverty affects girls' and women's life choices, ability to make decisions, earn money, invest in her children and fully participate in society. It is not a coincidence that in parts of Kaduna, and other parts of Nigeria, where women have more

[11] Amartya Sen developed this argument related to freedoms, poverty and women's empowerment in: "Development as Freedom", Oxford University Press, Oxford, 1999.

control over their own decisions (and more education) they had better attendance at health facilities, higher patronage of health services and better health outcomes.

Health for women and girls is linked to their broader role in society. **Study after study has shown that increasing women's autonomy and particularly, their participation in the economy increases the wealth of society and the state**[12]. Women's access to the economy and to decision-making, strengthens, rather than weakens, social cohesion and resilience. In settings where women have been able to access the economy and the financial system, they acquire more education and skills, reduce their own fertility and invest in their children.

2.3 Health Financing and Universal Health Coverage

High levels of out of pocket spending and low public expenditure on health have weakened the capacity of the Nigerian health system to decisively interrupt and re-calibrate the trajectory of preventable maternal and newborn deaths. The situation analysis identified inefficient services, underfunded and inaccessible facilities, lack of trust in health care workers, hidden as well as explicit fees and for many people, poor quality of care as factors that must be dealt with to overcome maternal and newborn health burdens significantly.

The public budget for health is less than 5% of available government resources (both federal and in most state budgets). In addition, the allocated funds are typically not made fully available during the year. For example in Katsina, 59% of the 2017 budget was released compared to 81% in Yobe and almost 100% in Jigawa, although not on time. In addition to delayed or partial disbursements, the lack of predictability in the arrival of funds has a serious impact on the ability to spend money when it does in fact arrive. As a result, the percentage of available funds actually utilised is typically a fraction of the amount budgeted (Figure 1).

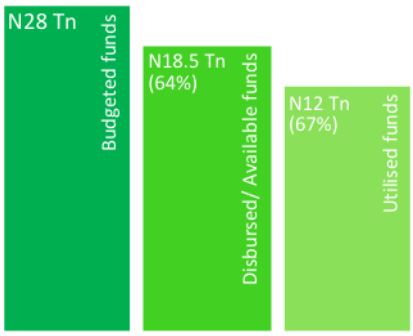


Figure 1: ***The typical budget process: What is budgeted is not released; what is released is not spent***[13] ***(Source:*** *http://www.nationalplanning.gov.ng/2017/assets/3rd-quarter-report-2016.pdf* **)**

This explains, amongst other reasons, why the burden of funding health services largely lies on the patient. When patients have health emergencies, they resort to fund raising through

[12] For example, for an assessment of the loss in terms of GDP due to education gender inequalities for the Asia Pacific region see ILO, *Women and labour markets in Asia –Rebalancing for Gender Equality,* 2011. And, for a broader literature review, see World Bank, *Measuring the Economic Gains from Investing in Girls: The Girl Effect Dividend,* World Bank Policy Research working Paper, 2011.

[13] This example is drawn from a government analysis of the budget from Q3 2016. It is not straightforward to find rigorous analyses of the annual federal and state budgets so this is presented as an example only.

selling of assets at low prices, trading assets for services such as transport in the middle of the night, incurring debts and for the poorest of the poor, there are no options. **The impoverishment of households as a result of high cost of health care is one of the main drivers of poverty, the world over and 100 million people fall back into poverty *every year* as a result**[14]. Even where the resources are available in a household, having to deplete hard earned assets (in most instances productive assets), makes people hesitate before seeking care leading to delays and, as clearly shown, to unnecessary deaths of many women and children.

2.4 Theory of Change

The Situation Analysis, supplemented by existing knowledge and strategies, was used to develop a **Theory of Change for maternal and newborn mortality reduction.**

The Theory of Change (Annex A) identifies the many layers of stakeholders, processes, interventions and behavioural and capacity change needed to significantly reduce maternal deaths in Nigeria. It maps out the complex web of interventions, behaviours and services needed everywhere, at all times, to reduce maternal and neonatal mortality.

The Theory of Change particularly identifies the critical role of political will, fiscal commitment, social norms change, women's economic participation, community leadership, improved quality of service and partnerships. The Roadmap is thus rooted in these drivers of change and picks out the critical priorities that are most important to building momentum for mortality reduction.

It is important to emphasise that the Theory of Change for this Roadmap does not replace the national IRMNCAH strategy. Rather, it serves as a framework of action to bolster implementation of the essential package of IRMNCAH services with an emphasis on redressing the bottlenecks to reducing maternal and neonatal mortality in the short and medium term. The purpose of the Roadmap is articulated in the next section.

3. Roadmap Goal and Objectives

3.1 Goal

The goal of the Roadmap is *to mobilize political, financial, social and health system commitment to accelerate the current trend in maternal and newborn mortality reduction, heighten the sense of urgency and bring to bear the sustained attention of government, community and religious leaders around eliminating preventable deaths.*

3.2 Objectives

The objectives of the Roadmap are thus to identify specific interventions and actions that will:

[14] The World Bank, the First Global Monitoring Report on Universal Health Coverage, Washington DC, 2017.

- ➢ Accelerate the pace of decline of maternal and neonatal mortality;
- ➢ Build and sustain commitment within and beyond the heath sector at LGA, State and National levels;
- ➢ Link maternal and neonatal mortality reduction to the political and economic agenda
- ➢ Identify specific roles and responsibilities, with clear monitoring and tracking arrangements to strengthen accountability.

3.3 Structure

The Roadmap does not repeat the existing strategies and plans that are currently supporting decision-making in the health system (outlined above). Rather, it aims to pick out the critical actions needed within and beyond the health sector to build momentum around the implementation of these strategies and to strengthen accountability for action among policy makers, funders, community and religious leaders and others. The priorities identified are thus captured in a comprehensive accountability framework in order to guide implementation.

4. The Roadmap

The Roadmap sets out nine critical areas for rapid acceleration, each with priority actions and accountable stakeholders. The nine areas are presented below and summarised in Table 3.

4.1 Sustained Political Commitment: Maternal and Neonatal Mortality is a Political Issue and States with Strong Governance and Leadership have Low Mortality.

Maternal and neonatal deaths create significant shock within a household and represent years of lost investment, risk of impoverishment and social stress. Motherless children are less likely to thrive. Access to safe, affordable and quality services is a fundamental deliverable of the political compact. With greater insight on the absolute necessity to end these preventable deaths, citizens could become less tolerant of the lack of quality services, as a failure of the political system at all levels and a denial of fundamental human rights.

With organisation, focus and effort, maternal and neonatal mortality are almost entirely preventable. **What is most needed is the will and sustained political commitment to ensure that all stakeholders develop a shared understanding of its high priority, that leaders clearly set goals, encourage and support change, hold all stakeholders and themselves accountable for progress and sustained focus.**

The increased participation of women in political life at all levels of society (local, state and national) can improve health and development outcomes; women's involvement also brings different perspectives and approaches to decision-making, as they are more likely to prioritise

health and education issues in their representative roles in politics.[15] However, in Nigeria, women's participation has been declining rather than increasing such that the country now ranks 122 out of 144 overall in terms of its gender gap score[16] and has declined since 2006 from 99th to 135th in terms of both education and political engagement of women. Revitalising women's roles in public and political life will be an important means of empowering women and increasing visibility of maternal and neonatal mortality reduction as political goals for governments.

Priority actions:

- **Presidential Declaration of a state of emergency** on Maternal and Neonatal Deaths in Nigeria;
- **Inaugurate and chair a Presidential taskforce,** similar to the *polio campaign taskforce*, to raise the profile and political importance of preventing maternal and neonatal deaths;
- Place **Governors at the centre of accountability** for action in States and include State efforts to reduce maternal and newborn mortality as a standing item on the agenda of the Governors' Forum;
- Create a **peer review mechanism** within each State and across States to monitor and support progress among LGAs and States, accompanied by incentives to encourage and reward progress in the form of matching funds and awards; (the Basic Health Care Provision Fund and the Saving One Million Lives P4R initiative lend themselves well to this approach).
- **Monitor the implementation** of the Roadmap for Maternal and Neonatal Mortality Reduction at the highest political level at regular (three-monthly) intervals.

[15] **Dare Arowolo and Folorunso S. Aluko, Women and Political Participation in Nigeria,** *European Journal of Social Sciences – Volume 14, Number 4 (2010) p.581-593.*

[16] The *Global Gender Gap Report,* World Economic Forum. 2017 edition. http://www3.weforum.org/docs/WEF_GGGR_2017.pdf

Accountability Framework 4.1: Sustained Political Commitment

Actions	Accountable Stakeholder	**Milestones**
Declaration of a state of emergency by the President on Accelerated Reduction of Maternal and Neonatal Deaths Inaugurate and chair a Presidential taskforce, similar to the *polio campaign taskforce*, to raise the profile and political importance of maternal and neonatal deaths	HMH, NCH, Relevant MDAs-MWA, Information, Education, National Planning Chairman senate committee on health Chairman House committee on health Private Sector	• Declaration of State of Emergency by the President by 2018 • Case for a Presidential Taskforce made and submitted; Presidential taskforce inaugurated by end of 2018
Place State Governors at the centre of accountability for action in states and include state efforts to reduce maternal and neonatal mortality as a standing item on the agenda of the Governors' Forum	State Governors through the Chairman Governors' Forum and the National Economic Council.	• Maternal and neonatal mortality reduction plans should always be on the agenda of the Governors' Forum.
Create a peer review mechanism within each state to monitor and support progress among LGAs (using the suggested indicators in Table 1), accompanied by incentives to encourage and reward progress in the form of matching funds and awards	Chaired by the Health Commissioner on behalf of the Governor	• Governor / Deputy Governor attends at least one meeting and hands responsibility to State Commissioner for Health. • Quarterly meetings at which some number of LGAs present action plans / progress reports to peers; • Six monthly reports to the Governor in time to support national feedback process.
Monitor the implementation of the Maternal and Neonatal Mortality Reduction Roadmap at the highest political level.	HMH convenes the accountability process; Report submitted to the President and the national taskforce.	• Six-monthly progress report to include progress from each state on relevant indicators (Table 1).

4.2 Strengthening Fiscal Commitment to Women's Health

To ensure that every woman gets the care she needs pre-pregnancy, throughout pregnancy, delivery and post-delivery, **routine and emergency services should be free** or significantly subsidised.

There are a number of options to ensure women get free care during pregnancy and birth (conditional cash transfers, contributory fund schemes, free maternity schemes) and each state should research the available choices and test out what will work best. From an economic standpoint, investing government resources to reduce preventable deaths can boost

the economy significantly[17] and is much more cost-effective than the minor funds raised by user fees. This is because the economic cost of a woman's death includes direct expenses and in addition, foregone income, sunk costs, risks to living children, higher likelihood of intergenerational poverty and weaker social structures.

Priority Actions:

- Conduct an evidence based budget analysis of the state and LGA budgets in order to fully understand when funds should be released, how they are actually implemented and develop a specific action plan to increase budget allocation and budget implementation for health in general and maternal and newborn health in particular.

- Advocate for the implementation of the Abuja Declaration target budget commitment of 15% to health at state and national levels

- Prioritise the release of funds ensuring that the funds are released on time and as budgeted;

- Make services for family planning, ANC, delivery, PNC and newborn care free at the service delivery points (remove user fees) such that women are able to attend antenatal care, deliver at health facilities and receive postnatal check-up without having to pay at the point of service delivery;

- Universal Health Coverage: Development of State specific plans in line with National Health Financing Strategy

Accountability Framework 4.2: Sustained Fiscal Commitment for Women's health

Actions	Accountable Stakeholder	Milestones
Conduct an **evidence based budget analysis** of the state and LGA budgets in order to fully understand when funds should be released, how they are actually implemented and develop a specific action plan to increase budget allocation and budget implementation.	**Federal**: Minister of **Health**, **Finance** and Budget / National **Planning**. Chairman, Senate Committee, Health Appropriation Chairman, House Committee on Health, Institutions and Policy	• Every state has a budget analysis completed by end of 2019 and identifies three recommendations for action. • 15% allocation to health by all states in 2020

[17] Investment case in health document

Advocate for the **implementation of the Abuja Declaration** target budget commitment of 15% to health at State and National levels.	**State**: State Commissioners of Health, Finance, Planning and Budget. Chairman, House Committee on Health Chairman, House Committee on Appropriation	
Prioritise the **release of funds for health** in general and maternal and newborn health in particular ensuring that funds are released on time and as budgeted	Minister of Health, Minister of Finance, Governors, HC for Health & Finance, LGA Chairman	• Timely release of funds at least by end of first quarter • At least 80% of budgeted funds released.
Make services for family planning, ANC, delivery, PNC and newborn care **free at the service delivery point** (remove user fees) such that women are able to attend antenatal care, delivery and a postnatal check-up without having to pay at the point of delivery;	Governors, Minister of Health, HCH, HCF	• Removal of user fees at service delivery points • Discussion at State legislative forum on removal of user fees
Universal Health Coverage: Develop State specific plans in line with National Health Financing Strategy	Governors, Ministry of Finance	• Establishment of contributory health insurance scheme by all states by 2019; • Access to BHCPF by all states by 2019.

4.3 Inter-Sectoral Actions to Address the Social Determinants of Health

The fastest and most sustainable way to make progress on maternal and neonatal mortality reduction is to improve the educational and socio-economic status of women in society and invest in developing their potential. There is strong evidence that **investing in girls' education** in particular, has a significant positive multiplier effect in terms of improvement in human development indicators such as longer life expectancy, reduced fertility rates, lower infant, child and maternal mortality rates, and improved nutrition. [18,19]

Priority actions:

- Ministries of Health (MoH) to collaborate with Ministries of Education (ME) at all levels, to develop and implement strategies with short, medium and long term interventions, to facilitate **enrolment and retention of girls to complete at least**

[18] Karlsen S, Say L, Souza JP et al. The relationship between maternal education and mortality among women giving birth in health institutions: Analysis of the cross sectional WHO global survey on maternal and perinatal deaths. BMC Public Health 2011;11:606-616

[19] Ikeako LC[1], Onah HE, Iloabachie GC. Influence of formal maternal education on the use of maternity services in Enugu, Nigeria. J Obstet Gynaecol. 2006 Jan;26(1):30-4.

senior secondary education (as a minimum) including, the development of innovative programmes and building on models already working in some states (such as cash transfers to girls and families);

- **Advocate, encourage and support States to domesticate and implement the National Child Rights Act.**

Accountability Framework 4.3: Accelerating Girls' Education

Actions	Accountable Stakeholder	Milestones
MOH to collaborate with ME at all levels, to develop and implement strategies with short, medium and long term interventions, to facilitate enrolment and retention of girls to complete at least senior secondary education (as a minimum) including, the development of innovative programmes and building on models already working in some states (such as cash transfers to girls and families)	Federal and State: Ministries of Education, Youth Development, Health and Women's Affairs	Strategies developed within 12 months
Advocate, encourage and support states to domesticate and implement the National Child Rights Act	State Governments, Ministries & departments (Ministry of Education, Ministry of Youth Development, SMOH and Ministry of Women's Affairs working together)	A strategy with suitable/ appropriate messages developed

4.4 Promote Healthy Timing and Spacing of Pregnancy (HTSP)

One major priority that would benefit from broader partnerships, especially with religious and traditional partnerships is Healthy Timing and Spacing of Pregnancy (HTSP) which is the most cost effective intervention to prevent both maternal and neonatal deaths. This is because birth spacing allows the woman to recover fully from one childbirth before the next. As for infants, receiving the full attention of the mother for three years (including breast feeding) is the single most effective intervention to reduce infant mortality. Collaboration with and endorsement of HTSP by traditional and religious institutions will rapidly scale up community awareness, acceptance and use of HTSP services by the community. **Efforts to engage these institutions and build their capacity to fully understand and support the role of HTSP for reduction of maternal and neonatal mortality should be intensified.**

Priority Actions:

- MOH at all levels should coordinate and ensure multi-sectoral partnership especially with traditional and religious leaders to build their capacity and promote knowledge, acceptance and usage of family planning and birth spacing services in their communities.

