Republic of Malawi

Ministry of Health

ROAD MAP FOR ACCELERATING THE REDUCTION OF MATERNAL AND NEONATAL MORTALITY AND MORBIDITY IN MALAWI

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LIST OF ACRONYMS

ANC	Antenatal care
ART	Antiretroviral Therapy
BCI	Behaviour Change Intervention
BEmOC	Basic Emergency Obstetric Care
CEmOC	Comprehensive Emergency Obstetric Care
CFR	Case Fatality Rate
CHAM	Christian Health Association of Malawi
CMS	Central Medical Stores
COM	College of Medicine
CPR	Contraceptive Prevalence Rate
DDCS	Deputy Director Clinical Services
DFID	Department for International Development
DHMT	District Health Management Team
DHO	District Health Officer
DHS	Demographic and Health Survey
DIP	District Implementation Plan
DNO	District Nursing Officer
EHP	Essential Health Package
EmOC	Emergency Obstetric Care
FP	Family Planning
FWCW	Fourth World Conference on Women, held In Beijing, China, 1995
GNP	Gross National Product
GTZ	German Technical Assistance agency
HA	Health Assistant
HEU	Health Education Unit
HMIS	Health Management Information System
HMIU	Health Management Information Unit
HIV	Human Immunodeficiency Virus
HR	Human Resources
HSA	Health Surveillance Assistant
ICPD	International Conference on Population and Development
IMR	Infant Mortality Rate
IPC	Internal Procurement Committee
IPT	Intermittent Presumptive Treatment
ITN	Insecticide Treated Bed net
KMC	Kangaroo Mother Care
MBTS	Malawi Blood Transfusion Services
MDG	Millennium Development Goal
MDHS	Malawi Demographic and Health Survey
MMR	Maternal Mortality Ratio
MNH	Maternal and Neonatal Health
MOH	Ministry of Health
MOLG	Ministry of Local Government

MOU	Memorandum of Understanding
NMCM	Nurses and Midwives Council of Malawi
NSO	National Statistics Office
PAM	Physical Assets Management
PMTCT	Prevention of Mother to Child Transmission
POA	Programme of Action
POW	Programme of Work
QECH	Queen Elizabeth Central Hospital
RHU	Reproductive Health Unit
SMI	Safe Motherhood Initiative
SMP	Safe Motherhood Project
SWAp	Sector Wide Approach
TA	Traditional Authority
TBA	Traditional Birth Attendant
TOR	Terms of Reference
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VCT	Voluntary Counselling and Testing
VHC	Village Health Committee
WHO	World Health Organization

FOREWORD

The Government of Malawi has over the years provided sexual and reproductive health services including maternal and newborn health care to its people. The Government with the support from various development partners has implemented several safe motherhood programmes in various districts of the country. Despite all these efforts the maternal mortality has continued to rise.

A number of studies have helped to throw light on the maternal mortality situation in the country. These studies have suggested an urgent need to further strengthen the Ministry of Health for the provision of quality health care services in order to reduce the high maternal and newborn mortality.

Consequently the Reproductive Health Unit of the Ministry of Health conducted a national EmOC assessment to identify the capacity of the health care delivery system to reduce maternal and neonatal mortality and to propose an action orientated plan: hence the development of this road map.

This road map was developed with financial as well as technical support, from WHO, UNFPA and UNICEF. It stipulates various strategies which will guide policy makers, development partners, training institutions and service providers in supporting government efforts towards the attainment of MDGs related to maternal and newborn health.

I thank all those who, in diverse ways, helped to make the development of this road map possible.

Dr. Hetherwick Ntaba
Hon. Minister of Health

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EXECUTIVE SUMMARY

This Road Map has been developed following a national EmOC assessment and in response to the call by the African Union to its member states to accelerate the attainment of the MDGs related to maternal and newborn health. The Ministry of Health undertook a national assessment of availability, quality and utilisation of EmOC services to determine the capacity of the health delivery system to reduce maternal and neonatal mortality. The EmOC assessment comprised a complete enumeration of all hospitals in the 27 districts in Malawi. In addition, 25% of health centres were randomly selected and included in this study. Altogether 166 Health Facilities were included irrespective of ownership. The Road Map also draws and builds on the Programme of Work (SWAp) and the Emergency Resources Programme of Malawi.

The Road Map has a vision, rationale, a goal and the following objectives:

- To increase the availability, accessibility, utilisation and quality of skilled obstetric care during pregnancy, childbirth and postnatal period at all levels of the health care delivery system.

- To strengthen the capacity of individuals, families, communities, Civil Society Organisations and Government to improve maternal and newborn health.

These are followed by nine strategies, which will guide policy makers, programme managers, development partners, training institutions and service providers in government efforts towards the attainment of MDGs related to maternal and newborn health. Each strategy has interventions, which are presented in detail from page 12-24. The interventions are costed.

The Road Map will be implemented within the context of the SWAp. Ninety five percent of the total funds for implementing the first phase of this Road Map, including Human Resources, is already costed in the Programme of Work of the SWAp. There is thus a need for an additional five percent to make up for the funding gap.

1.0 BACKGROUND

Malawi is a land-locked country in Central Africa. The United Republic of Tanzania borders it to the North and Northeast; the Republic of Mozambique to the East, South and Southwest; and the Republic of Zambia to the West and Northwest. It has a total surface area of 118,484 square kilometres, of which approximately 80% is land. The remaining area is mostly composed of Lake Malawi, which is about 475 kilometres long and runs down Malawi's eastern boundary with Mozambique. Administratively, the country is divided into three regions, The North, Central and South. The Southern Region is the largest in terms of size and population. There are 27 districts, out of which 12 are in the Southern Region, 9 in the Central Region and 6 in the Northern Region. Each District is made up of several Traditional Authorities (TAs), which are in turn composed of villages, the smallest administrative unit in Malawi (1).

The total population of Malawi is 11,937,934. Females comprise 51% of the total population, of whom 42.2% is in the reproductive bracket, i.e. 15-49 years. Eighty five percent of the population lives in the rural areas. The urban population has grown significantly over the past 10 years (1, 2).