- Development of IEC materials on Healthy Timing and Spacing of Pregnancy (champions, radio discussions and communications, media promotion and service delivery at key entry points such as PNC services).

Accountability Framework 4.4: Promote Healthy Timing and Spacing of Pregnancy

Actions	Accountable Stakeholder	Milestones
Establish multi-sectoral partnership especially with traditional and religious leaders to build their capacity and promote knowledge, acceptance and usage of family planning and birth spacing services in their communities.	FMOH/ SMOH, N/SPHCDA, Partners	• Established and functional coalition of partners • Capacity building of religious and traditional leaders for increased acceptance and usage of HTSP
Development of IEC materials on HTSP (champions, radio discussions and communications, media promotion and service delivery at key entry points such as PNC services)		• IEC materials/key messages on HTSP Messages developed (can leverage on existing ones) • Expanded campaign on HTSP including champions designed • On-going messages on mass media • PNC services promote HTSP for health of mother and baby

4.5 Accelerate Women's Economic Empowerment and Financial Inclusion

There is a direct relationship between women's economic empowerment and health outcomes. Putting **more resources in the hands of women** increases the income spent by households on the nutrition, health and education of children and significantly improves women's health literacy and control over their own health.

... Societies become stronger and wealthier when women are educated and empowered.

When such progress is accompanied by the **expansion of economic opportunities for women**, it translates into improved economic indicators such as increased labour force participation rates for women, the diversification of household revenue streams, rises in household incomes and reductions in vulnerability to shocks.[20]

[20] World Bank, *Measuring the Economic Gains from Investing in Girls: The Girl Effect Dividend,* World Bank Policy Research working Paper, 2011.

The legal, social, educational and financial barriers to the participation of women in the economy need to be removed so as to **overcome the constraints in terms of unequal access to assets and unequal participation in the market**. In particular, understanding how women participate in the informal economy, and particularly the "survivalist" end of that economy (those selling low value goods to support a hand-to-mouth existence), is crucial to removing barriers and increasing women's access to capital, skills and opportunities.

Reducing poverty and increasing purchasing power in the household reduces vulnerability to preventable diseases that lead to maternal and infant mortality. But more than this, economic growth – including through expanding women's participation – is vital to sustaining and **increasing the resources available for health services** both through taxation, social insurance and other contributory mechanisms.

Priority Actions:

- MOH should collaborate with the Ministries of Women Affairs at all levels to integrate MNCH interventions into existing women empowerment schemes and programmes.

- Each state should conduct an analysis to assess barriers to women's economic empowerment and develop key action plans to address and overcome these barriers.

Accountability Framework 4.5: Accelerate Women's Economic Empowerment and Financial Inclusion

Actions	Accountable Stakeholder	Milestones
MOH to collaborate with Ministry of Women's Affairs (MWA) at all levels to integrate MNCH interventions into existing women empowerment schemes and programmes.	Ministries of Women Affairs, Health and Finance, at all levels	• Implementation of agreed strategies on mainstreaming MNCH into women empowerment schemes and programmes by 2021
Each state should conduct an analysis to assess barriers to women's economic empowerment and develop key action plans to address and overcome these barriers	Ministries of Women Affairs, Health in collaboration with relevant stakeholders	• Analysis of barriers to women's economic empowerment and Development of key action plans to address these barriers.

4.6 Sustained Priority Investments: Increased Availability and Quality of Core MN Health Services

The national health strategies and plans summarised in Section 1 clearly outlines proven high-impact and cost-effective technical interventions to save women and newborns from dying during childbirth. **Commitment to implementing these strategies, particularly the national strategy on MNH quality of care and the Improvement plan** as a matter of urgency, is a key priority, to accelerating reduction in number of maternal and neonatal deaths.

Priority Actions:

There are **six vital steps** that could be taken immediately to accelerate the implementation of maternal and newborn health plans and strategies:

1. **Implement the National strategy and Improvement plan for quality of care (QoC) on MN health and achieve the milestones.**

2. **Rapidly identify and upgrade (make functional) a network of Basic and Comprehensive Emergency Obstetric and Newborn Care (BEmONC and CEmONC) facilities and services**:

The availability, quality and capacity of BEmONC and CEmONC facilities should meet WHO guidelines as soon as possible. Focus on a core network of facilities for the next two years so that there is one BEmONC facility in every ward open 24 hours a day and at least one CEmONC in every LGA:

- Each State should **map the distribution of identified BEmONC and CEmONC facilities** that will be rapidly raised to a minimum standard of quality and care;
- Nurses and midwives at these facilities and even medical officers and doctors, should be **trained again on EmONC (life saving skills;** the seven signal functions are listed in Appendix D) including:
    - Update and finalise manuals on lifesaving skills
    - Finalise and disseminate training manuals on life-saving skills and other harmonised training manuals on maternal and newborn health
    - Update preservice curriculum on lifesaving skills and newborn care for relevant cadre of health workers in line with task shifting policy
    - Ensure training of front line workers on lifesaving skills in line with the task shifting and sharing policy
    - Update and disseminate Emergency maternal and newborn management Protocols (obstetric haemorrhage, eclampsia, sepsis, obstructed labour and post abortion care, Helping Babies Breathe (HBB))
- Institutionalise **use of partograph for every** delivery: Develop, reproduce and distribute copies of the partograph and protocols to support the management of obstetric emergencies to every BEmONC and CEmONC facility;
- Sensitise relevant frontline HCW on **promoting delivery in different 'birthing positions' for improved birth experience and patient-centred care.**
- All BEmONC and CEmONC facilities should be the focus of a programme of **urgent upgrading** to achieve a minimum standard including
    - Basic obstetric and newborn management equipment including beds, labour furniture and privacy curtains,

- Reliable power supply
- Water and sanitation
- Fencing and improved security including night guards.

➢ **Appoint sufficient midwifery staff** (preferably women) to ensure that all BEmONC and CEmONC facilities are **open 24 hours a day**.

➢ Implementation plans should include **milestones** for this upgrading programme that are reported on regularly at the political level including at the Governor's Forum.

2. **Prioritise Investments on Human Resources for Health: a package of activities aimed at making more midwives and nurses available at the health facilities.** These actions include:
   ➢ Establish more accredit-able Schools of Midwifery and strengthen existing ones
   ➢ Training, deploying and retaining more midwives and nurses
   ➢ Prioritising the selection (and funding) of students from high burden communities;
   ➢ Reinstating the Foundation Year Programme for the Schools of Midwifery and strengthening the Modified Midwifery Service Scheme
   ➢ Urgently filling vacant midwifery and medical officer posts and appoint sufficient midwifery and medical officer staff to enable all BEmONC and CEmONC facilities remain open 24 hours a day.

3. Prioritise WHO list of **life-saving maternal and newborn drugs** and associated commodities using the signal functions as a guide and ensure that all BEmONC and CEmONC facilities are stocked regularly.

4. Every **maternal death should be investigated and lessons learned** about how and why it happened. The **Maternal and Peri-Natal Death Surveillance and Response (MPDSR)** review process is designed to create a safe environment for all relevant parties (the family, community members and leaders, health authorities, health workers etc) to recreate the sequence of events and symptoms in the hours/days leading up to a woman's death with the aim of preventing another one in the future. The process follows a recognised and well-established methodology that, when implemented correctly and consistently, can rapidly strengthen community and health workers' ability and knowledge in similar cases without assigning blame. **Revitalising and institutionalising the MPDSR process in each state, LGA and community, is an essential part of building consistency, strengthening positive reinforcement and spreading the idea that maternal and neonatal death is almost always preventable.**

5. **Fostering a more empathic, constructive and resilient MNH workforce** will be critical to encouraging attendance and gaining community confidence in the health services. There are three components to this vital effort:

   ➢ Re-orient health workers about the importance of respectful maternity care and improve teamwork among health workers to ensure everyone respects and works in harmony with each other and puts the well-being of patients first;

   ➢ Create a complaints system at each of the BEmONC and CEmONC facilities and empower the community to discuss complaints with the health authorities.
   ➢ Sensitise relevant frontline HCW on promoting delivery in different 'birthing positions' for improved birth experience and patient-centred care.

Accountability Framework 4.6: Sustained Priority investments on Core MN Health Services

Actions	Accountable Stakeholder	Milestones
Implement the existing national strategy and implementation plan on Quality of care (QoC) for MNH	**HCH,** SMOH, SPHCDAs, **HMB,** FMOH, NPHCDA	• Adopt/adapt and disseminate copies of the QOC strategy and improvement plan to facilities for implementation.
Rapidly identify, map and make functional Basic and Comprehensive Emergency Obstetric and Newborn Care **(BEmONC and CEmONC) facilities and services**: in line with one functional PHC unit per ward and one referral level General Hospital per LGA	State Commissioners / HMB, SPHCDA responsible at state level SOGON, PAN, NAMN, MDCN, Community health regulatory body,	• By end of 2019 each state have identified and mapped the BEmONC and CEmONC facilities in each ward and LGAs respectively for targeted response
Upgrade BEmONC and CEmONC facilities to achieve a minimum standard of quality including: • Basic obstetric and newborn management equipment, beds and labour furniture including privacy curtains, • Ensure uninterrupted power supply to all BEmONC and CEmONC facilities • Ensure availability of water, sanitation and hygiene (WASH) in facilities • Fencing and improved security including night guards		**Works and repairs:** • Each identified BEmONC and CEmONC facility develops assessment of works needed • Capital budget prioritises upgrades in each LGA/ State to achieve minimum standard. • Every identified BEmONC and CEmONC facility is fenced by end of 2019. **Opening hours:** • Every BEmONC and CEmONC facility is open 24 hours and has a night guard by end of 2019.

Twice yearly training of relevant HCWs on EmONC (Life Saving Skills training) • Adopt and disseminate updated training manuals on LSS and other harmonized training manuals on MNH • **Ensure u**pdate of preservice curriculum on LSS/EmONC in line with task shifting policy. • Sensitize relevant frontline HCW on **promoting delivery in different 'birthing positions' for improved birth experience and patient-centred care**. • Adopt and disseminate Management Protocols on obstetric haemorrhage, eclampsia, sepsis, obstructed labour and post abortion care, HBB) • Carry out regular supportive supervisory visits using the National ISS tool.		• Service providers trained on EmONC/LSS twice yearly **Training:** • Updated lifesaving skills manuals available by 2018 • Updated lifesaving protocols available by 2019 in all health facilities • Regular supportive supervision conducted
Mentoring, supervision and coaching of health workers through the Voluntary Obstetrician Scheme (VOS) and the Voluntary Paediatrician Scheme (VPS)	State MOH/ SPHCDA working with HMBs, LGAs and others Ministry of Education SOGON, PAN	• VOS and VPS programmes both initiated.
Institutionalise use of partograph for every delivery: Develop, print and distribute copies of the partograph and protocols to support the management of obstetric emergencies in every BEmONC and CEmONC facility		• Availability and use of partograph in all facilities
Ensure **functional referral** at all levels of care		**Referral**: • Institutionalise referral systems (facilities-training, logistics, referral slips, feedback) in all health facilities

Prioritise investment on human resources for health for MNH: • Appoint sufficient midwifery and medical officer staff including urgent filling of existing vacancies) to enable all BEmONC and CEmONC facilities to **remain open 24 hours** a day. • **Accelerate and prioritise preservice training and appointment** of critical MNH staff -midwives and nurses • Establish more accredit-able Schools of Nursing and Midwifery • Prioritise the selection (and funding) of students from high burden communities; • Reinstate the Foundation Year Programme and the Modified Midwifery Service Scheme (mMSS)	SMOH, SPHCDA, HMBs, LGAs.	• Adequate minimum staffing of BEmONC, CEmONC (HR for MNH), and other facilities recorded • Training of more midwives, nurses, doctors, CHEWS and community midwives • Filling of vacant midwifery and medical officer posts • Reinstatement of the foundation year program
Prioritise the UN/WHO list of life-saving maternal and newborn drugs and associated commodities using the signal functions as a guide and ensure that all BEmONC and CEmONC facilities are stocked regularly shifting, if necessary to a partial push system where facilities are remote and communications are difficult.	HMB, HCH, SMOH, Drug Management Agency, N/SPHCDA	• Priority list of life saving medications for pregnant women and children available • Elimination of stock-outs of life saving medications
Maternal and Peri-natal Death Surveillance and Response (MPDSR) review process revitalised and institutionalised in each LGA in line with the National MPDSR Guidelines	FMOH, SMOH, NPHCDA, SPCDA, SMOH LGA working with community and traditional leaders, women's groups and health authorities	• Each LGA develops a strategy for conducting reviews within 48 hours of a death; • MPDSR conducted after each death • Report sent to HMH • States have peer review of the MPDSR data
Creating a more **cooperative, resilient and compassionate workforce**	HCH, SMOH, HMB, Servicom, SPHCDA LGA working with community and traditional leaders, women's groups and health authorities	• Re-orientation and Trainings on respectful maternity care conducted • Complaints/ redress/ suggestion system established and monitored by the community; • Team building programme designed and rolling out;

Review CHEW curriculum to incorporate training on basic emergency obstetric and newborn care and focus CHEW training on knowing when to refer, encouraging ANC attendance, distributing family planning and counselling around birth spacing, and handing out clean delivery kits (including misoprostol and chlorhexidine).	N/SPHCDA CHPRB, FMOH, SMOH	• CHEW Curriculum reviewed • CHEWs actively working on refocused areas of priority • Number of CHEWs trained under the new curriculum

4.7 Community Engagement and Mobilisation

Communities and their leaders and households, including extended family members all have a crucial role to play in accelerating reduction of maternal and neonatal mortality in Nigeria. Four priority areas identified are:

➢ **Investing in changing community perception and attitude towards maternal and newborn deaths**

The Situation Analysis illustrated that in many communities the death of a woman during pregnancy and childbirth along with the frequent death of newborns is seen as something that is inevitable, "the will of God" or somehow, in another way, something that cannot be helped. This sense of resignation is heightened by the lack of options and services available to women. This attitude has to change. When people feel strongly that the death of a woman and child is a tragedy and avoidable, they will demand more from their service providers and political leaders.

➢ **Investing in changing community perception and attitude towards increased patronage of health care services**

Religious and traditional leaders have major roles to play in mobilising community members to make use of HTSP, ANC, delivery and postnatal services. Antenatal care is highly cost-effective as a means of identifying and preventing complications in pregnancy and delivery. Yet, for a range of reasons, ANC attendance (as well as delivery and postnatal care attendance) is very low in all the states. Improving the quality of health facilities and the performance of health staff will improve patronage of services by the community (Roadmap Priority 4.5). But continuing current efforts to improve community knowledge about the benefits of ANC in identifying complications will enhance change in behaviour.

Community, traditional and religious leaders are a vital group to engage in support of transforming women and children's health. They should be engaged and supported to educate men (and women) using existing opportunities, on the importance of ANC and facility delivery.

In addition, there is a need to improve institutional delivery conducted by skilled attendants as most maternal and a large number of newborn complications that lead to death, occur as emergencies around labour. Men are the main decision-makers on where (and even when) to seek care. Religious leaders are major gate keepers because men listen to their sermons and guidance. Religious leaders could be better engaged to

support efforts to educate and influence men to improve their health seeking behaviour and share decision-making with their wives at least around health care.

- **Investing in Community Health Workers**

  Nigeria's Task shifting and Sharing Policy has led to the recognition of Community Health Extension Workers (CHEWs) as **potential skilled birth attendants**. However, as a group, there is an urgent need to improve their capacity, establish performance standards, supervise their work and provide them with basic tools and guidance. Only 16% of CHEWs could correctly manage maternal and child health complications.[21] CHEWs need support to work in teams, improve communications, treat patients with respect and to be themselves respected. CHEWs and community health influencers and promoters services (CHIPS) should be tasked with distributing basic commodities to women in case they are unable to get to a health facility (misoprostol, clean delivery kits and chlorhexidine gel for umbilical cord care).

- **Encouraging Community Leaders to Organise Emergency Transport Schemes**

  Community, traditional and religious leaders should be trained in basic determinants of health: women empowerment, gender issues, birth spacing, delaying the age of marriage and nutrition.

  On a practical level, community leaders should be tasked with the responsibility to help organise emergency transport schemes in the community so that every pregnant woman can get to the health facility.

Priority Actions:

- Working closely with community, traditional, religious leaders and women groups, accelerate community engagement to build understanding, that maternal and newborn deaths are preventable and continuing current efforts to educate communities about the ways in which maternal newborn health can be improved;

- Promote ANC, institutional delivery, FP, PNC, good newborn practices

- Implement appropriate demand-side financing interventions to promote uptake of MNCH services by mother and child e.g., conditional cash transfer; distribution of Mama - Baby kits to mothers as an incentive to attend ANC, deliver in hospital and patronise PNC services;

- Build on existing community-driven initiatives to promote early referral and emergency transport of pregnant women and newborn to health facility;

[21] The situation analysis reported that the proportion of maternal and child health complications correctly managed in PHFs (where the main professional groups are CHEWS) was a dismal 16% nationally. This figure ranged from 10% in Kano State to 21% in Yobe (Page 200).

- ➢ Launch an active campaign with high profile champions to promote key messages: space births, attend ANC services, have a facility delivery and get a postnatal check-up;

- ➢ Strengthen activities associated with Safe Motherhood Day

Accountability Framework 4.7: Community Engagement and Mobilisation

Actions	Accountable Stakeholder	Milestones
Implement existing communication strategy on Maternal and Newborn health	State Commissioners of Health, State PHCDAs	• Updated and costed State specific community engagement & BCC strategy.
Working closely with community, traditional, religious leaders and women groups to **accelerate community engagement** and mobilisation through: - building the understanding that maternal and newborn deaths are preventable - And continuing current efforts to educate communities on ways to improve MNH - through promotion of ANC, institutional delivery, FP, PNC and good newborn practices	State HCH, FMOH, SMOH, MWA, MOI, NPHCDA, SPHCDAs, FBOs(JNI, CAN FOMWAN), National council of Traditional leaders, Women groups, NPHCDA/SPHCDA, WDCs, FHCs, CBOs	• Community and traditional institutions engaged in community mobilization
Implement appropriate demand-side interventions to promote uptake of MNH services e.g. distribution of mama-kits, (conditional cash transfer)	State HCH, FMOH, SMOH, MWA, MOI, NPHCDA, SPHCDAs, FBOs(JNI, CAN FOMWAN), National council of Traditional leaders, Women groups, NPHCDA/SPHCDA, WDCs, FHCs, CBOs	• Provision and distribution of demand side financial interventions such as Mama-Baby Kits and CCT to women at ANC/Labour/delivery;
Build on existing community-driven initiatives to promote early referral and emergency transport of pregnant women and neonate to health facility		• Emergency Transport Scheme (ETS) scaled up
Launch an active campaign with high profile champions to promote key messages: space births, attend ANC services, have a facility delivery and get a postnatal check-up;	NPHCDA/SPHCDA, Federal/ State Ministries of Women Affairs, information, National Health advocates	• Designate champions to speak out about maternal newborn deaths • Plan appropriate state focused media campaigns • Develop a small number of key message
Strengthen activities associated with Safe Motherhood Day	FMOH, SMOH, NPHCDA, SPHCDA, Ministries of information,	• Key advocacy messages on safe maternal and newborn care developed

Promote distribution of Misoprostol and Chlorhexidine	HCH reporting to the Governor HMB SMOH Ministry of LG Ministry oWomen Affairs	• Communities mobilized on community distribution of chlorhexidine and misoprostol
Promote Kangaroo Mothercare especially for premature and underweight babies		
Recognizing the existence of several community health cadres and community structures, strengthen mechanisms and initiatives to track pregnant women, deliveries and newborns	NPHCDA/SPHCDA, LHA Health management team	• Designated community health workers engaged in community mobilisation and tracking

4.8 Everyone Has a Role: Strategic and Meaningful Partnerships

Partnerships are vital to making progress. In particular, coordinating efforts ensures that all partners work on promoting the same objectives and outcomes. Conversely, partners who work independently can duplicate efforts and create inefficiencies. In each state, **a coalition of stakeholders**, including local and international **NGOs, religious groups, external funders, private sector partners and government agencies**, should be convened within an umbrella group to coordinate support for the achievement of Maternal and Newborn Health objectives beginning with coordination around the implementation of the priorities set out in this Roadmap.

Religious leaders in particular have a very important role that is probably under utilised in most places. For example, religious leaders are held in high esteem in their communities and there are weekly opportunities to share important messages, set examples, and encourage people to change their attitudes and behaviour towards critical health issues such as birth spacing, attending health facilities for ANC, delivery, postnatal checks, and other vital services. Religious leaders are looked up to across the community and the regularity with which they speak to large gathered groups makes their role and participation an ideal channel for sharing important information to shape social norms.

There are a number of **religious groups** that could be empowered to educate communities on how to reduce maternal and newborn deaths. Such groups may require capacity building and support. Since they work in such a wide range of communities, it would almost certainly be an effective means to really advance important ideas about the avoidable nature of maternal and newborn deaths, shifting attitudes toward HTSP (having fewer healthy children creates strong families) and mobilising women to attend services. Such religious groups include, for example, Jamaatul Nasril Islam, the Women Wing of Christian association of Nigeria (WOWICAN), Christian Association of Nigeria, Council of Ulama, Federation of Muslim Women Association of Nigeria (FOMWAN), Islamic Medical Association of Nigeria (IMAN) and the Christian Health Association of Nigeria (CHAN).

Traditional institutions are also highly regarded by the people and most currently have active interests in the reduction of maternal and newborn mortality. For example, the Kano Emirate Council has a Committee on Health and Human Development (KECCoHD) which

works closely with the Kano State Government to support community mobilisation around priority issues including Maternal and Child Health, immunisation, the promotion of girl child education, nutrition and sanitation. Other Emirate Councils and other traditional institutions within the zone have similar structures that could be mobilised to create demand for maternal health services.

There are also a number of **governmental and non-governmental organisations** that are actively working in the community to stimulate demand and in health facilities to improve the supply side to strengthen MNH services. However, whereas they all have something to contribute, their collective efforts will yield better results. Creating a coalition of partners will help reduce duplication of efforts and promote greater geographical spread of efforts for wider coverage.

Priority Actions:

- Strengthen (and where necessary, establish) and expand existing MNH mechanisms to ensure participation and inclusion of all stakeholders at all levels
- Fully implement existing communication strategy on Maternal and Newborn health
- **Accelerate community engagement** to build understanding that maternal and newborn deaths are preventable

Accountability Framework 4.8: Strategic and meaningful partnerships

Actions	Accountable Stakeholder	Milestones
Strengthen (and where necessary, establish) and expand RMNCH mechanisms to ensure participation and inclusion of all stakeholders at all level	FMOH, SMOH HCH, NPHCDA, SPHCDA, MoE, MoF MWA Civil society/ Women groups, Religious/traditional leaders, CTC/RMNCAH steering committee, Private sector	• Established and functional coalition of partners

4.9 Improve Data Quality for Better Decision-Making

Routine data collection and analysis is important to aid decision making in MNH. Unfortunately, there is poor culture of data collection in Nigeria. This includes vital statistics data from routine civil registration of birth and deaths and also that collected from health facilities and services. In the absence of reliable data, there is difficulty in appraising the current situation, analysing trends, learning lessons and planning appropriately to optimise the use of scarce resources.

A good example is the lack of reliable population-based maternal mortality figures aggregated to the different states. Table 2, drawing on available data (as earlier shown in Table 1) illustrates the challenges. Estimating maternal mortality is not easy anywhere but it is possible to develop a consistent approach and at least build some reliability into the data. Instead, the table shows that each state's estimate was done in a different year, uses a different methodology and approach and estimates a slightly different thing (institution-based deaths, all deaths etc).

Table 2: An example of the data weaknesses in MNH

State	MMR	NMR*
Jigawa	1012 (2001)	37
Kaduna	1400 (2010)	28
Kano	2420 (2003)	69
Katsina	1596 (2017)	35
Kebbi	Not available	55
Oyo	262	42
Sokoto	2151 (2002)	28
Yobe	2849 (2007)	44
Zamfara	1049 (2012)	35
NW	1026	33
NE	1549	44
Nigeria	576**	39

Sources

* National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF). 2017 *Multiple Indicator Cluster Survey 2016-17, Survey Findings Report*. Abuja, Nigeria: National Bureau of Statistics and United Nations Children's Fund.

** National Population Commission (NPC) [Nigeria] and ICF International. 2014. *Nigeria Demographic and Health Survey 2013*. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF International.

A further problem is that data management methods have remained archaic, paper-based and bureaucratic, making passage of data from one office to another difficult. With newer technology, ICT methods are now available to make data transfer more accurate, instantaneous and less cumbersome. There is thus an urgent need to deploy ICT in data collection to improve decision making in MNH services and to improve accountability within the health system as well as between the health system and the political and social institutions that have responsibility for use of public resources, equity and well-being.

Priority Actions:

- Strengthen civil registration and vital statistics (CRVS) by ensuring effective linkages with all relevant agencies at all levels
- Strengthen and improve existing data management systems to ensure availability and use of quality and accurate data for MNH planning and decision making at all levels
- Tracking of maternal and newborn death in communities and health facilities building on MPDSR guidelines
- Ensuring availability of accurate subnational data on maternal and newborn mortality at State and LGA levels
- Build capacity to ensure use of data for planning, decision making and result allocation to strengthen delivery of MNH interventions
- Scale up the use of technology (ICT) to improve efficiency of data collection using the existing pilot
- Strengthen Public Private Partnership (PPP) to include private sector reporting.

Accountability Framework 4.9: **Improving MNH data quality for better decision-making**

Actions	Accountable Stakeholder	Milestones
Strengthen Civil Registration and Vital Statistics (CRVS) by ensuring effective linkages with all relevant agencies at all levels Strengthen and improve existing data management systems to ensure availability and use of quality and accurate data for MNH planning and decision making at all levels Tracking of maternal and newborn death in communities and health facilities building on MPDSR guidelines Ensuring availability of accurate subnational data on maternal and newborn mortality at State and LGA levels Build capacity to ensure use of data for planning, decision making and resource allocation, to strengthen delivery of MNH interventions Scale up the use of technology (ICT) to improve efficiency of data collection using the existing pilot. Strengthen PPP to include private sector reporting	NPoC at all levels, Federal/State MoH, NPHCDA, LGA, HFs , community structures Federal/State MoH, NPHCDA, LGA, HFs , community structures	• CRVS System strengthening, active and functional at all levels • Roll out of e-platform for MPDSR (as approved by NCH) in all 37 states • Regular and improved rate of data reporting • Integration of ICT into HMIS system • Improve reporting from private sector

5. Accountability and Tracking: Measure What Matters

This Roadmap will only be useful if it is used and applied for a sustained period of time to create increasing pressure behind the idea that preventable maternal and newborn deaths are unacceptable and can be avoided. A 'whole of society' and 'whole of government' shift needs to take place to eradicate unnecessary deaths, led by political, community and religious leaders. Sound, reliable, evidence-based and robust data will be a critical component of the Roadmap.

5.1 What Is Measured Gets Done

The Roadmap thus integrates results tracking which should be conducted on a regular basis and over a sustained period of time. A league table among LGAs or States or other groups tracking vital elements of the Roadmap could be established and monitored at regular intervals at political, religious and community fora.

Predictably, what is measured becomes the main focus of collective effort. What is measured thus needs to be what matters most and also, those elements of the programme most likely to lead to the fastest, deepest change.

5.2 Roadmap Monitoring and Accountability Framework:

The Roadmap showcases the Accountability Frameworks for each priority area identified with key actions for implementation. Against each action, responsible stakeholders are proposed and **milestones with timeframes for tracking are listed**. The Accountability Frameworks may require consideration and agreement by implementers at the states.

However, without the Accountability Framework and more importantly, active monitoring and implementation of the accountability processes anticipated in the Framework, this Roadmap will become another, in the long line of documents that set out good intentions but lead to little action or concrete change.