Malawi is one of the poorest countries in the world with an estimated GNP per capita of US $ 170.00 in 2000 (3). Its economy is predominantly agriculture-based, depending on tobacco (providing the bulk), tea, sugar and coffee (1,3,). Sixty five percent of the population is defined as poor and unable to meet their daily consumption needs, and over 50% of the population is defined as food-insecure (2).

The country is reported to have one of the highest maternal mortality ratios globally, currently estimated at 1120 per 100,000 live births up from 620 per 100,000 live births in 1992 (1). Adolescent pregnancies comprise about 25% of all births and 20% of maternal deaths. The lifetime risk of maternal death in Malawi is estimated at 1:7, one of the highest globally. Some of the underlying causes of the high maternal death include early childbearing and the high fertility rate. According to the MDHS (2000), the mean age at first childbearing was 19 years, and the total fertility rate was 6.3. The neonatal mortality rate is equally high, estimated at 42/1000 live births (1).

Nearly all health care services in Malawi are provided by three main agencies. The Ministry of Health (MOH) provides about 60%; the Christian Health Association of Malawi (CHAM) provides 37% and the Ministry of Local Government (MoLG) provides 1%. There is a small private-for-profit health sector limited to the urban areas as well as health services provided by private companies, private practitioners, commercial companies, the Army and the Police.

There are three levels in the health system i.e. primary level comprising of health centres, health posts, dispensaries, and rural hospitals; second level made up of district and CHAM hospitals; the tertiary level consisting of the central hospitals and one private hospital with specialist services.

Malawi's health system is grossly under-resourced. Per capita expenditure is about US $ 12, which is inadequate for delivery of basic primary health care. In 2002, an extensive exercise to determine the cost of delivering an "Essential Health Package" (EHP) of well proven and cost effective health services that would deal with the main burden of disease, calculated a figure of US $ 17.53 per capita per year (1).

2.0 INTRODUCTION

The last three decades have witnessed significant renewed concern over women's health, particularly because of increasing poor reproductive outcomes such as maternal mortality, among other issues. The Global Safe motherhood Initiative (SMI), launched in Nairobi (1987), brought to the world's attention the widespread problem of pregnancy-related deaths and disability. The Conference called for reduction of global, regional and national maternal mortality ratios (MMR) by 50% between 1990 and 2000. In response to that, Malawi, like many countries in the developing world, established their national safe motherhood programme (5).

The International Conference on Population and Development (ICPD) held in Cairo, 1994, established the reproductive health concept. This was reaffirmed by the Fourth World Conference on Women (FWCW, Beijing, 1995) (6,7). The ICPD programme of action called for reduction of MMR by 50% between 1990 and 2000, and a further 50% between 2000 and 2015. The issue of women's rights in matters relating to their sexuality and reproductive processes were considered critical for the attainment of reproductive health and well-being and socio-economic development (6). It was hoped that with the broad based life-span approach advocated in the concept of reproductive health with safe motherhood at its heart, pregnancy and childbirth would no longer carry with them the risk of death and disability as had been the case hitherto.

Concerned by the worsening poverty situation and its relationship with health, especially for the most vulnerable groups, the United Nations (2000) adopted the Millennium Declaration, which led to the establishment of Millennium Development Goals (MDGs). The Millennium Summit identified maternal health as an urgent priority in the fight against poverty. Four of the eight MDGs (MDG 3, 4, 5, and 6) have direct bearing on maternal and newborn health. MDG 3 calls for promotion of gender equality and empowerment of women; MDG 4 calls for reduction in child mortality, MDG 5 calls for reduction of maternal deaths, and MDG 6 urges nations to halt the spread of HIV/AIDS, control and prevent malaria and other infectious conditions. The MDGs set targets and indicators for monitoring progress (8).

The enabling environment for making progress and eventually achieving the MDGs include among others, peace and stability, a genuine democratic evolution, good governance, economic growth and increasingly equitable distribution of the benefits of growth, social inclusion and delivering on promises made by both national governments and international partners. Notwithstanding this, there is now consensus that the MDGs cannot be achieved without effectively addressing population dynamics and Reproductive Health issues (9)

Recent global evidence indicates that availability of Emergency Obstetric Care (EmOC) and skilled attendance at birth are key to the reduction of maternal mortality. Cognisant of that Malawi undertook a national assessment of availability, quality and utilisation of EmOC services in 2005. The results of this assessment clearly show poor access and utilisation of EmOC services, poor quality of health care services as evidenced by high case fatality rates. Some of the barriers to the utilisation of maternal health care services include social and cultural/traditional beliefs and practices (10).

Concerned by the high maternal mortality ratios in various countries in Africa, the African Union (2004) urged each Member State to develop a country-specific Road Map to accelerate attainment of MDGs related to maternal and newborn health. The Regional Reproductive Health Task Force together with other stakeholders developed a generic Road Map to accelerate the attainment of MDGs related to maternal and neonatal health (11), to guide Member States in developing theirs. Consequently, the government of Malawi has renewed its commitment to address maternal health issues in a more comprehensive manner.

This national Road Map draws and builds on the Programme of Work (SWAp) and the Emergency Resources Programme of Malawi. It is being developed in response to the current maternal mortality crisis in Malawi, and indeed to the Global and Regional call for each country to develop a country- specific Road Map. This is therefore in conformity with government commitment to accelerate the attainment of the MDGs related to maternal and neonatal health in Malawi.

3.0 THE ROAD MAP

3.1 Rationale

Recent evidence indicates that availability of EmOC and skilled attendance at birth are key to reducing maternal mortality. Cognisant of that, Malawi undertook a national assessment of availability, quality and utilisation of EmOC services, which built on previous studies. All these have underlined the following factors as contributing to the high maternal mortality ratio in the country.

- Shortage of staff and weak human resource management
- Limited availability and utilisation of maternal health care services
- Low quality maternal health care services
- Weak procurement and logistics system for drugs, supplies and equipment
- Problems of infrastructure
- Weak referral systems
- Weak monitoring, supervision and evaluation
- Inadequate coordination mechanisms among partners and stakeholders
- Weak community participation and involvement
- Harmful social and cultural beliefs and practices.