Table 3: Roadmap - Nine Priority areas with key actions and indicators

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
1. **Political leadership & accountability**	1.1 Declaration of a state of emergency by the President on Accelerated Reduction of Maternal and Neonatal Deaths. 1.2 **Inaugurate and chair a Presidential taskforce**, similar to the *polio campaign taskforce*, to raise the profile and political importance of maternal and newborn deaths;	HMH, NCH, Relevant MDAs-MWA, Information, Education, National Planning Chairman senate Chairman House committee on health	• Declaration of State of Emergency on ARMNM by the President by 2018 • Case for a Presidential Taskforce made and submitted; Presidential taskforce inaugurated by end of 2018	• Number of Presidential Task Force meetings held per year
	1.3 Place State Governors at the centre of accountability for action in states and include state efforts to reduce maternal and neonatal mortality as a standing item on the agenda of the Governors' Forum	State Governors through the Chairman Governors' Forum and the National Economic Council.	• Maternal and neonatal mortality reduction plans presented, discussed at least once at the Governors' Forum.	• Number of meetings (with reports) on maternal and newborn mortality reduction efforts at the Governors' Forum per year

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
	1.4 Create a peer review mechanism within each state to monitor and support progress among LGAs (using the suggested indicators in Table 1), accompanied by incentives to encourage and reward progress in the form of matching funds and awards	Chaired by the Health Commissioner but on behalf of the Governor;	• Governor attends at least one meeting and hands responsibility to State Commissioner for Health. • Quarterly meetings at which some number of LGAs present action plans/ progress reports to peers; • Six monthly reports to the Governor in time to support national report back process.	• Number of state level meetings with reports for peer review mechanisms of Local Government on ARMNM efforts per year
	1.5 Monitor the implementation of the Roadmap for Accelerated Maternal and Neonatal Mortality Reduction at the highest political level.	Federal Minister of Health convenes the accountability process; Report submitted to the President.	• Six-monthly progress report to include progress from each state on ten indicators (Table 2).	• Percentage level of implementation of the road map

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
2. Sustained fiscal commitment	2.1 Conduct an **evidence based budget analysis** of the state and LGA budgets in order to fully understand when funds should be released, how they are actually implemented and develop a specific action plan to increase budget allocation and budget implementation. 2.2 **Advocate for the implementation of the Abuja Declaration target budget commitment of 15% to health**	**Federal**: Minister of **Health**, **Finance** and Budget/National **Planning**. Chairman, Senate Committee, Health Appropriation Chairman, House Committee on Health, Institutions and Policy **State**: State Commissioners of Health, Finance, Planning and Budget. Chairman, House Committee on Health and Appropriation	• Every state has a budget analysis completed by end of 2019 and identifies three recommendations for action. • 15% allocation to health by all states 2020	• Number of state and LGA budget analyses conducted per year • Percentage increase in budgetary allocation to health at national and state levels
	2.3 Prioritise **the release of funds for health** in general and maternal and newborn health in particular ensuring that funds are released on time and as budgeted;	Minister of Health, Minister of Finance, Governors, HCH, Finance, LGA Chairman	• Timely release of funds • At least 80% of budgeted funds released.	• Percentage increase in the budget release for health at national and state levels; • Percentage of the health budget (both approved and released) that was utilised.
	2.4 Make services for family planning, ANC, delivery, PNC and newborn care free at the point of use (**remove user fees**) such that women are able to attend antenatal care, delivery and a postnatal check-up without having to	Governors, HMH, HCH, HCF	• Removal of user fees at service delivery points • Discussion of the issues held within State legislative forum;	• Number and percentage of health facilities offering free maternal and neonatal health care services

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
	pay at the point of delivery;			
	2.5 Universal Health Coverage: State specific plans in line with National Health Financing Strategy	Governors, Ministry of Finance	• Establishment of contributory health insurance scheme by all states by 2019; • Access to BHCPF by all states by 2019.	• Number and percentage of states that have implemented contributory health schemes • Number and percentage of states that have accessed the Basic Health Care Provision Fund
3. Advance intersectoral cooperation & accelerate girl's education	3.1 MOH to collaborate with ME at all levels, to develop and implement strategies with short, medium and long term interventions, to facilitate enrolment and retention of girls to complete at least senior secondary education (as a minimum) including, the development of innovative programmes and building on models already working in some states (such as cash transfers to girls and families)	Federal and States: Ministries of Education, Youth Development, Health and Women's Affairs	• Strategies developed within 12 months	• Number of strategies to promote Girl Child education that have been implemented • Percentage increase in the number of girls transiting to secondary school • Percentage increase in number of girls completing senior secondary school.

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
	3.2 Advocate, encourage and support states to domesticate and implement the National Child Rights Act	State Government departments (Ministry of Education, Ministry of Youth Development, SMOH and Ministry of Women's Affairs working together)	• A strategy with suitable/ appropriate messages developed	• Number and percentage of states that have domesticated and implemented the Child Rights Act
4. Promote healthy timing and spacing of pregnancies	4.1 Establish multi-sectoral partnership especially with traditional and religious leaders to build their capacity and promote knowledge, acceptance and usage of family planning and birth spacing services in their communities. 4.2 Development of IEC materials on HTSP (champions, radio discussions and communications, media promotion and service delivery at key entry points such as PNC services)	FMOH/ SMOH, N/SPHCDA, Partners	• Established and functional coalition of partners • Capacity building of religious and traditional leaders for increased acceptance and usage of HTSP • IEC materials/key messages on HTSP Messages developed (can leverage on existing ones) • Expanded campaign on HTSP including champions designed • On-going messages on mass media • PNC services promote HTSP for health of mother and baby	• Established and functional partnership coalition(s) in the state • Number of healthy timing snd spacing of pregnancy messages that have been developed
5. Accelerate women's empowerment	5.1 MOH to collaborate with Ministry of Women's Affairs (MWA) at all levels to integrate MNH interventions into existing women empowerment schemes and programmes.	Ministry of Health, Finance, Women's Affairs at all levels	• Implementation of agreed strategies on mainstreaming MNH into women empowerment schemes and programmes by 2019	• Number of women's empowerment strategies that have been implemented

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
	5.2 Each state should conduct an analysis to assess barriers to women's economic empowerment and develop key action plans to address and overcome these barriers	MWA in collaboration with relevant stakeholders	• Analysis of barriers to women's economic empowerment and Development of key action plans to address these barriers.	• Analytic report and key action plans developed
6. Increase health service quality and availability	6.1 **Implement the existing national strategy and implementation plan on Quality of care (QoC) for MNH**	**HCH,** SMOH, SPHCDAs, **HMB,** FMOH, NPHCDA	• Adopt/adapt and disseminate copies of the QOC strategy and improvement plan to facilities for implementation.	Number of functional quality improvement (QI) teams per facility

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
	6.2 **Rapidly identify, map and make functional** Basic and Comprehensive Emergency Obstetric and Newborn Care **(BEmONC and CEmONC) facilities and services**: in line with one functional PHC unit per ward and one referral level General Hospital per LGA	State Commissioners / HMB, SPHCDA responsible at state level SOGON, PAN, NAMN, MDCN, Community health regulatory body,	• By end of 2019 each state have identified and mapped the BEmONC and CEmONC facilities in each ward and LGAs respectively for targeted response	• Proportion of wards with one functional BEmONC per ward open 24 hours a day • Proportion of LGAs with one functional CEmONC open 24 hours a day • Increase in use of seven signal functions • Caesarean section rates • Availability of blood transfusion services
	6.3 **Upgrade BEmONC and CEmONC facilities** to achieve a minimum standard of quality including: • Basic obstetric and newborn management equipment, beds and labour furniture including privacy curtains, • Ensure uninterrupted power supply to all BEmONC and CEmONC facilities • Ensure availability of water, sanitation and hygiene (WASH) in facilities • Fencing and improved security including night guards		**Works and repairs:** • Each identified BEmONC and CEmONC facility develops assessment of works needed • Capital budget prioritises upgrades in each LGA/ State to achieve minimum standard. • Every identified BEmONC and CEmONC facility is fenced by end of 2019. **Opening hours:** • Every BEmONC and CEmONC facility is open 24 hours and has a night guard by end of 2019.	• Proportion of health facilities with minimum basic equipment (i.e thermometer, stethoscope, sphygmomanometer, weighing scale) • Proportion of health facilities with 24-hour electricity and water

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
	6.4 **Twice yearly training of relevant HCWs on EmONC (Life Saving Skills training)** • Adopt and disseminate updated training manuals on LSS and other harmonized training manuals on MNH • **Ensure u**pdate of preservice curriculum on LSS/EmONC in line with task shifting policy. • Sensitize relevant frontline HCW on **promoting delivery in different 'birthing positions' for improved birth experience and patient-centred care**. • Adopt and disseminate Management Protocols on obstetric haemorrhage, eclampsia, sepsis, obstructed labour and post abortion care, HBB) • Carry out regular supportive supervisory visits using the National ISS tool.		• Service providers trained on EmONC/LSS twice yearly **Training:** • Updated lifesaving skills manuals available by 2018 • Updated lifesaving protocols available by 2019 in all health facilities • Regular supportive supervision conducted	• Number of EmONC/Life Saving Skills trainings conducted per state • Number of emergency Maternal and newborn protocols produced • Proportion of PHCs offering 24 hour services
	6.5 **Mentoring, supervision and coaching of health workers** through the Voluntary Obstetrician Scheme (VOS) and the Voluntary Paediatrician Scheme (VPS)	State MOH/ SPHCDA working with HMBs, LGAs Ministry of Education SOGON, PAN	• VOS and VPS programmes initiated.	

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
	6.6 **Institutionalise use of partograph for every delivery:** Develop, print and distribute copies of the partograph and protocols to support the management of obstetric emergencies in every BEmONC and CEmONC facility		• Availability and use of partograph in all facilities	• Proportion of health facilities using partograph to monitor women in labour
	6.7 Ensure **functional referral** at all levels of care		**Referral**: • Institutionalize referral systems (facilities-training, logistics, referral slips, feedback) in all health facilities	• Increase in referral rates
	6.8 **Prioritise investment on human resources for health for MNH:** • Appoint sufficient midwifery and medical officer staff including urgent filling of existing vacancies) to enable all BEmONC and CEmONC facilities to **remain open 24 hours** a day. • **Accelerate and prioritise preservice training and appointment** of critical MNH staff -midwives and nurses • Establish more accredit-able Schools of Nursing and Midwifery • Prioritise the selection (and funding) of students from high burden communities; • Reinstate the Foundation Year Programme and the Modified Midwifery Service Scheme (mMSS)	State MOH/ SPHCDA, HMBs, LGAs.	• Training of more midwives, nurses, doctors, CHEWS and community midwives • Filling of vacant midwifery and medical officer posts • Reinstatement of the foundation year program	• Proportion of health facilities with basic minimum staffing

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
	6.9 Prioritise **the UN/WHO list of life-saving maternal and newborn drugs** and associated commodities using the signal functions as a guide and ensure that all BEmONC and CEmONC facilities are stocked regularly shifting, if necessary to a partial push system where facilities are remote and communications are difficult.	Reporting to the State Commissioner of Health: Drug Management Agency and Hospital Management Boards (HMB) working with NPHCDA	• Priority list of life saving medications for pregnant women and children • Eliminating stock-outs of life saving medications	• Proportion of health facilities with minimum life saving maternal and newborn drugs and associated commodities
	6.10 **Maternal and Peri-natal Death Surveillance and Response (MPDSR)** review process revitalised and institutionalised in each LGA	State Governor through the SMOH LGA working with community and traditional leaders, women's groups and health authorities	• Each LGA develops a strategy for conducting reviews within 48 hours of a death; • MPDSR conducted after each death • Report sent to HMH • States have peer review of the MPDSR data	• Proportion of health facilities and communities that have established MPSDR
	6.11 Creating a more **cooperative, resilient and kinder workforce**	Reporting to the State Commissioner of Health/ SPHCDA: LGA working with community and traditional leaders, women's groups and health authorities	• Complaints/ redress/ suggestion system in place monitored by the community; • Team building programme designed and rolled out; • Health worker reorientation in place • Regular supportive supervision	• Proportion of health facilities that have organised team building and health worker reorientation activities • Proportion of health facilities that have established complaints and redress mechanisms

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
	6.12 Review CHEW curriculum and focus CHEW training on knowing when to refer, encouraging ANC attendance, distributing family planning and counselling around birth spacing, and handing out clean delivery kits (including misoprostol and chlorhexidine).	NPHCDA CHPRB	• Curriculum reviewed • CHEWs actively working on refocused areas of priority	• CHEW curriculum reviewed
7. Engage and Mobilize communities	7.1 Implement existing communication strategy on Maternal and Newborn health	State Commissioners of Health, State PHCDAs	• Updated and costed State specific community engagement & BCC strategy.	• Specific community engagement strategies developed
	7.2 Working closely with community, traditional, religious leaders and women groups to **accelerate community engagement** and mobilisation through: - building the understanding that maternal and newborn deaths are preventable - And continuing current efforts to educate communities on ways to improve MNH - through promotion of ANC, institutional delivery, FP, PNC and good newborn practices	State HCH, FMOH, SMOH, MWA, MOI, NPHCDA, SPHCDAs, FBOs(JNI, CAN FOMWAN), National council of Traditional leaders, Women groups, NPHCDA/SPHCDA, WDCs, FHCs, CBOs	• Community and traditional institutions engaged in community mobilization	• Number of BCC sessions held

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
	7.3 Implement appropriate demand-side interventions to promote uptake of MNH services e.g. distribution of mama-kits, (conditional cash transfer)		• Provision and distribution of demand side financial interventions such as Mama-Baby Kits and CCT to women at ANC/Labour/delivery;	• Number of demand-side financing interventions established
	7.4 Build on existing community-driven initiatives to promote early referral and emergency transport of pregnant women and neonate to health facility		• Emergency Transport Scheme (ETS) scaled up	
	7.5 Launch an active campaign with high profile champions to promote key messages: space births, attend ANC services, have a facility delivery and get a postnatal check-up;	NPHCDA/SPHCDA, Federal/ State Ministries of Women Affairs, information, National Health advocates	• Designate champions to speak out about maternal newborn deaths • Plan appropriate state focused media campaigns • Develop a small number of key message	• Number of key messages on MNH passed by high profile champions
	7.6 Strengthen activities associated with Safe Motherhood Day	FMOH, SMOH, NPHCDA, SPHCDA, Ministries of information,	• Key advocacy messages on safe maternal and newborn care developed	
	7.7 Promote distribution of Misoprostol and Chlorhexidine	HCH reporting to the Governor HMB SMOH Ministry of LG Ministry oWomen Affairs	• Communities mobilized on community distribution of chlorhexidine and misoprostol	• Number and proportion of chlorhexidine and misoprostol distributed
	7.8 Promote Kangaroo Mothercare especially for premature and underweight babies			• Number of facilities where Kangaroo Mothercare is offered