As a result of the foregoing, the Malawi government has made a renewed commitment to address the issue of maternal mortality and morbidity. Cognisant of the mother- newborn dyad, the government has also included issues of newborn mortality and morbidity in its renewed efforts, in line with the call by the African Union to each Member State to develop a country-specific Road Map for the reduction of maternal and neonatal mortality and morbidity. Consequently a multisectoral group consisting of government and its development partners came together and developed this National Road Map for accelerating the attainment of the Millennium Development Goals related to Maternal and Neonatal Health.

3.2 Vision

All women in Malawi go through pregnancy, childbirth and the postpartum period safely and their newborns are born alive and healthy through the implementation of effective maternal and newborn health interventions.

3.3 Goal

To accelerate the reduction of maternal and newborn morbidity and mortality towards the achievements of the Millennium Development Goals (MDGs).

3.4 Objectives

1.0 To increase the availability, accessibility, utilization and quality of skilled obstetric care during pregnancy, childbirth and postnatal period at all levels of the health care delivery system.

2.0 To strengthen the capacity of individuals, Families, Communities, Civil Society Organisations and Government to improve Maternal and Neonatal Health.

3.5 Strategies and interventions

Strategy 1: Improving the availability of, access to, and utilisation of quality Maternal and Neonatal Health Care

Interventions:

1. Provide essential health care package for Maternal and Neonatal Health, with priority on health centre level, particularly in rural and remote areas
2. Upgrade health facilities to be able to provide minimum package for Maternal and Neonatal Health, with first priority to BEmOC facilities
3. Reinforce blood transfusion services at each hospital
4. Review, define and adopt minimum standards and protocols of care for Maternal and Neonatal Health
5. Conduct maternal death reviews and clinical audit
6. Provide supportive supervision to enhance quality of care

Strategy 2: Strengthening human resources to provide quality skilled care

Interventions:

1. Ensure adequate staffing at health facility to provide the Maternal and Neonatal Health essential health care package
2. Increase and improve training of Maternal and Neonatal Health staff
3. Build the capacity of training institutions to provide competency based training
4. Develop, review and update policies that enable health professionals to use their skills

Strategy 3: Strengthening the referral system

Interventions:

1. Establish /strengthen communication system between health centre and referral hospital
2. Establish/strengthen referral system including transport

Strategy 4: Strengthening national and district health planning and management of Maternal and Neonatal Health care

Interventions

1. Strengthening capacity of DHMT for better management of Maternal and Neonatal Health services
2. Review the HMIS so that it captures all essential information on Maternal and Neonatal Health for planning purposes

Strategy 5: Advocating for increased commitment and resources for maternal and newborn health care

Interventions:

1. Develop advocacy package on Maternal and Neonatal Health with priority on BEmOC services
2. Conduct National Health Accounts exercise
3. Maternal and Neonatal Health named as priority in DIPs and AIP

Strategy 6: Fostering of partnerships

Interventions:

1. Improving partnership collaboration and coordination
2. Promoting effective public/private partnership

Strategy 7: Empowering communities to ensure continuum of care between the household and health care facility

Interventions:

1. Build capacity of HSAs to empower communities to utilise Maternal and Neonatal Health services
2. Establish/strengthen community initiatives for RH including Maternal and Neonatal Health
3. Raise awareness of the community on Maternal and Neonatal Health issues including birth preparedness and danger signs
4. Empower communities, especially men, to contribute towards timely referrals
5. Review and define role of TBAs in Maternal and Neonatal Health

Strategy 8: Strengthening services that address adolescents' sexual and reproductive health services.

Interventions:

1. Establish/strengthen youth friendly health services

Strategy 9: Strengthening monitoring and evaluation mechanisms for better decision-making and service delivery of Maternal and Neonatal Health services

Interventions:

1. Strengthen MOH capacity for monitoring and evaluation
2. Operations Research
3. Evaluation of Road Map for impact

3.6 Monitoring and evaluation

Indicators have been developed to monitor and evaluate the Road Map. Most of these indicators are included in the national HMIS. Greater emphasis will be placed on the routine collection and processing of data on process indicators for monitoring progress towards maternal mortality reduction.

1. Percentage of pregnant women receiving 4 focused ANC visits
2. Proportion of pregnant women screened for syphilis
3. Proportion of pregnant women receiving VCT
4. Proportion of HIV positive pregnant women receiving ART
5. Proportion of newborn of HIV positive mothers receiving ART
6. Proportion of births assisted by a skilled attendant
7. Proportion of all births in EmOC facilities
8. percentage of health centres offering Basic EmOC services.
9. Percentage of hospitals offering Comprehensive EmOC services.
10. Geographic distribution of EmOC services
11. Proportion of expected direct obstetric complications treated in EmOC facilities
12. Proportion of all expected births by Caesarean Section
13. Case fatality rate of direct obstetric complications
14. Proportion of health facilities with 24 hours coverage of skilled attendants to provide emergency obstetric care
15. Percentage of health facilities conducting maternal death review and submitting to national level
16. Proportion of expected maternal deaths reviewed in each district.
17. Proportion of Health facilities with protocols and guidelines in performance and quality improvement including infection prevention
18. Percentage of hospitals with functional blood transfusion facilities
19. Percentage of facilities with functioning neonatal resuscitation facilities
20. Percentage of mothers and newborns receiving two postnatal care visits
21. Proportion of postnatal mothers receiving modern contraceptives
22. Proportion of mothers counselled on infant feeding
23. Proportion of mothers initiating breastfeeding within half an hour after delivery
24. Proportion of newborn receiving essential newborn care
25. Number of districts that prioritise provision of basic EmOC services in heir DIPs
26. Percentage of HSAs trained in providing Maternal and Neonatal Health care
27. Proportion of VHCs addressing Maternal and Neonatal Health issues
28. Proportion of health facilities with functioning communication system
29. Coverage of ambulances per population

30. Proportion of health facilities receiving regular supportive supervision
31. Proportion of Low Birth Weight babies
32. Percentage of teenage pregnancies.
33. Maternal mortality ratio.
34. Neonatal mortality rates

4.0 DETAILS OF INTERVENTION (activities in **bold** are priority in 2006)

Strategy 1: Improving the availability of, access to, and utilisation of quality Maternal and Neonatal Health Care						
Intervention	**Activity**	**Leading agent(s)**	**Indicator**	**Baseline and Targets**		
				Baseline	**2010**	**2015**
1.1 Provide essential health care package for MNH, with priority on health centre level, particularly in rural and remote areas	Provide Focused ANC	DHO	% of health facilities providing focused ANC	20	60	100
			% pregnant women receiving 4 focused ANC visits	10	40	60
			% of pregnant women screened for syphilis	20	50	90
			% of pregnant women received VCT	10	40	60
			% of pregnant women found to be HIV positive	25	20	15
			% of pregnant women received iron/folate supplementation	10	40	60
			% of pregnant women received IPT	20	40	60
			% of pregnant women using ITNs	10	40	70
	Provide Intra Partum Care, with priority given to implementing BEmOC services	**DHO**	**% of pregnant women receiving skilled care at delivery**	19	40	60
			% of deliveries in EmOC health facility	19	40	60
			% of HIV positive mothers received ART (e.g. Nevirapine)	25	50	75
			% of direct obstetric complications treated in EmOC facilities	18.5	40	60
			% of births by caesarean section	2.8	5	8
			% of mothers initiating breastfeeding within half an hour after delivery	20	50	70
			% of Low Birth Weight babies	20	15	10
			Case Fatality Rate (CFR)	3.4	2.5	2
	Provide Essential newborn care	DHO	% of health facilities with newborn resuscitation services	40	80	90
			% of newborn receiving essential newborn care including resuscitation	30	50	70
			% of newborn exclusively breast fed for 6 months	20	40	60
			% of newborn of HIV positive mothers received ART	25	50	75
	Provide Kangaroo Mother Care (KMC)	DHO	% of health facility providing KMC	5	20	40
	Provide Postnatal care	DHO	% of mothers receiving postnatal care within 2 weeks	10	30	60
			% of mothers receiving postnatal care at 6 weeks	20	30	40
			% of postnatal mothers received Vitamin A supplementation	20	40	60
			% of postnatal mothers receiving modern contraceptives	21.5	40	60

1.2 Upgrade health facilities to be able to provide minimum package for MNH, with first priority to BEmOC facilities	**Ensure that under the SWAp POW infrastructure development plan, upgrading health facilities to provide BEmOC services is given the highest priority**	**PAM**	**% of health facilities offering BEmOC services**	2%	50%	100%
	Rehabilitate existing hospitals to provide Comprehensive EmOC services	**PAM**	**% of hospitals offering Comprehensive EmOC services**	58%	80%	100%
	Ensure that the MOH consolidated procurement plan has prioritised equipment and drugs to provide BEmOC services	**RHU PAM CMS**	**% of health centres having the necessary equipment and drugs to provide BEmOC services**	2%	50%	100%
	Ensure with PAM that the standard equipment list is regularly reviewed and updated to provide MNH services, with priority on BEmOC services	RHU	Standard equipment lists updated in line with national standards to provide MNH services	2003	updated	updated
1.3 Reinforce Blood transfusion services at each hospital	**Ensure with MBTS that each hospital is equipped to provide Blood transfusion services**	**RHU MBTS**	**% of hospitals with functional blood transfusion services for maternity cases**	20	100	100
1.4 Review, define and adopt minimum standards and protocols of care for MNH	Ensure that the MNH clinical protocols developed through SMP are in place and kept updated	RHU	Standards and protocols revised every 5 years	2004	Updated	Updated
			% of health facilities with updated standards and protocols in place	50	75	100
1.5 Conduct maternal death reviews and clinical audit	**Institutionalise maternal death reviews**	**RHU**	**% of health facilities conducting maternal death review and submitting to national/zonal level**	20	100	100
	Analyse maternal death and audit reports and compile for the entire country	**DHO RHU**	**Reduction in CFR**	3.4	2.5	2

1.6 Provide supportive supervision to enhance quality of care	**Ensure supportive supervision for essential maternal and neonatal care is included in the MOH integrated supervisory checklist with priority on BEmOC**	**RHU**	**MNH included in MOH integrated supervisory Checklist**	-	Checklist available	Checklist available
	Review/update supervisory check lists	**RHU**	**Check lists reviewed/updated every 5 years**	2002	Updated	Updated
	Conduct quarterly supervisory visits at all levels	**DHO**	**% of health facilities receiving regular supervisory visits**	20	50	70
			% DHO reporting on supervisory visits	60	80	100

Strategy 2: Strengthen human resources to provide quality skilled care						
Intervention	**Activity**	**Leading agent(s)**	**Indicator**	**Baseline and Targets**		
				Baseline	**2010**	**2015**
2.1 Ensure adequate staffing at health facility to provide the MNH essential health care package	**Implement 6-year Emergency Human Resource programme**	**HR**	**% of established posts filled:**			
			Nurse/midwife technicians	36%		
			Registered Nurse/midwives			
			Clinical Officers (with midwifery and obstetric skills)	73%		
			Medical Assistants (with midwifery skills)	47%		
			Medical Officers with obstetric and neonatal skills	36%		
	Ensure that the deployment and incentive programme in the Emergency Human Resource Programme prioritises the deployment of staff with BEmOC skills to rural health facilities	**HR**	**% of established posts in rural areas filled**			
			Rural incentive scheme to support the deployment of staff in rural areas in place		Incentive scheme in place	Incentive scheme in place
	Ensure EMOC is the highest priority in the Emergency Human Resource Programme for re-engagement of staff, re-deployment of staff and placement of volunteer specialist doctors and nurse tutors	**HR RHU**	**No. of health workers in place:**			
			Nurse/midwife technicians	4717	7035	
			Registered Nurse/midwives			
			Clinical Officers (with midwifery and obstetric skills)	942		
			Medical Assistants (with midwifery skills)	718		
			Medical Officers with obstetric and neonatal skills	139		
			Volunteer specialist doctors			
			Nurse/Midwife tutors			
			Average norm of number of births to practising skilled attendants	350	250	175
			% of births attended by skilled health personnel	19	40	60
2.2 Increase and improve training of MNH staff	**Revise curricula in line with latest evidence and ensure that BEmOC training (6 signal functions) is compulsory in the pre-service training for nurse/midwives, clinical officers and medical assistants**	**HR RHU**	**Curricula revised and implemented**	-	Revised and implemented	Revised and implemented