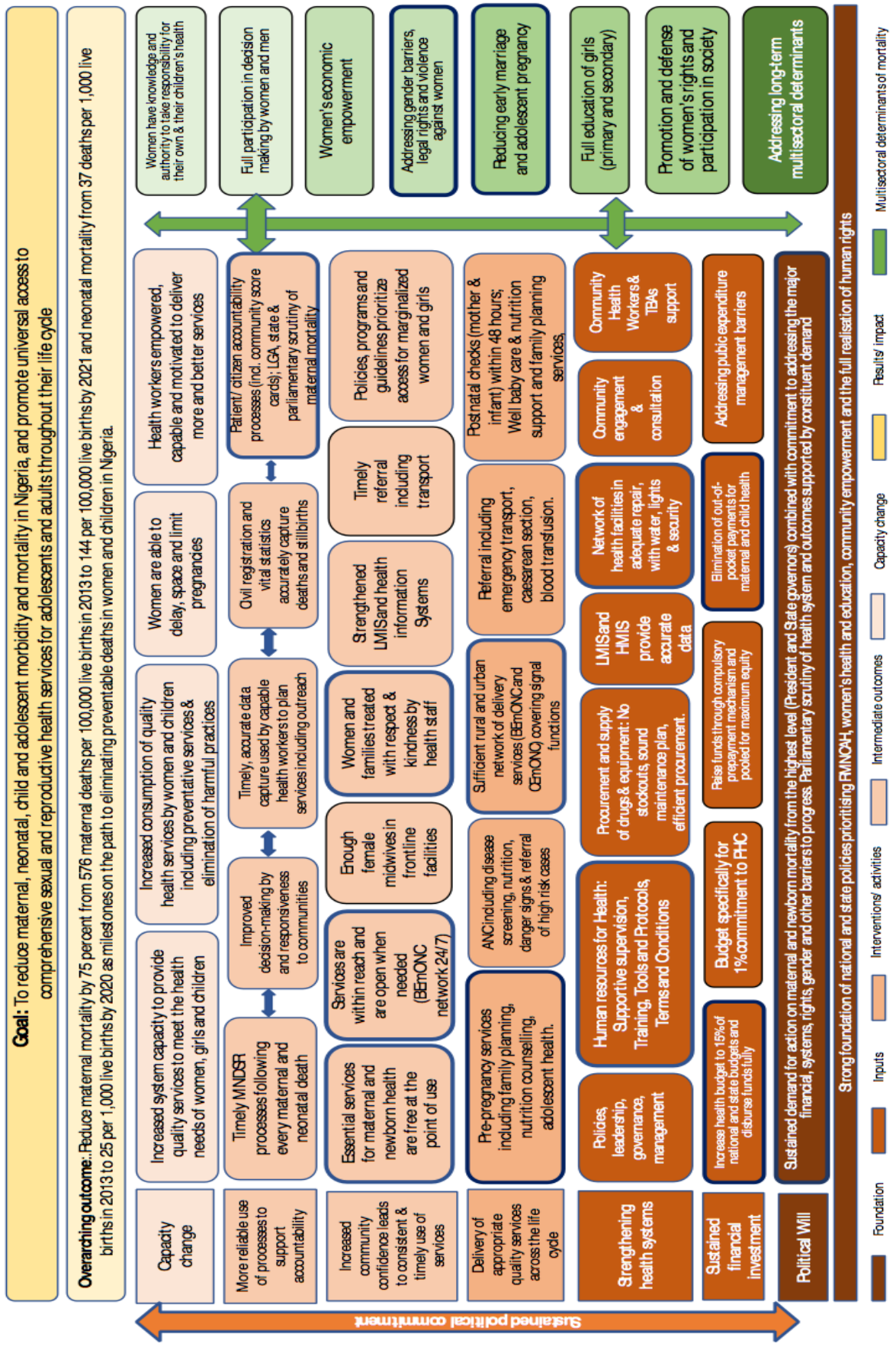
Priority area	Actions	Accountable stakeholder	Milestones	Indicators
	7.9 Recognizing the existence of several community health cadres and community structures, strengthen mechanisms and initiatives to track pregnant women, deliveries and newborns	NPHCDA/SPHCDA, LHA Health management team	• Designated community health workers engaged in community mobilization and tracking	• Proportion of booked pregnant women whose births were tracked
8. Strengthens partnerships to focus on the Roadmap priorities	Strengthen (and where necessary, establish) and expand RMNCH mechanisms to ensure participation and inclusion of all stakeholders at all level	FMOH, SMOH HCH, NPHCDA, SPHCDA, MoE, MoF MWA Civil society/ Women groups, Religious/traditional leaders, CTC/RMNCAH steering committee, Private sector	• Established and functional coalition of partners	• Established and functional coalition of partners - CTC/RMNCAH at National and State level • Number of organisations and partners committed to supporting the Roadmap implementation

Priority area	Actions	Accountable stakeholder	Milestones	Indicators
9. Data for Maternal and Newborn Health management and decision making	**9.1** Strengthen Civil Registration and Vital Statistics (CRVS) by ensuring effective linkages with all relevant agencies at all levels **9.2** Strengthen and improve existing data management systems to ensure availability and use of quality and accurate data for MNH planning and decision making at all levels **9.3** Tracking of maternal and newborn death in communities and health facilities building on MPDSR guidelines **9.4** Ensuring availability of accurate subnational data on maternal and newborn mortality at State and LGA levels **9.5** Build capacity to ensure use of data for planning, decision making and resource allocation, to strengthen delivery of MNH interventions **9.6** Scale up the use of technology (ICT) to improve efficiency of data collection using the existing pilot. **9.7** Strengthen PPP to include private sector reporting	NPoC at all levels, Federal/State MoH, NPHCDA, LGA, HFs , community structures Federal/State MoH, NPHCDA, LGA, HFs , community structures	• CRVS System strengthening, active and functional at all levels • Roll out of e-platform for MPDSR (as approved by NCH) in all 37 states • Regular and improved rate of data reporting • Integration of ICT into HMIS system • Improve reporting from private sector	• Proportion in increase in CRVS system • Number of e-platforms rolled out • Percentage increase in the rate of accurate MNH data reporting • Percentage increase in the tracking of maternal and newborn deaths • Percentage increase in the rate of MCH data reporting from private sector • Percentage increase in the use of ICT for data collection

1. Annexes

A. The Theory of Change
B. Synthesis of Situation Analysis
C. Full methodology and TOR
D. Signal functions for Emergency Obstetric and Newborn Care

Annex A: Theory of Change



Maternal and Newborn Mortality in Six States in Nigeria

A synthesis of the situation analysis

September 2018

1. Introduction

As part of the Federal Government's commitment to address the unacceptably high maternal and newborn mortality in Nigeria, particularly in high burden States, the Honorable Minister of Health, recently inaugurated a *"Task Force on Acceleration of the Reduction of Maternal and Newborn Deaths".* To inform the committee's work, a situation analysis was conducted in six states (Jigawa, Kaduna, Katsina, Kano, Yobe and Zamfara). The situation analysis[1], entitled "Situation Analysis of Maternal and Newborn Mortality in Selected High Burden States in Nigeria" explored the direct and indirect causes of mortality, assessed facility readiness to deliver services and captured a wide range of views from across the community about the nature and burden of maternal mortality. Government officials, community and religious leaders, health care workers, husbands and families as well as women themselves in 42 communities and health facilities participated in extensive interviews and focus group discussions. The material is rich in detail and conveys a strong sense of the very urgent need to address what is clearly a persistent – and pervasive – problem throughout the six states. Some progress has been made.

This synthesis aims to capture the main points from the 300+ page Situation Analysis in support of the development of a theory of change for maternal and newborn mortality and, thereafter, the development of a Roadmap to guide urgent, immediate action in all six states. The Synthesis is structured into six further sections. Section 2 presents the current situation regarding maternal and newborn health; Section 3 summarizes supply-side conditions while Section 4 presents the main demand-side issues raised by key informants and underlying causes are examined in Section 5. Sections 6 then evaluates the evidence using the "Three Delays" model and the final section analyses where progress has been made, what challenges were identified by key informants, priorities for reform and – where possible – opportunities for rapid progress.

2. Summary of Maternal and Newborn Health Status in Six Northern States

Despite the substantial decline in global maternal deaths (by 45% from 1990 level), 303,000 women still die every year from pregnancy related causes. Most of these deaths are preventable.[2] Nigeria has the highest global burden of maternal mortality in the world with a maternal mortality burden of 58,000 lives and a perinatal mortality rate of 77 per 1000 births, second only to Pakistan in its perinatal mortality rate.[3] As in most countries, the burden is unevenly distributed through the country, concentrating mainly in the Northern states.

Table 1: Summary of the situation - Maternal and Newborn Mortality in the six States+

	Maternal Mortality Ratio	Newborn Mortality Rate	Adolescent birth rate (%)^	Adolescent pregnancy rates (%)±	Fertility rate	Contraceptive prevalence rate	Unmet need for family planning
Jigawa	1012 (2001) [4]	37	186	32	8.5	1.3	17
Kaduna	1400 (2010)[5]	28	134	28	5.6	24.1	6
Kano	2420 (2003) [6]	69	169	24	7.7	6.3	11
Katsina	1596 (2017) [7]	35	218	38	7.5	6.3	15
Yobe	2849 (2007)[8]	44	159	20	6.8	3.5	14
Zamfara	1049 (2012) [9]	35	208	46	7.3	5.6	13
NE Zonal*	1026[10]	33	146	42 (p.198)	6.3	7.6	26.9
NW Zonal*	1549	44	176	46 (p.198)	7.3	8.4	26.9
Nigeria (NDHS 2013)	576[11]	39	120	29	5.5	13.4	9

+Data from the six states are difficult to compare as they are derived from different methodologies at different points in time. *North East Zone includes Yobe state; North West Zone includes Jigawa, Kano, Katsina, Zamfara and Kaduna states). ^ Proportion of every 1000 births that are to adolescent girls aged 15-19. ± Measures the percentage of teenage girls aged 15-19 who are mothers.

Table 2: The experience of antenatal care and childbirth (MICS 2017)

Experience of ANC care and Childbirth 2017	Jigawa	Kaduna	Kano	Katsina	Yobe	Zamfara	**Nigeria**
ANC 4 visits minimum (%)	36	44	45	33	27	29	**49**
ANC visit included BP, urine testing and blood samples (%)	42	67	49	30	31	22	**54**
Intermittent preventive treatment for malaria (2 doses) (%)	19	16	36	8	7	7	**15**
Use of LLIN during pregnancy (%)	26	5	9	36	19	11	**18**
Tetanus toxoid immunisation *%)	25	63	43	31	31	22	**48**

Skilled birth attendance (%)	21	47	20	21	14	16	**43**
Institutional delivery (%)	17	35	16	18	9	11	**38**
Caesarean section rates (% of deliveries)	0.5	4.3	1	3.3	1.1	0.8	**2.8**
Postnatal care within 48 hrs (%)	18	37	17	15	12	25	**37**

The major causes of maternal mortality in the six northern Nigerian states are haemorrhage (both ante and post-partum), hypertensive diseases of pregnancy, complications from obstructed or prolonged labour and maternal infections. The most common ante/intrapartum **haemorrhage** is placental abruption, while the most common cause of post-partum haemorrhage is uterine atony. The most dangerous **hypertensive** disease of pregnancy is pre-eclampsia, which may lead to eclampsia. Maternal **infection** includes bacterial sepsis, HIV, malaria, syphilis, and various other infections and is one of the main **complications from abortion**. Obstructed or **prolonged labour**, may lead to maternal death through haemorrhage and infection, sometimes after uterine rupture.

Newborn mortality – direct causes

There were three major causes of newborn mortality: infections, asphyxia and complications related to prematurity. The most common type of **infections** causing mortality are bacterial such as group B streptococcus (GBS), often acquired during labor, but infections causing mortality also may include malaria, syphilis, and tetanus. Newborn **asphyxia** is predominantly caused by maternal complications such as placental abruption, or preeclampsia. Among **preterm** infants, conditions that contribute to mortality include respiratory distress syndrome (RDS), intraventricular hemorrhage (IVH), necrotizing enterocolitis, and infections. [12]

A majority of newborn deaths are associated with one of the major maternal complications such as hypertension, haemorrhage, intrauterine infections, obstructed labour and maternal anaemia (p 98) suggesting that if maternal health is improved, a direct beneficiary will be reduction in newborn mortality.

Figure 1: Causes of newborn mortality in Nigeria, 2015

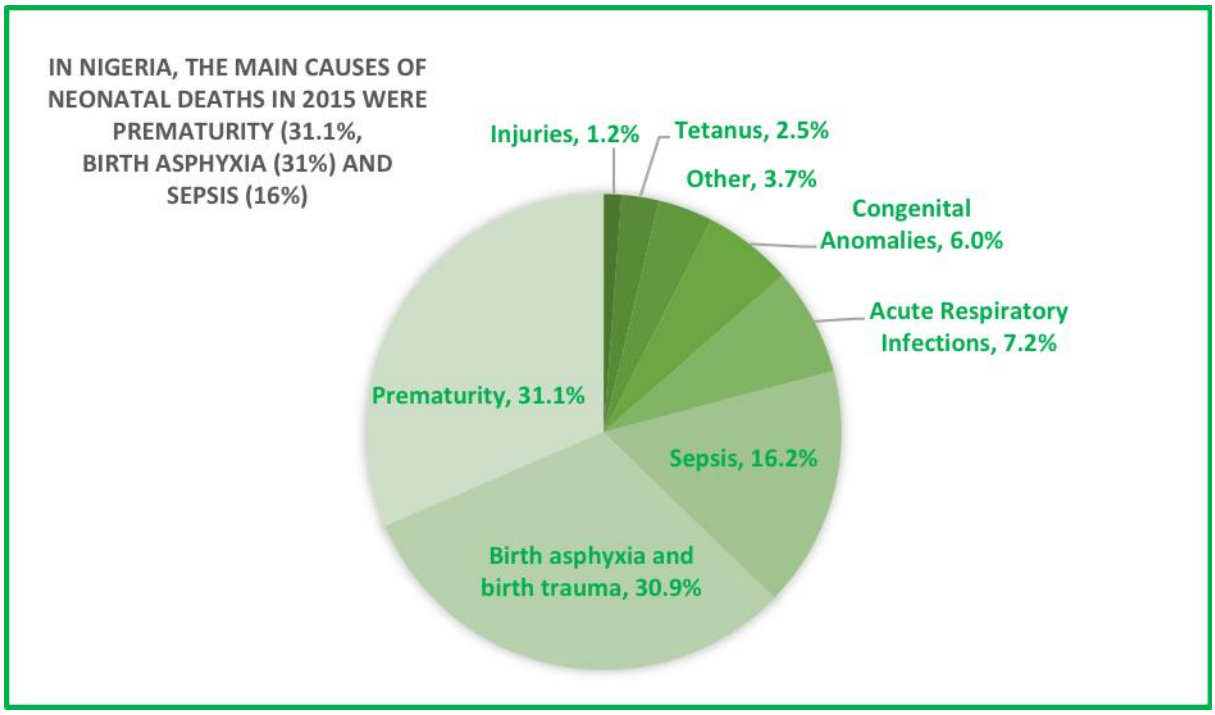


Table 3: The management and care of newborns (MICS 2017)

The Newborn (2017)	Jigawa	Kaduna	Kano	Katsina	Yobe	Zamfara	**Nigeria**
Early initiation of breastfeeding	13	29	31	38	39	23	**33**
Postnatal check for newborns	17	37	18	15	12	22	**37**
Newborns dried (wiped) after birth	29	18	25	21	23	6	**18**
Skin to skin contact after birth	29	18	25	21	23	6	**18**
Delayed first bath	10	11	9	6	10	6	**17**
Chlorhexidine applied to the umbilical area (non-institutional births) (%)	1.4	19.2	5	1	2.6	0.2	**3.9**
Use of clean delivery kits at home births (%)	96	66	96	96	94	81	**91**
Newborns receiving at least two postnatal signal functions*	17	31	15	10	14	14	**32**

*__Postnatal signal functions__ for newborns are: cord examination, temperature assessment, counselling on and observation of breastfeeding, weight assessment, and counselling on danger signs for newborns. The proportion of newborns who received at least two postnatal signal functions in Nigeria in 2017 was 32% (MICS 2016/17).

3. Supply Side (Health System) Factors Contributing to Maternal & Newborn Mortality

This section synthesises the material in the situation analysis relating to the supply of health services and the capacity in the states to deliver safe, effective, quality services. It will assess how the delivery of services affects maternal and newborn mortality. The evidence in this section is largely drawn from data collected during 42 facility assessments across the six states.

3.1 The Availability of Services: Community Care, Primary Health Services, Hospital Services

Health facilities, especially the Primary Health Care facilities, were found to be dilapidated and in poor repair. Only 23 out of the 42 health facilities (55%) assessed across the six states provide 24-hour service (p.219). Furthermore, it was common for health facilities to be unable to offer deliveries because of a lack of water and/ or electricity supply (p. 43). Availability of equipment, facilities and emergency drugs affected the quality of care available for women and children in the health facilities. The availability of basic medical equipment was measured as the proportion of facilities that had a full complement of thermometer, any weighing scale, functional blood pressure apparatus, stethoscope and examination light. In the 2017 MICS survey, the proportion of PHCs with functional basic medical equipment in the six states was Jigawa (47.1%), Kaduna (7.6%), Kano (1.5%), Katsina (11.1%), Yobe (29.8%), and Zamfara (17.1%) (p. 203).