	Increase intake of enrolment to ensure adequate numbers of staff for deployment	**HR**	**Intake of enrolment of:**			
			Nurse/midwife technicians	300		
			Registered Nurse/midwifes	90	600	
			Clinical Officers	110		
			Medical Assistants	150		
			Medical Officers	60		
			Lab technicians	25		
			Anaesthetic Officers	30		
	Implement an in-service programme on essential obstetric and neonatal care with focus on BEmOC for all registered nurse/midwives, nurse/midwife technicians and medical assistants, with priority given to health centre based staff	**HR RHU Training Institutions**	**# of nurse/midwife technicians trained**	-		
			# of registered nurse/midwives trained	-		
			# of medical assistants trained	-		
			# of HC staff trained in BEmOC	-		
2.3 Build the capacity of training institutions to provide competency based training	Train tutors and lecturers to provide competency based training	HR RHU Training Institutions	# of tutors/lecturers that have received competency-based training	0	60	120
	Provide institutions with teaching and learning materials to provide competency based training, with priority focus on BEmOC	HR RHU	% of training institutions fully equipped	0	50%	100%
2.4 Develop, review and update policies that enable health professionals to use their skills	Revise the midwifery practice policy to ensure that midwives are able to provide BEmOC services	NMCM RHU	Updated policy	-	Policy updated	
			Increased BEmOC services	2%	50%	100%

Strategy 3: Strengthen the referral system						
Intervention	**Activity**	**Leading agent(s)**	**Indicator**	**Baseline and Targets**		
				Baseline	**2010**	**2015**
3.1 Establish / strengthen communication system between health centre and referral hospital	**Install/repair radio communication, ground /mobile phone at all health facilities, with priority to facilities providing BEmOC services in rural areas**	**PAM RHU**	**% of facilities with functioning communication system**	30	100	100
			% of health facilities in rural areas with communication system			
3.2 Establish/strengthen referral system including transport	Review/develop relevant guidelines on referral system and implement transport policy that prioritises and ensures that health facilities in rural areas are able to provide BEmOC services	Admin RHU	% of health facilities with referral system guidelines in place	-	50	100
			% of expected obstetric and neonatal complications actually being referred	5	50	90
	Provide motorised ambulances between health facilities	**PAM**	**# of motorised ambulances per 100.000 population**	0.8	0.9	1

Strategy 4: Strengthening national and district planning and management of Maternal and Neonatal Health Care						
Intervention	**Activity**	**Leading agent(s)**	**Indicator**	**Baseline and Targets**		
				Baseline	**2010**	**2015**
4.1 Strengthen capacity of DHMT for better management of MNH services	**Provide guidance and support to DHMT on planning, implementation and monitoring of MNH interventions and ensure that MNH issues are prioritised in the DIPs, with special focus on health centres in rural areas**	**RHU Planning Unit**	Reports of meetings available	-	Meetings conducted	Meetings conducted
		DHO	**# of DIPs that prioritise provision of BEmOC services in all health centres**	**0**	**15**	**27**
	Conduct meetings with DHMT for information sharing, updating of standards and policies, discussing key issues	RHU	% of health facilities implementing the full MNH EHP	20	40	60
	Review Terms of Reference and membership of DHMT to reflect prioritising MNH	Planning DHO RHU	# of DHMTs with revised TOR	-	15	27
4.2. Review the HMIS so that it captures all essential information on MNH for planning purpose	**Review and update HMIS in line with the Road Map, including international agreed process indicators**	HMIS RHU	**Updated HMIS**	2002	Updated HMIS	Updated HMIS
	Train HMIS personnel, service providers and managers to improve on data and information management of MNH	RHU DHO	% of health facilities reporting on MNH indicators	50	100	100

Strategy 5: Advocating for increased commitment and resources for Maternal and Neonatal Health						
Intervention	Activity	Leading agent(s)	Indicator	Baseline and Targets		
				Baseline	2010	2015
5.1. Develop advocacy package on MNH with priority on BEmOC services	**Develop advocacy materials**	RHU HEU	Advocacy materials developed	-	Materials developed	Materials developed
	Use advocacy materials to mobilise resources	RHU HEU	Advocacy materials developed and used	-	Materials used	Materials used
	Hold annual meetings with the parliamentary health committee on MNH issues	RHU	**Increased budgetary allocation for MNH care available**	11%	13%	15%
	Ensure that parliamentary health committee briefs all MPs on MNH	RHU	**Increased budgetary allocation for MNH care available**	11%	13%	15%
5.2 Conduct National Health Accounts exercise	Analyse health sector budget commitment and expenditure on MNH	RHU				
	Ensure that MNH is prioritised within the existing commitments to the health sector	RHU Planning Unit	% of total funds for MNH increased	100	150	250
	Advocate that available additional MOH and donor resources are committed to fill any gap	RHU	Hold stakeholders meeting to advocacy for additional resources	-	Sufficient resources	Sufficient resources
5.3 MNH named as priority in DIPS and AIP	**Advocate during the development of DIPs and AIP the importance of MNH, with priority on BEmOC**	RHU Planning	% of increased budgetary allocation within DIP and AIP		25%	30%

Strategy 6: Fostering Partnerships						
Intervention	**Activity**	**Leading agent(s)**	**Indicator**	**Baseline and Targets**		
				Baseline	**2010**	**2015**
6.1 Improving partnership collaboration and coordination	**Transform the current Emergency Safe Motherhood Taskforce into a Technical Working Group to oversee MNH policy development and review progress on implementation of the Road Map**	**RHU**	**TORs developed for TWG and quarterly meetings conducted**	**-**	**TWG in place and functional**	**TWG in place and functional**
	Highlight MNH and progress against the Road Map in the Annual Health Sector Report	**RHU Planning**	**Annual Health Report reports on progress on Road Map**	**-**	**Progress included in annual report**	**Progress included in annual report**
	Ensure that MNH programme review is included in annual SWAp review	**RHU Planning**	**Report of annual SWAp review includes MNH programme review**	**-**	**Included in annual SWAp review**	**Included in annual SWAp review**
6.2 Promoting effective public/private partnership	**Ensure that basic and comprehensive EmOC services are a priority within the currently developed and implemented Service Agreements with CHAM**	**Planning RHU**	**# of districts with service agreements in place that emphasises on EmOC**	**3**	**15**	**27**
	Explore more active involvement of the private sector in MNH issues	Planning RHU	# of service agreements / MOU	-	3	10

Strategy 7: Empowering communities to ensure continuum of care between the household and health care facility						
Intervention	**Activity**	**Leading agent(s)**	**Indicator**	**Baseline and Targets**		
				Baseline	**2010**	**2015**
7.1 Build capacity of HSAs to empower communities to utilise MNH services	**Train HSAs to orient communities on MNH issues including birth preparedness and danger signs to increase utilisation of services**	**HR DHO RHU**	# of HSAs trained	2500	6000	12000
			# of districts with EHP coverage of HSAs (1:1000 population)			
			Utilization of services increased (skilled attendants)	19	40	60
7.2 Establish / strengthen community initiatives for RH including MNH	Liaise with relevant authorities to revitalise Village Health Committees (VHCs)	DHO	% Functional VHCs	30	50	70
	Train VHCs in MNH issues including birth preparedness, danger signs and collection of maternal death data	DHO	**% of functional VHCs addressing MNH issues**	30	60	90
	Establish emergency preparedness committees	DHO	# of communities with functional emergency preparedness committees	-	500	1500
			% of pregnant women with birth preparedness plans	10	40	80
	Establish mechanisms for monitoring VHC activities with respect to MNH issues	DHO	DHO reports on VHC activities available	5	25	50
			# of districts implementing community initiatives for RH issues at village level	4	20	27
			# of villages implementing community initiatives for RH in the districts	240	1600	3500
			% of TAs addressing MNH needs	10	30	60
	Develop and support implementation of verbal autopsy at community level	DHO RHU	**# of communities implementing verbal autopsy**	-	500	1500
7.3. Raise awareness of the community on MNH issues including birth preparedness and danger sign	Ensure that health promotion materials on birth preparedness and danger signs are finalised and printed	RHU HEU	% VHC with health promotion materials available	10	30	50
	Use community based organizations to disseminate health promotion information on MNH care	DHO	Reports on dissemination through community based organisations	-	Reflected in annual health report	Reflected in annual health report
	Disseminate BCI materials through appropriate media	HEU	Reports on dissemination through different media (radio, TV, print, drama)	-	Reflected in health report	Reflected in health report

7.4. Empower communities, especially men, to contribute towards timely referrals	Mobilise Village Health Communities to establish transport plans	DHO	# VHC's with transport funds		500	1500
			# of communities with transport plans for referral	-	500	1500
	Procure and maintain bicycle ambulances	DHO PAM	# of bicycle ambulances	120	500	1500
7.5. Review and define role of TBAs in MNH	Conduct meetings to define role of TBAs in MNH	RHU	Role of TBAs defined and disseminated	-	Defined role	
	Support TBAs in their new role	DHO	% of pregnant women delivered by TBA	20%	15%	10%

Strategy 8: Strengthening services that address adolescents' sexual reproductive health issues						
Intervention	**Activity**	**Leading agent(s)**	**Indicator**	**Baseline and Targets**		
				Baseline	**2010**	**2015**
8.1. Establish/strengthen youth friendly health services	Develop/Review training manual to address adolescent sexual and reproductive health	RHU HR	Revised Training manual available	-	Manual reviewed	Manual reviewed
	Provide youth friendly services in all health facilities	DHO	% of health facilities providing youth friendly services	5%	25%	60%
			Teen age pregnancies as % of total pregnancies	25	20	15
			Uptake of FP among adolescents	15	25	40
	Incorporate adolescent health services into the pre-service curricula	HR RHU	Updated curricula	-	updated	updated

Strategy 9: Strengthening monitoring and evaluation mechanisms for better decision-making and service delivery of MNH services						
Intervention	**Activity**	**Leading agent(s)**	**Indicator**	**Baseline and Targets**		
				Baseline	**2010**	**2015**
9.1. Strengthen MOH capacity for monitoring and evaluation	**Establish office for maternal and neonatal health at national level to coordinate collation and analysis of data on maternal and neonatal health and disseminate the reports**	**HR RHU**	**Officer responsible for MNH in place at national level**	1	2	2
			MNH reports available		Reports available	
	Review existing maternal mortality review forms to include a section on neonatal deaths	**RHU**	**Revised forms available**		Forms available	
9.2. Operations research	Conduct research on identified issues	RHU Research	Research reports disseminated		Reports available	
9.3. Evaluation of Road Map Impact	Conduct formative evaluation after 5 years	RHU Planning	Evaluation report available		Report available	
	Conduct End term Evaluation in 2015	RHU Planning	Final evaluation report			Report available

5.0 COSTING OF ROAD MAP

The Road Map will be implemented within the context of the SWAp. Ninety five percent of the total funds for implementing the first phase of this Road Map, including human Resources, is already costed in the Programme of Work of the SWAp. There is thus a need for an additional five percent to make up for the funding gap

Costing of Road Map 2005-2010 (USD)