Across Nigeria, the proportion of women that delivered in a health facility in 2017 was 38% ranging in the focus states from 9% in Yobe to 18% in Katsina and 35% in Kaduna State (p. 110). Those that deliver at home are mainly attended to by traditional birth attendants (TBA). Untrained TBAs are much less able to recognize complications and make early referrals leading to complications and maternal and newborn mortality (Page 65). In some locations, TBAs are being retrained to act as community mobilisers to encourage women to attend antenatal care services and accompany them during labour to the health facility.

3.2 Health Workers: Training, Skills, Attitudes, Distribution: What are the Main Points.

There is a scarcity of human resources for health in all six states although all of them have articulated an ambition to ensure every delivery is attended by a skilled birth attendant (a trained health worker who is able to give competent care, recognize complications and make early referrals where necessary). Stakeholders interviewed in several of the states also noted the general scarcity of health workers especially doctors and midwives and when available, they tend to work in the urban areas to the detriment of the rural areas. Lack of skilled personnel leads to a poor quality of available care.

Recently, a policy shift meant that community health extension workers (CHEWs) were included as skilled birth attendants, even though they are not recognized as such by WHO. Availability of skilled birth attendants was 53% and 54% if CHEWS are counted and 8.2% and 15.4% not considering CHEWs in the North East and North West regions respectively. This can be compared with the national figure which is 62.9% and 15.3% respectively (Page 208).

For a range of reasons, there has been little progress made recently with hiring additional staff despite the recognized need (p.148). The health workers that are available and working are thought to be overworked and often rude to women. Their attitude "*rubs off on the patients who then vow never to utilize the health facilities in the future*" (p. 58). Health workers themselves said that they felt they did not have the right skills to manage obstetric emergencies. Many said there were no protocols or "standing orders" while others who had access to the protocols had not been trained to use them. The capacity of the health workers to render emergency obstetric and newborn care is thus considered poor even by health workers themselves. The proportion of maternal and child health complications correctly managed in PHFs was 16% nationally (ranging from 10% in Kano State to 21% in Yobe).

When evaluated, 37% of PHC staff adhered to clinical guidelines in Nigeria in 2016 (ranging in the six focus states from 30.9% in Kano to 44% in Kaduna and 59% in Zamfara, p. 200). Health staff and others interviewed for the situation analysis were also able to identify a number of ways they thought their performance could be improved including supportive supervision, the payment of salaries on time, opportunities for promotion, opportunities for skills development and training, and performance based rewards and incentives. The workload, the poor conditions, the lack of appreciation and the difficult environment make the health worker's job a challenge on several levels.

3.3 Commodities: Medicines, Equipment, Supplies (Stockouts, Life Saving Drugs, Quality of Supplies).

The national policy guidelines (*Minimum Standards for Primary Health Care in Nigeria*) specify the types of drugs expected to be available in each type of primary health facility. In a recent study, these essential drug lists were used to assess drug availability in primary health facilities. Drug availability was found to be less than 40% nationwide, as well as across all the geopolitical zones. Comparing health facility types, drug availability was found to be lower in primary health facilities (32%) than the secondary health facilities (52%). According to the 2017 MICS survey, only 34.5% and 35.2% of the primary health care facilities in the NE and NW regions respectively had the essential drugs they needed to manage basic health care needs (p. 202).

Considering the two most common causes of maternal mortality, the survey included a specific assessment of the availability of oxytocin (for prevention and treatment of postpartum haemorrhage) and magnesium sulphate (for the treatment of eclampsia). Oxytocin was available in 40.3% and 22.4% of the PHCs in the NE and NW regions respectively compared to the national average of 35.5%. Magnesium sulphate was available in 19.7% and 13.4% of PHCs in the NE and NW respectively compared to the national average of 8.8% (page 206).

3.4 The Signal Functions For Emergency Obstetric And Newborn Care

The signal functions for maternal and newborn emergencies should be available in the Basic Emergency Obstetric and Newborn Care facility (BEmONC). These include: parenteral magnesium sulfate for (pre-) eclampsia, assisted vaginal delivery, parenteral antibiotics for maternal infection, parenteral oxytocic drugs for haemorrhage, manual removal of placenta for retained placenta, removal of retained products of conception. In the Comprehensive Emergency Obstetric and Newborn Care facility (CEmONC) these functions should be augmented with surgery (caesarean section including anaesthesia) and blood transfusions. In addition, three signal functions specifically related to newborns include newborn resuscitation, treatment of newborn sepsis/infection, and oxygen support. The ability to deliver the signal functions in the six focus states was limited by the lack of skills, equipment failures, and stockouts of basic medicines.

In the survey that was conducted as part of the landscape analysis, the use of the partograph to monitor labour was generally poor particularly in Zamfara, Jigawa and Katsina States. The uptake of assisted vaginal delivery services was also poor in virtually all the six states that were surveyed, while the caesarean section rates were also extremely low. These findings are an indication of the unreliable quality of CEmONCs and their services in the most affected states (p. 225). The national caesarean section rate was 2.8% in 2017. Among the six focus states, it ranged from 0.5% in Jigawa to 3.3% in Katsina. However, the rate in Kaduna State was 4.3% (p 111), the closest to the WHO recommended minimum rate of 5%.

The quality of care available for newborn babies also appears to be weak. The 2017 MICS survey assessed the availability of a functional bag and mask for infant resuscitation in the three months prior to the survey finding that of the six states, Kano had the highest proportion of facilities (29.3%) that met the criteria while Katsina had the lowest (8.4%). The national average was 14.9% (p. 207).

In 2017, 33% of babies were breastfed within an hour of delivery in Nigeria. Among the focus states, the proportion ranged from 13% in Jigawa to 39% in Yobe. In 2017, the proportion of newborns that were dried (wiped) after birth in Nigeria was 18%. Among the focus states, the proportion ranged

from 6% in Zamfara to 29% in Jigawa. In 2017, the proportion of newborns delivered outside health facilities that had chlorhexidine applied to their umbilical stump in Nigeria in 2017 was 3.9%. Among the focus states, it ranged from 0.2% in Zamfara to 5% in Kano. The proportion in Kaduna was 19.2% (p. 118)

4. Demand Side Factors that Contribute to Maternal Mortality

Table 4: The demand side issues most often mentioned by community leaders, religious leaders and families

State	Home birth preference	Transport	Cost of medical care	Facility opening hours	Health worker attitudes	Decision-maker attitudes	Cultural factors/ beliefs
Jigawa	✓✓	✓✓	✓✓	✓	✓✓	✓✓	✓
Kaduna	✓ rural	✓✓	✓✓	✓	✓✓	✓✓	✓
Kano	✓rural	✓✓	✓✓	✓	✓	✓✓	✓
Katsina	✓rural	✓	✓✓	✓	✓✓	✓✓	✓
Yobe	✓✓	✓✓	✓✓	✓	✓	✓✓	✓
Zamfara	✓✓	✓✓	✓✓	✓	✓✓	✓✓	✓

In all states, many women said they preferred to deliver at home rather than go to the health facility. There is a perception that hospital births are for complications. A range of barriers were identified as underpinning that preference such as in Jigawa, "*underlying poverty, access to transportation*…" (p.54) or "*husbands refuse to give them money*" (p.51) discussed further below.

However, across most of the states, key informants suggest that this preference is changing and more women are attending the health facility not just for antenatal care but also for delivery as, "…*there is awareness now, not like in the past" (Katsina, p.48).* In Yobe, one informant suggested that women mostly deliver at hospital now and those *"that deliver at home [do so because of] problems of money and restrictions from husbands" (p.72).*

Women in urban areas seemed more inclined to deliver in hospitals with the view summarized by women in Katsina that, *"Delivering in the hospital is the best, because they have the best equipment"* (p. 49) and they have *"injections and drugs, some give gifts" (p.169).* In rural areas, where there is still less choice, weaker demand for ANC, and more difficulties accessing formal services, there is still a strong preference for home births. However, "*following mobilization by volunteer community mobilizers*" (p.48), and "*community dialogues with husbands and compound meetings with women on the danger signs of pregnancy and maternal death"* (Zamfara p. 177) there is more awareness about the value of giving birth in hospital. Regardless of preference, a number of factors influence community demand for a facility birth and a range of barriers persist such that, even those who wish to attend may not be able to:

4.1 Geographical Access to Services

One of the main reasons, mentioned across all states were geographical and physical challenges related to reaching services. This included living in remote and hard to access villages. *"...Some of the reasons why some women don't come to the facility is they live in very hard to reach areas" (Jigawa p. 55)* where roads are poor or non-existent and transportation options are limited and expensive (Kano p.154). *"Transportation is one of the reasons that stop [*women*] from coming to hospital for*

*delivery and antenatal because most of the women live in hard to reach areas and before they can get transport that can carry a pregnant mother to a hospital, [*she develops a*] problem"* (Katsina p.66) while in Yobe, *"Transportation is one of the major causes of maternal death in this community"* (p.72) which "*mostly affects those that are in villages or remote areas and it happens frequently"* (Zamfara p.85).

While communities had transport plans, including well-functioning Emergency Transport Schemes (in Kaduna and Katsina for example), transportation was still a major gap as, for example, in one Zamfara community "…Our ambulance has broken down for the past five years" (p.186). Resolving transport issues was widely recognized as fundamental to making progress on maternal mortality reduction and some key informants were aware of efforts by authorities to tackle the problem. "*The government initiates outreach services and ambulances are taken to remove areas*" (Kano, p.66) while in Katsina, already delivering an emergency transport scheme in some places, the Chief of Ilallai Town said, "*We have a plan for transportation* [and] *people on standby with means of transportation... Our mission is to make sure that we save life"* (p.165).

4.2 Cost of Services

Next to transport and remote living, the cost of services was raised more frequently than any other barrier. Services, including drugs, were not free for pregnant women anywhere according to those *using* the services. The price most often quoted was N2000. One health worker said that "*some pregnant women tend to avoid coming to the health facility for child delivery because they cannot afford the money to pay for all the necessary materials and drugs for child delivery (Kano p.44).* In Zamfara, "*there are charges in every facility"(p.91) and "some people due to poverty … will not go to the health facility, they will use traditional herbs which they will not spend more than N100" (p.88).*

Public services had been made free of charge in some places – at least at a policy level. For example, in Yobe, a state official said that women could "*receive all forms of treatment, all forms of investigations without paying a penny"* (p.74) as well as free ANC, and free drugs for under-fives. A community leader in Yobe also said "W*e have free drugs, we have Mama Kits* [that] *they give to the pregnant women that makes the women attend the antenatal" (p.75).*
However, even there, health care workers said there was a *"Lack of enough free drugs"* which discourages women from coming to the hospital since they then had to pay (Yobe p.72).

While costs were a barrier, free care was identified as an incentive. One midwife said, "*when family planning commodities are free mothers showed their interest and come for it … but in the case of delivery because of the charges attached to it most of the women don't want to come"* (Zamfara p 185).

4.3 Facility Opening Hours:

At lower level health facilities, services were not available 24 hours a day. Many key informants suggested that 24 hour services would be vital if women were to attend for delivery as "most deliveries occur at night" (Kaduna p.126). This means that facilities "*should be upgraded* [to operate] *24 hours" (*Kano p.157) because currently "*we are available except at night because we do not have a call duty vehicle*" (Zamfara p.184).

4.4 Views About Quality, Health Worker Attitudes

With regard to services offered at health facilities, there were several problems identified. For example, a *"lack of privacy in the labour room"* was commonly mentioned along with "*Perceptions about poor quality, lack of equipment and drugs, over worked staff"* (Zamfara p.183). However, "*What really affects the use of maternity is lack of patience from the health workers" (*Katsina p.67). Many women (and their husbands) talked about "*how they were poorly treated by some health care workers… they also say some drugs are free but health workers charge them some money to give them" (*Kaduna, p. 131*).* The *"attitude of the health workers also contributes. Some of the HCWs harass the patients and the patients get angry"* for example, "*the nurse was shouting at [one woman]*

and the woman said you are very young and can easily be my daughter but you are shouting at me, after she gave birth she said it will be over her dead body that she will come back to any hospital again. (Kano p.58).

4.5 Preference for Female Attendant:

In some – but not all – states (for example, in Kaduna, Jigawa and Zamfara), the preference for a female birth attendant was mentioned. In Zamfara, "*some husbands dislike male doctors attending to their wives during delivery despite the fact that there are no enough female doctors. This problem is mainly in rural areas. Husbands in urban areas care little about the sex of the doctor attending to their wives*" (Zamfara p.86). One health care worker thought the problem was very serious for some women though, saying, "*Men are very jealous over their wives. Thus, rather than a male doctor or health worker attending to his wife during delivery, it is better for her to die"* (Kano p 60).

4.6 Role of Decision-Makers in the Household (Husband, Mothers-In-Law, Others)

"…M*ost of the pregnant women cannot move out of their matrimonial home without the husband's permission even while she is in labour"* (Kaduna, p.49). The low status of women in society more generally means that they have little decision-making power. In the absence of their husband, women cannot decide what to do. In addition, "*she lacks the required resources*" (Yobe p.73). As explained by a mother of six children in Kaduna, "*People will see you as very stubborn if you said you want to deliver in the hospital. Going to the hospital is not a practice here at all. One will be tagged as troublesome to the husband. In this village, people don't value it at all" (p.135).*

Rarely, government officials blamed women themselves for their lack of attendance at the health facility citing the refusal of "*pregnant women to be taken to the hospital until their condition has worsened. By the time she is brought to the hospital, … she is in need of blood and while the health workers are trying their best to help her and her unborn baby, the woman will die. So, you see, this is the fault of the pregnant woman and not that of the government"* (Official in Kano) p.154.

4.7 Cultural and Gender Related Barriers

The role of other decision-makers in the household and women's lack of agency underscores the range of cultural and gender related barriers affecting women's health. "*The common causes of maternal mortality are known by everyone, it is universal. Women in our society are not empowered to take decision on their own, and because of their economic status" (*Kano p.47).

'.....At home a woman may be in labour for days or may be bleeding and the husband is out of town and the in-law may not give authority for the wife to be moved to the health facility, some due to personal interest and others due to culture or beliefs or because they do not believe in attending health facility. And in some places the roads are too bad especially during rainy season..' (Jigawa, p.63).

As one community leader said, there are "*Negative socio-cultural beliefs, religion. However, religion has never stopped anyone from going to the health facility*" (Zamfara p.191).

5. Analysis of Main Underlying/ Non-Health Determinants

Table 5: The main underlying determinants of maternal mortality most often mentioned by key informants in the situation analysis.

	Education	Nutrition	Poverty/ Lack of cash	Gender & Rights	Adolescence	Birth spacing
Jigawa	✓		✓✓	✓		
Kaduna	✓✓		✓✓	✓	✓	✓
Kano	✓✓		✓✓	✓		
Katsina	✓		✓✓	✓		
Yobe	✓	✓	✓✓	✓		
Zamfara	✓✓		✓✓	✓		

5.1 Education

The underlying role and importance of education is shifting cultural norms and empowering women was raised in several contexts. Education of girls and women was identified positively with attendance at a health facility for ANC and delivery. For example, in Kaduna, one health worker said "as *of now women deliver mostly at the health facility, because most of the pregnant women in this community are educated"* (p.45). The converse was also considered true as observed by one key informant in Katsina who identified the complex relationship between literacy and poverty: "*Well, the literacy level is very low in our remote areas [*more*] than in urban communities and we have to go slow and steady to convince them because there are a lot of factors like economic status …and nutrition"* (p.69). In Kano, *"what causes maternal mortality is a lack of knowledge and awareness in the rural area; if a woman is pregnant she should go for antenatal. Lack of knowledge makes the parents not to take their children to hospital and that will lead to the child death. I am talking about women in the rural areas"* (Kano p.61).