Intervention	Activity	Estimated Cost (5 yrs)	Costed in POW (apportion)	Funding gap	Comments / Source(of funds)
1.1 Provide essential health care package for Maternal and Neonatal Health	• Provide Focused ANC • Provide Intra Partum Care • Provide Essential Newborn Care • Provide Kangaroo Mother Care (KMC) • Provide Postnatal Care	Total 33,961,232	Activity 2.1.2/2.1.3/2.1.4/2.1.5/2.1.6/2.1.7 (25%) Total 27,400,000	6,561,232	**POW**: Procure EHP pharmaceuticals, medical and lab supplies **Estimated cost**: EHP costing model, see Annex 1 for annual breakdown (costs for PMTCT and ITNs not included)
1.2 Upgrade health facilities to be able to provide minimum package for MNH	• Ensure that under the SWAp POW infrastructure development plan, upgrading health facilities to provide Basic EmOC services is given the highest priority • Rehabilitate existing hospitals to provide comprehensive EmOC services • Ensure that the MOH consolidated procurement plan has prioritised equipment and drugs to provide BEmOC services • Ensure with PAM that the standard equipment list is regularly reviewed and updated to provide MNH services, with priority on BEmOC services	Total 26,437,500	- Activity 4.2 (100%) 15,100,000 - Activity 4.1.3/4.1.4/4.1.5 (100%) 7,900,000 - Activity 3.1.1/3.1.2/3.1.3 (25%) 3,437,500 Total 26,437,500	0	**POW**: - upgrade existing maternities / dispensaries to HC level to support the full range of EHP services - rehabilitate existing health facilities to support the delivery of the full range of EHP services - Procure and distribute essential basic equipment **Estimated cost**: Assumed that POW costing is sufficient
1.3 Reinforce Blood transfusion services at each hospital	• Ensure that functional blood banks are established at all hospitals in line with the National Blood Transfusion Services and that priority is given within this programme to minimum requirements for Comprehensive EmOC services	0	0	0	**Estimated cost:** Assumed that Malawi Blood Transfusion Services meets all the costs
1.4 Review, define and adopt minimum standards and	• Ensure that the MNH clinical protocols developed through SMP are in place and kept updated		Activity 6.2.5.5.4 (25%) 500		**POW:** Redevelopment and update of various health services/interventions, standards, protocols

Intervention	Activity	Estimated Cost (5 yrs)	Costed in POW (apportion)	Funding gap	Comments / Source(of funds)
protocols of care for MNH		Total 50,000	Total 500	49,500	and guidelines **Estimated cost:** Consultative meetings, printing and distribution
1.5 Conduct maternal death reviews and clinical audit	• Institutionalise maternal death reviews • Analyse maternal death and audit reports and compile for the entire country	0	0	0	**Estimated cost:** Included in M&E activities
1.6 Provide supportive supervision to enhance quality of care	• Ensure supportive supervision for essential obstetric and neonatal care is included in Zonal Office checklist with priority on BEmOC • Review/update supervisory check lists • Conduct quarterly supervisory visits at all levels	Total 1,175,000	- Activity 5.2.3 (25%) Total 1,175,000	0	**POW:** - Routine supervision at sub-district level **Estimated cost:** Assumed that POW costing is sufficient (but doesn't include supervision costs made by zonal and central level)
2.1 Ensure adequate staffing at health facility to provide the MNH essential health care package	• Implement 6-year Emergency HR Programme • Ensure that the deployment and incentive programme in the Emergency Human Resource Programme prioritises the deployment of staff with BEmOC skills to rural health facilities • Ensure EMOC is the highest priority in the Emergency Human Resource Programme for re-engagement of staff, re-deployment of staff and placement of volunteer specialist doctors and nurse tutors	Total 171,600,000	Total 171,600,000	0	**6-year emergency HR programme:** Target is 5776 nurse/midwives in 2010 **Estimated cost:** Assumed that HR costing is sufficient to reach 40% skilled attendants (250 deliveries per midwife), while 16% of nurse/midwives actually work in maternity
2.2 Increase and improve training of MNH staff	• Revise curricula in line with latest evidence and ensure that BEmOC training (6 signal functions) is compulsory in the pre-service training for nurse/midwives, clinical officers and medical assistants • Increase intake of enrolment to ensure adequate numbers of staff for deployment • Implement an in-service programme on essential obstetric and neonatal care with focus on BEmOC for all registered	Total	Activity 6.2.1.1 (25%) 135,000 Total		**POW**: Develop and coordinate pre- and in-service training programmes for MOH **Estimated cost**: Training of 2500 health workers (MA, CO and nurses) in BEmOC

Intervention	Activity	Estimated Cost (5 yrs)	Costed in POW (apportion)	Funding gap	Comments / Source(of funds)
	nurse/midwives, nurse/midwife technicians and medical assistants, with priority given to health centre based staff	5,000,000	135,000	4,865,000	
2.3 Build the capacity of training institutions to provide competency bases training	• Train tutors and lecturers to provide competency based training • Provide institutions with teaching and learning materials to provide competency based training, with priority focus on BEmOC	Total 250,000	0	Total 250,000	**POW**: No cost centre **Estimated cost:** Training of 100 tutors
2.4 Develop, review and update policies that enable health professionals to use their skills	• Revise the midwifery practice policy to ensure that midwives are able to provide BEmOC services	0	0	0	No cost
3.1. Establish/strengthen communication system between health centre and referral hospital	• Install/repair radio communication, ground /mobile phone at all health facilities	Total 1,900,000	Activity 4.1.1/4.1.2 (50%) 1,900,000 Total 1,900,000	0	**POW:** Equip facilities with basic utility systems (water, electricity and telecommunications) – GOM/CHAM **Estimated cost:** Assumed that POW costing is sufficient
3.2 Establish/strengthen referral system including transport	• Provide motorised ambulances between health facilities • Review/develop relevant guidelines on referral system and implement transport policy	25,400,000 50,000 Total 25,450,000	Activity 5.1.1/5.1.2 (100%) 25,400,000 Total 25,400,000	50,000	**POW:** Equip district with vehicles and equipment adequate for transport needs/finance routine transport costs & maintenance **Estimated cost:** Assumed that POW costing for ambulances is sufficient Consultative meetings, printing and distribution of guidelines is not costed in POW

Intervention	Activity	Estimated Cost (5 yrs)	Costed in POW (apportion)	Funding gap	Comments / Source(of funds)
4.1 Strengthen capacity of DHMT for better management of MNH services	• Provide guidance and support to DHMT on planning, implementation and monitoring of MNH interventions • Conduct meetings with DHMT for information sharing, updating of standards and policies, discussing key issues • Review Terms of Reference and membership of DHMT	Total 500,000	- Activity 6.2.5.2.3 (25%) 112,800 - Activity 6.2.7.2.2 (25%) 37,850 Total 150,650	349,350	**POW:** - Provision of support to the district (institutional and capacity development) for implementation tracking of DIPS - Complete and implement the District Management Manual **Estimated cost:** POW costing is insufficient for organising 6-monthly meetings
4.2 Review the HMIS so that it captures all essential information on MNH for planning purpose	• Review and update HMIS in line with the Road Map • Train HMIS personnel, service providers and managers to improve on data and information management of MNH	Total 387,375	- Activity 6.2.5.2.7 (25%) 37,375 - Activity 6.2.1.2/6.2.1.3 (25%) 350,000 Total 387,375	0	**POW:** - Conduct POW M&E - Develop/update and disseminate tools and guidelines for HIM and use - Provide tools and equipment required for data collecting and processing **Estimated cost:** Assumed that POW costing is sufficient
5.1 Develop advocacy package on MNH	• Develop advocacy materials • Use advocacy materials to mobilise resources • Hold annual meetings with parliamentary health committee on MNH issues • Ensure that parliamentary health committee briefs all MPs on MNH	Total 100,000	0	100,000	**POW**: No cost centre **Estimated cost:** Development and printing of advocacy materials
Conduct National Health Accounts exercise	• Analyse health sector budget commitment and expenditure on MNH • Ensure that MNH is prioritised within the existing commitments to the health sector • Advocate that available additional MOH and donor resources are committed to fill any gap	0	0	0	No cost
MNH named as priority in DIPS and AIP	• Advocate during the development of DIPs and AIP the importance of MNH, with priority on BEmOC	0	0	0	No cost

Intervention	Activity	Estimated Cost (5 yrs)	Costed in POW (apportion)	Funding gap	Comments / Source(of funds)
6.1 Improving partnership collaboration and coordination	• Transform the current Emergency Safe Motherhood Task Force into a TWG to oversee MNH policy development and review progress on implementation of Road Map • Highlight MNH and progress against the Road Map in the Annual Health Sector Report • Ensure hat MNH programme review is included in annual SWAp review	Total 5,000	Activity 6.2.5.3.1 (100%) 5,000 Total 5,000	0	**POW**: Coordinate inputs from development partners to ensure adequate resourcing of the joined POW **Estimated cost:** Assumed POW costing is sufficient
6.2 Promoting effective public/private partnership	• Ensure that EmOC services are a priority within the currently developed and implemented service agreements with CHAM • Explore more active involvement of the private sector in MNH issues	Total 242,000	Activity 6.2.7.2.4 (100%) 242,000 Total 242,000	0	Enhance inter-agency collaboration through the implementation and monitoring of service agreements, MOUs and Code of Conducts with NGO and private sector partners **Estimated cost:** **POW**: Assumed that POW costing is sufficient for ensuring and exploring but does not include the actual implementation of service agreements
7.1 Build capacity of HSAs to empower communities to utilise MNH services	• Train HSAs to orient communities on MNH issues including birth preparedness and danger signs to increase utilisation of services	Total 672,500	Activity 1.3.1 (10%) 672,500 Total 672,500	0	**POW**: Integrated in-service training of health workers **Estimated cost:** Assumed POW costing is sufficient

Intervention	Activity	Estimated Cost (5 yrs)	Costed in POW (apportion)	Funding gap	Comments / Source(of funds)
7.2 Establish / strengthen community initiatives for RH including MNH	• Liaise with relevant authorities to revitalise Village Health Committees (VHCs) • Train VHCs in MNH issues including birth preparedness, danger signs and collection of maternal death data • Establish emergency preparedness committees • Establish mechanisms for monitoring VHC activities with respect to MNH issues • Develop and Support implementation of verbal autopsy at community level	Total 60,000	0	60,000	**POW**: No cost centre for training of VHCs **Estimated cost:** Training of 60 VHCs
7.3. Raise awareness of the community on MNH issues including birth preparedness and danger sign	• Ensure that the health promotion materials on birth preparedness and danger signs by HEU are finalised and printed • Use community based organizations to disseminate health information on MNH care • Disseminate BCI materials through appropriate media	Total 5,350,000	Activity 5.2.4 (25%) 5,350,000 Total 5,350,000	0	**POW**: IEC and health education activities undertaken **Estimated cost:** Assumed POW costing is sufficient
7.4. Empower communities, especially men, to contribute towards timely referrals	• Mobilise Village Health Communities to establish transport plans • Procure and maintain bicycle ambulances	Total 500,000	0	500,000	**POW**: No cost centre for procurement of bicycle ambulances **Estimated cost:** Procurement of 500 bicycle ambulances
7.5. Review and define role of TBAs in MNH	• Conduct meetings to define role of TBAs in MNH • Orient TBA's on their new role	0	0	0	No cost, assumed that this activity will be taken care of by HSAs
8.1. Establish/strengthen youth friendly health services	• Develop a training manual to address adolescent sexual and reproductive health • Provide youth friendly services in all health facilities • Incorporate adolescent health services into the pre-service curricula	Total 75,000	Activity 6.2.5.5.5 (100%) 15,500 Total 15,500	59,500	**POW**: Develop a programme to train health workers on customer care – attitudes, waiting times, confidentiality and privacy **Estimated cost:** Assumed that POW costing is insufficient for developing, printing and distributing a manual

Intervention	Activity	Estimated Cost (5 yrs)	Costed in POW (apportion)	Funding gap	Comments / Source(of funds)
9.1. Strengthen MOH capacity for monitoring and evaluation	• Establish office for maternal and neonatal health at national level to coordinate collation and analysis of data on maternal and neonatal health and disseminate the reports • Review existing maternal mortality review forms to include a section on neonatal deaths	Total 200,000	Activity 6.2.6.1.4 (25%) 200,000 Total 200,000	0	**POW**: Host health information databank and health resource centre and disseminate information to specific and general users **Estimated cost:** Assumed POW costing is sufficient
9.2. Operations research	• Conduct research on identified issues	Total 250,000	0	250,000	**POW:** No cost centre **Estimated cost:** 50,000 per annum
9.3. Evaluation of Road Map Impact	• Conduct formative evaluation after 5 years • Conduct End term Evaluation in 2015	Total 100,000	Activity 6.2.5.2.6 (100%) 10,000 Total 10,000	90,000	**POW:** Design and implement an appropriate joint annual POW review progress **Estimated cost:** Assumed that POW costing of 10,000 USD for 5 years is insufficient
	TOTAL	**274,265,607**	**261,081,025**	**13,184,582**	**Additional 5% of funds required to implement the Road Map till 2010**
	TOTAL (without HR)	**102,665,607**	**89,481,025**	**13,184,582**	

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