"When you see a woman attend the health clinic, she might possibly have attended a school, so she has the knowledge of the importance of attending the health clinic to deliver. But those that are in the remote areas and even those that do not go to school in the urban areas they always prepare to stay at home and deliver" (Zamfara, p. 85) while on the other hand, in some communities, health workers point out that "*We have a very low rate of maternal death. This is because our women are well educated on the importance of ANC attendance" (*Zamfara, p.89).

5.2 Nutrition

Relatively few key informants raised nutrition as a fundamental demand-side challenge underpinning maternal mortality. Even where raised it was linked to poverty and financial constraints rather than other determinants such as women's access to food within the household. The complexities of nutritional status and access to good, healthy food, were raised in some contexts. For example, *"Money constraints [are] a problem not only to maternal [health] but to everybody and generally with the recession in the country … you don't have a balance diet*" (Yobe, p. 79).

5.3 Poverty

Poverty – or a lack of money - was specifically identified as an underlying cause of maternal deaths in a wide range of contexts especially where "*a husband does not wish to sell his goods to pay for the wife's medical care*" (Kaduna p.49). A lack of cash discourages women and their husbands from going to health facilities as they know that they will have to pay fees and pay for drugs: "*We have*

only one General Hospital that conduct delivery services…..and they charge high amount of money… [which prevents people] going to hospital" (Zamfara, p. 87).

Men said they … considered cost as an important factor in deciding on place of delivery (Jigawa p.54). They said it mostly played an inhibitory role due to the pervading poverty (Kaduna p.134). However, some women suggested that "*Money should not be used as a reason for keeping a woman at home to deliver. The husbands should look for means of taking care of the problem. I challenge all men to be responsibility for all it will take them to take their wives to the hospital" (*Kaduna p.136).

5.4 Gender, human rights and the low status of women

Female status and a range of gender issues affected women across the six states. For example, many women are not autonomous and cannot leave the home without permission from their husbands or others in the family. Many had never been to school and were unable to read and write. However, even where women prefer to go to hospital, they have no power to act if their husbands and in-laws do not agree. *"Some [in-laws] don't believe in coming to the hospital for delivery. They believe in delivery at home. That is their main problem and they believe is safer to deliver at home"* (Katsina p.69). There are exceptions. As one husband in urban Kaduna said, "*To me, my wife does it better than I do (decisions about place of delivery). Whenever she feels any discomfort, she quickly rushes to the hospital, she doesn't even have to wait for my instructions"* (p.133).

6. Gap Analysis

Despite rich detail in many aspects of the complex picture of maternal mortality in northern Nigeria, there are a number of gaps in the Situation Analysis that have been identified.

Throughout the Situation Analysis, although mentioned occasionally, there is a marked absence of reference to the **early age of marriage**, the **age of first pregnancy**, or the rate of **adolescent child bearing**. Some limited references to the important **role of education** in improving women's health were included but few of the key informants apparently considered early marriage and adolescent pregnancy as specific (and quite directly related) drivers of maternal mortality (although some mentioned these as areas for more action in the future (section 8). Similarly, **birth spacing** and increased uptake of **family planning** (and access to services associated with birth spacing) were not widely referenced as urgent priorities for reducing maternal mortality. On the other hand, attending antenatal services once pregnant, attending health facilities for the birth, and getting a post-natal check-up for mother and baby were all considered best practice by almost all informants.

It is, however, notable that Kaduna State has made significant progress with expanding access to family planning services, reducing fertility rates and increasing the age of first births. For example, with a fertility rate of 5.6, Kaduna is just about the national average compared to the other states which are all significantly higher. Contraceptive prevalence is almost twice the national uptake at 24.1% (compared to 13%). As illustrated in Table 1, Kaduna state is beginning to show a lower adolescent birth rate and mortality especially in newborns (28 per 1000 births compared to a national rate of 30 per 1000).

Other gaps include consideration of **stillbirths**, **perinatal mortality** or the nature of and direct causes of newborn mortality. While there is a strong argument that addressing the health of the mother in pregnancy and childbirth can benefit the newborn, other factors are also at play including keeping baby warm, nutrition, cultural practices and others. The Situation Analysis did not specifically assess the **seven signal functions** as a means to mapping skills or **BEmONC/ CEmONC** availability. Nor did it systematically review the use or application of the **Maternal and Newborn Death Surveillance and Response (MNDSR) tool** or strategy, an approach to engaging health workers and communities in reviewing each maternal death shortly after it occurs in order to learn lessons and make critical changes.

7. Partners and Partnerships

A wide range of partners are working with communities to support national, state and LGA authorities to improve maternal and child health (Page 296). Table 6 sets out the main partners and partnerships currently supporting maternal and newborn health activities. The list is not exhaustive.

Table 6: Partners working on maternal and newborn health in northern Nigeria

Partner	Area of focus
CHAI	Child health in Kano and Katsina State
Fistula Care	Maternal health, family planning and fistula care in Katsina and Zamfara States
Fistula Foundation	Maternal health fistula care and family planning in Kano State
JHPIEGO through USAID's Maternal and Child Health Integrated Program (MCHIP)	Family planning, maternal and child health, quality of care (in Zamfara, Kano and Katsina states)
Médecins San Frontières (MSF)	Maternal health in Jigawa and Katsina States
MNCH2 (Palladium)	Maternal, newborn and child health in six states (Kano, Jigawa, Katsina, Zamfara, Yobe and Kaduna States)
United Nations Population Fund (UNFPA)	Maternal, Newborn and Child Health, Reproductive Health in Kaduna and Yobe States
United Nations Children's Fund (UNICEF)	Child health in six states (Kano, Jigawa, Katsina, Zamfara, Yobe and Kaduna States)
Women 4 Health	Maternal and child health in Kano, Zamfara, Katsina, Jigawa and Yobe States with a focus on human resources for health and health training institutions including midwifery.
World Health Organisation (WHO)	Child health and other health priorities in six states (Kano, Jigawa, Katsina, Zamfara, Yobe and Kaduna States)

8. Analysis of Maternal Mortality using the Three Delays Model

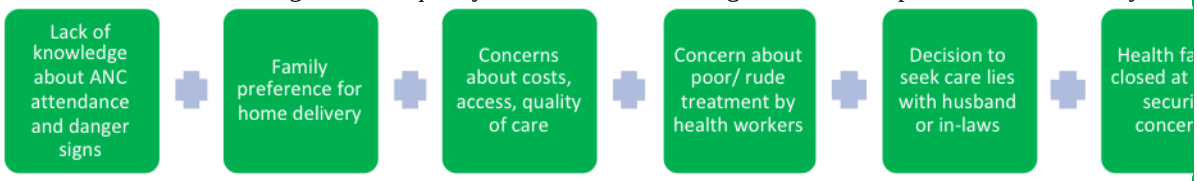
The Situation Analysis identified a range of supply side and demand side factors contributing to maternal and newborn mortality as well as indirect and underlying causes. This section identifies how these factors align with the "three delays" model.[22]

[22] The "Three Delays" model identifies the three main factors that affect the outcome of emergency presentation during pregnancy. These factors were defined, chronologically. The model incorporates socioeconomic and cultural factors, access to services and quality of care recognising that these may independently or collectively affect the lengths of the delays and that the delays are a product of various complex/ interwoven factors. From: Emilie J Calvello, Alexander P Skog, Andrea G Tenner, & Lee A Wallis, **Applying the lessons of maternal mortality reduction to global emergency health,** *Bulletin of the World Health Organization* 2015;93:417-423. doi: http://dx.doi.org/10.2471/BLT.14.146571

The three delays in six Nigerian states (Jigawa, Kaduna, Kano, Katsina, Yobe, Zamfara)

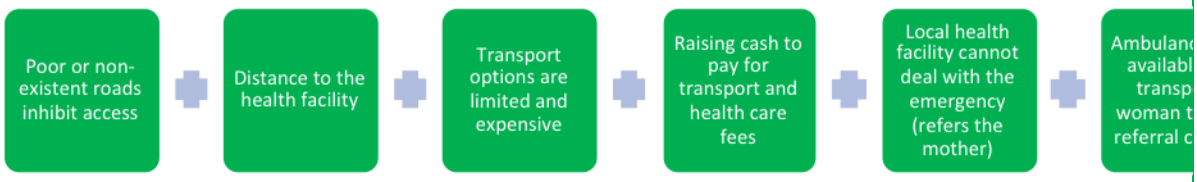
Delay 1: Making the decision in the household to seek care.

The decision to seek care did not – usually – rest with the woman in any of the six states. Women were more likely to prefer home births when they lived in more remote rural areas but increasingly, there is evidence that women choose to deliver in hospital when they are knowledgeable and have a genuine choice. The decision to seek care depends on community attitudes, the empowerment of women & girls, the availability of transport and money to pay for services as well as gender and cultural norms. Mobilising TBAs to encourage ANC attendance, increasing access to quality services, and educating women all help reduce the first delay.



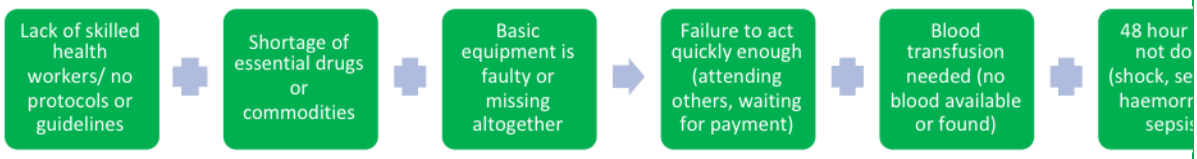
Delay 2: Getting to the right level of care (reaching the health facility or, once referred, reaching the hospital or referral centre.

The access, cost and geographic barriers associated with getting to the health centre/ hospital were present in every state. Sometimes, there were also *further delays associated with being referred* by the primary health care service to a referral centre or hospital and *there were delays getting to that hospital*. Roads, available transport options, the need to have cash on hand and concerns about going against the wishes of relatives were all factors raised.



Delay 3: Receiving the right care and treatment in time.

Delays receiving the right care on arrival at a referral centre included elapsed time before the right interventions were started, a lack of knowledge or skills in the health worker to address the emergency, complicated by drug stockouts, equipment shortages, challenges associated with arranging blood transfusions



9. Progress, Priorities and Opportunities

The Situation Analysis identified areas of progress in the different states as well as clearly surfacing the priorities of key informants. In some cases, opportunities were also clarified. These are summarised in the table below and more fully captured in the Annex A.

Table 7: Progress, priorities and opportunities with maternal and newborn mortality reduction across the six states.

	Jigawa	Kaduna	Kano	Katsina	Yobe	Zamfara

Progress made

Emergency transport schemes in some locations	✓	✓		✓		
Women have been incentivised to attend ANC and delivery at the health facility through the distribution of LLINs and Mama Baby kits		✓				✓
Significantly increased uptake of Family Planning (birth spacing)		✓				
Community mobilization to encourage attendance at the health facility for ANC & delivery, including the recruitment and deployment of Voluntary Community Mobilisers (VCM)		✓				
Engaging traditional leaders around reducing maternal mortality			✓			
Scaling up family planning			✓			
Free medicines and services for women and children at primary level					✓	
Misoprostol starting to have impact but needs more roll-out.			✓			
School of nursing/ school of midwifery				✓		
Using radio programmes to education and "enlighten" people about their health and especially maternal health issues;						✓
Staff accommodation						✓

Priorities identified

Expand Access

Free services for women and children including ANC, delivery, PNC, basic drugs and tests.	✓	✓	✓	✓	✓	✓
Operate a network of health facilities for 24 hours a day and end night time closures	✓	✓	✓	✓	✓	✓
Initiate or scale up Mama Baby Kits and LLIN distribution to encourage attendance	✓	✓	✓	✓	✓	✓
Design and implement an emergency transport scheme or expand an existing one	✓		✓		✓	✓
Improve roads and road network	✓	✓	✓	✓	✓	✓

Increase Quality of Care

Improve staff motivation: provide more in-service training and workshops, pay salaries on time, promotion on time.	✓	✓	✓	✓	✓	✓

Develop protocols and guidelines (standing orders) for obstetric management and emergencies; distribution and post protocols in labour wards; train staff regularly on their use. (Introduce and train according to the signal functions)	✓	✓	✓	✓	✓	✓
Expand mandatory midwifery postings to rural areas for one year (with allowance)	✓					
Commence or scale up maternal and perinatal death reviews at the facility level	✓	✓	✓	✓	✓	✓
Improving the Environment						
Improve utilities: clean water (borehole), lights (solar system), cleanliness.	✓	✓	✓	✓	✓	✓
Improve the environment of the labour ward with additional labour beds, privacy and a waiting area.	✓	✓	✓	✓	✓	✓
Improve the security at the facility (fencing, lighting, watchman)		✓			✓	✓
Addressing indirect causes						
Educate the girl child	✓				✓	
Birth Spacing						
Ending adolescent pregnancy						
Opportunities for future engagement						
Federal Government investments						
The Saving One Million Life Performance for Result programme(SOMLP4R)	✓	✓	✓	✓	✓	✓
International Development partners and Bilateral agencies support for improving MNCH						
- UN Agencies (UNFPA, UNICEF, WHO)	✓	✓	✓	✓	✓	✓
- DFID(MNCH2, Save the Children,	✓	✓	✓	✓	✓	✓
- USAID (The Challenge Initiative,	✓	✓	✓	✓		
- BMGF	✓	✓	✓	✓	✓	
State Government Commitments						
- Increase budgetary allocation for health	✓	✓	✓		✓	
- Evidence of increased spending & releases for health interventions						

-	Increase efforts on production of Nurses and midwives through establishment of additional institutions	✓				✓	
-	Commitment to renovation and building health facilities to achieve PHC per ward	✓	✓			✓	
-	Establishment of functional State Primary Health Care Under One Roof (PHCUOR)	✓	✓	✓	✓	✓	✓
-	Secure sustainable financing for free MNCH drugs, HTSP, Child survival drugs,			✓			
-	Establishment of the State Health Contributory Scheme			✓			
-	Establishment of the Health Trust Fund for PHC strengthening, improvement of MNCH,			✓			
-	Adoption and implementation of the Task-shifting policy	✓	✓	✓	✓	✓	✓
Greater involvement and commitment of the traditional institutions towards improving MNCH		✓	✓	✓	✓	✓	✓
Peer review platforms such as the Northern Governors forum and Commissioners of Health Forum		✓	✓	✓	✓	✓	✓

Situation Analysis References

Nigeria has a suite of strategies and plans that set the context for action on maternal and newborn mortality. The main policies are outlined in the **National Strategic Health Development Plan II**, where one of the top priorities is to reduce maternal mortality "through the provision of timely, safe, appropriate and effective healthcare services before, during and after child birth" (page 93). The **2017 Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCAH) Investment Case** presents the evidence and costs for maternal mortality reduction. Both the **National RMNCAH Strategic Plan** and the **Quality of Care Improvement Plan** together identify the high impact interventions for maternal and newborn health outcomes.

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Situation Analysis Annex: Table of Progress, Challenges, Priorities and Opportunities by individual state

Across all states, poverty has emerged as a leading explanation for the inability to afford health care and this barrier impacts on the first (and subsequent) delays. Currently, out-of-pocket (OOP) expenditure on health is high at about 71.5% in 2016 and almost half the population lives below the extreme poverty threshold of one dollar per day[13]. The constraint created by user fees and the associated barriers are well understood. The *MDG Free Maternal and Child Health* (MCH) programme was initiated against the backdrop of Nigeria's poor performance on maternal and child health indices as a special intervention to address the high mortality among women and children by increasing access to MCH services through removal of financial barriers to access by exemptions. The project ran from 2008 and 2015 in about 115 LGAs spread across six states of the country initially and later extended to other states[14]. It clearly demonstrated that free MCH services increased access to and utilisation of basic health care for women and children. In line with federal government policy, all states should aim to adopt the concept of Universal Health Coverage (UHC) and to put in place systems to ensure access to (among other services) MNCH care through the introduction of contributory health schemes. Contributory health schemes raise funds through compulsory, pre-paid mechanisms and sometimes, the government has to contribute on behalf of the poorest individuals. Currently, Kano state is leading in this regard having set up the Kano State Contributory Health Scheme which is a contributory fund scheme that enables civil servants and poor people in the community to access health care, especially MNCH services. The Nigeria RMNCAH investment case targets services for women and children that are genuinely free at the point of care.[15]

The table below identifies state-specific progress, priorities and opportunities that emerge from the Situation Analysis.

	The most progress has been made…	State challenges are…	Priorities/ recommendations offered by Key Informants
Katsina	- Emergency Transport Systems in selected areas and communities -	- **Road network is poor.** - Although Katsina spends more on health than Lagos, one official observed that Lagos was "*more economically vibrant and that was because women were educated, empowered and engaged in the economy."*	- Produce/ train more midwives, nurses, and doctors, especially women; - **Empower women: "If you empower women, they can be educated, have economic power to take decisions";** - Educate men to allow their wives to come to the clinic for ANC and delivery; - **Performance contracts for health workers and staff motivation: pay salaries on time; promote staff when due;** - Improve training opportunities and do in-service training; - **Provide a pleasant working environment, patient privacy.** - Larger budget.
Kaduna	- Community mobilization to encourage attendance at the health facility for ANC & delivery since *"in the ten areas that this was done, maternal mortality reduced" (*p.124) - ***Increased uptake of Family Planning (birth spacing)*** - Recruitment and deployment of Voluntary Community Mobilisers (VCM). - **Emergency Transport Services (ETS): A list of drivers' numbers is available and when the need arises, the family or TBA can call one to transport the woman to the facility. (p.131)** - Women are incentivised to attend ANC and delivery with LLIN and Mama Baby kits	- Health staff: Need more staff, better distributed across the health facilities, better paid, more opportunities for in-service training) - **Perceived need for nurse/ midwife clinic based protocols and guidance (standing orders)** - Security at night, watchman, fence, - **Lights, solar energy system** - Free drugs for pregnancy and childbirth - **Basic delivery equipment, sterilisation equipment.**	- Open the clinic 24 hours (p.249-53) - **Free tests and ANC check-ups, free PNC. Free delivery and drugs during delivery** - Staff motivation: Training, workshops improved salary, promotion on time, salary paid on time - **Security at the facility (fencing, lighting, watchman)** - Improved labour ward with additional labour beds and cleaner, upgraded environment, privacy, water; - **Value women (clients);** - Better training and supervision for TBAs - **Expand services: Enhanced FP services, child spacing support, Mama Baby Kits to encourage attendance.**

	The most progress has been made…	State challenges are…	Priorities/ recommendations offered by Key Informants
Kano	- Scaling up FP; - Engaging traditional leaders around reducing maternal mortality (p.139) - Misoprostol starting to have impact but needs more roll-out.	- Insufficient budget for health means that people have to pay for their own drugs & commodities when they are in labour.	- Free drugs during antenatal care and incentives to women who complete antenatal care and deliver in hospital such as LLINs and Mama Baby kits - **Security at health facilities: Fence, security guards**, - Infrastructure needed: solar lights, water/ borehole - **Integrated approaches to maternal and child health including more FP, ANC, PNC** - More staff, compensation packages for health workers including more female workers; - **Incentivise health workers health workers to be tolerant, kind, patient.** - Create a mandatory year for female midwifes in rural area with a rural allowance for compensation. - **Foundation year programme for female health workers and select local women to train as midwives and nurses and doctors** - Road improvement scheme needed - **Equipment, laboratory for basic tests.** - Increase the number of health facilities in hard to reach places.
Jigawa	- School of nursing but need to maintain funding and political commitment, - **Plan developed to open a school of midwifery.** - Emergency Transport Scheme is underway and working in some places.	- Community mobilisation, empowering women to take own decisions about delivery; - **Expanding access to and uptake of family planning services, increasing birth spacing;** - Education of women so they can understand birth spacing and take good decisions for their own health and that of their children.	- Improve quality and availability of equipment, the number of labour beds and upgrade and refurbish facilities to provide emergency obstetric and newborn care; - **Improve the environment in the labour ward and increase privacy;** - Expand the number of midwives; especially female midwives and improve their training, their attitudes to patients and their skills. - **Improve staff development, equitable employment practices, adequate remuneration, integrated supportive supervision, and accommodation.** - Ensure ambulances are available, working, and maintained; - **Free care for ANC, delivery and PNC for all women;** - Link commercial tricyclist with National Union of Road Traffic Workers; - **Expand foundation year programme for skilled birth attendants;** - Strengthen/ expand community structures like young women support groups, WDC, VDC, - **Increase girl child enrolment and retention in formal education**

	The most progress has been made…	State challenges are…	Priorities/ recommendations offered by Key Informants
Yobe	- Free medicines and services have been established at primary level for pregnant women and children.	- Lack of sufficient drugs and scanning machines/ equipment in facilities. - **Insufficient high skilled workers like medical doctors** - Amenities like light, water and renovation and staff accommodation. - **To review the salaries of staff so that they will feel motivated and produce quality services;** - Adequate well maintained equipment; - **Provision of functional and well maintained ambulance.**	- Health care workers should be paid on time, receive in service training, development opportunities and be taught to treat people kindly, not to shout. - **Continue and expand free deliveries and free routine drugs for women and children.** - Provide incentives to women to attend for ANC, deliveries and PNC including Mama Baby kits, LLINs. - **Ambulances are needed (maintained and functional) and also an emergency transport scheme for remote communities.** - Improve the number and quality of labour beds, improve privacy, and the availability of equipment. - **Provide water (a borehole), lights (a solar lighting system)** - Train more community mobilisers and increase advocacy and awareness with religious and traditional and community leaders. - **Establish a Drug Management Agency to ensure availability of drugs.** - UHC implementation needed. Under UHC, "*every person can have access to health care*". - **Expand girl-child education**
Zamfara	- Using radio programmes to education and "enlighten" people about their health and especially maternal health issues; - **The Midwife Mandatory Service Scheme (MSS) of the federal government has greatly helped in improving health care system. Could increase the number of midwives in that program.** - Drugs and staff accommodation have been provided in many places; - **Use of Folate and LLINs to motivate women to attend for ANC and getting good results. Could expand this programme.**	- Staff accommodation - **Ambulances and transport options for rural areas.** - Training for all health staff on using protocols and guidelines, using available drugs appropriately (such as magnesium sulphate) or equipment like the anti-shock garment; - **Volunteer watchmen needed to improve security**	- Guidelines and protocols to support the management of labour and delivery and also staff training on the use of protocols and management of delivery, especially emergencies. - **Salaries should be paid on time, given training opportunities, offered promotion when due.** - Free drugs and maternity care for women; - **Need security, watchmen, lights at night time, fencing.** - Feeder roads and improved physical access to clinics. - **More collaboration with NGOs and civil society partners** - Expand radio programmes, communication and media and ANC around delivery. - **Improve labour room environment, equipment, privacy, waiting rooms, toilets and cleanliness**

Annex C: Summary of Roadmap Methodology and Approach

Goal

The main goal of the Roadmap is *to disrupt current trends and rapidly accelerate maternal and newborn mortality reduction, significantly boosting the provision of timely, safe, appropriate and effective healthcare services before, during and after childbirth through sustained action.*

Objectives

The objectives of the Roadmap development process are thus to identify specific interventions and actions that will:

- disrupt the slow decline of maternal and newborn mortality to accelerate progress;
- build and sustain commitment within and beyond the heath sector at LGA, State and National levels;
- link maternal mortality reduction to the political agenda
- identify specific roles and responsibilities, with clear monitoring and tracking arrangements to strengthen accountability.

Roadmap development approach

The process of developing the roadmaps will be based on consultation and broad participation (to the extent possible in the time allowed), drawing on evidence of what is working and strengthening existing partnerships. The approach to developing the Roadmap will include the following features:

- The development process is time limited
- The Roadmap will identify short term (two-year) timeframe for action and should be ready to implement by September (pending the process outlined below).
- The Roadmap will respond to the particular conditions of the six States it is linked to and will be
    - a tool to guide decision-making, resource allocation, partnerships, and implementation arrangements.
    - a means to drive political will, and sustain commitment within and beyond the health sector.
    - practical in presentation and design without repeating existing strategies.
    - include a monitoring and tracking framework both for accountability purposes but also, crucially, in order to measure progress and adjust activities and approach in response to evidence.

Roadmap development framework

The methodology for developing the Roadmap will draw on a combination of approaches rooted in best practice and evidence, and will aim to take advantage of opportunities, maximise partnerships, and strengthen commitments.

Policy and systems investments: What are the key investments in systems reforms that are most likely to affect women's and children's health outcomes and how can these be incorporated into the roadmap;

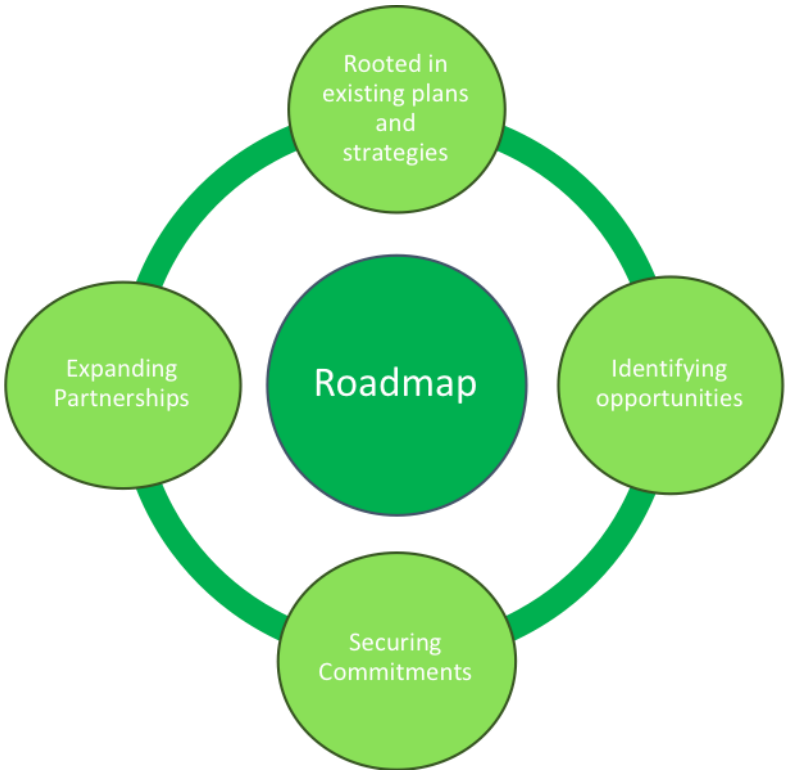
Evidence of what works in the context: What interventions and investments has been most effective in Nigeria and specifically in the states under evaluation;

Partnerships: Where is political will coming from now? What traction currently exists to support mortality reduction? What MNCH activities are currently funded/ promoted and how can these be accelerated or incorporated into the roadmap?

Political economy challenges and opportunities: What elements of array of institutional, political, management and financing barriers can be targeted to unlock progress? Can specific actions be clearly identified with explicit responsibilities, timelines and results?

The exact mix of priority interventions selected would then reflect the combination that is most appropriate to the setting. The methodological framework is shown in Figure 2.

Figure 2: The Framework for the development of the Roadmap.



The Roadmaps should be practical, implementable, harmonised with existing efforts, and evidence-based. The principles underpinning the development approach are in Table 2.

Annex D: Signal Functions for Emergency Obstetric & Newborn Care

The signal functions are those that can save maternal and newborn lives. These functions require training, skills, supervision, equipment, basic drugs and commodities and service delivery facilities. As outlined in the Roadmap, all midwifery staff in BEmONC and CEmONC facilities should be trained in the signal functions, supervised and supported in their skills enhancement and use.

Table D1: The Signal Functions for basic and emergency obstetric and newborn health

	Signal Functions	
	Seven signal functions for BEmONC	**Additional Newborn Care**
Primary level Secondary (general hospital) Tertiary (Referral or teaching hospital)	Administration of parenteral oxytocics (drugs that cause the womb to contract)	Administration of parenteral antibiotics
	Administration of parenteral anticonvulsants (drugs that stop/ prevent convulsions)	Corticosteroids in preterm labour
	Administration of parenteral antibiotics	Resuscitation with bag and mask of non-breathing baby
	Ability to perform manual vacuum aspiration	KMC for premature/very small Babies
	Ability to perform manual removal of placenta	Immediate breastfeeding within an hour of birth; Alternative feeding if baby is unable to breastfeed
	Ability to conduct assisted vaginal delivery by performing vacuum or forceps delivery	Injectable antibiotics for newborn sepsis
	Newborn resuscitation with ambu-bag and mask	PMTCT (if HIV-positive mother)
	Signal Functions CEmONC	
Secondary hospital Tertiary-Referral hospital	Caesarean section	Intravenous fluids
	Blood transfusion	Administration of oxygen

Source: Gabrysch S, Civitelli G, Edmond KM, Mathai M, Ali M, et al. (2012) New Signal Functions to Measure The Ability of Health Facilities to Provide Routine and Emergency Newborn Care. PLoS Med 9(11): e1001340. doi:10.1371/journal.pmed.1001340

Table D2: Basic indicators and associated targets recommended by WHO

Indicator	Acceptable level
1. Availability of emergency obstetric care: basic and comprehensive care facilities	At least five emergency obstetric care facilities (including at least one comprehensive facility) for every 500,000 population
2. Geographical distribution of emergency obstetric care facilities	All subnational areas have at least five emergency obstetric care facilities (including at least one comprehensive facility) for every 500,000 population
3. Proportion of all births in emergency obstetric care facilities	Minimum acceptable level to be set locally

4. Met need for emergency obstetric care: proportion of women with major direct obstetric complications who are treated in such facilities	100% of women estimated to have major direct obstetric complications are treated in emergency obstetric care facilities
5. Caesarean sections as a proportion of all births	The estimated proportion of births by caesarean section in the population is not less than 5% or more than 15%
6. Direct obstetric case fatality rate	The case fatality rate among women with direct obstetric complications in emergency obstetric care facilities is less than 1%

Source: WHO, Monitoring emergency obstetric care: a handbook. WHO Press. 2009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