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MINISTRY OF HEALTH

Fast Track Initiative Road Map for Reducing Maternal & Newborn Mortality

2010 - 2015

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Preface

When a woman dies, her child, her family, her community and ultimately the country loses one of its most valuable sources of health, happiness and prosperity.

Every year estimated 1,600 women die in Cambodia during childbirth or as a result of becoming pregnant. This is why we, the Ministry of Health and health care professionals are working hard to improve the health of women. We know what it will take to significantly improve maternal health: access to family planning counseling, services and supplies; access to quality care for pregnancy and childbirth (antenatal care; skilled attendance at birth, including emergency obstetric and neonatal care; immediate postnatal care for mothers and newborns) and access to safe abortion services.

As health professionals we also must continuously and systematically tackle the 'three critical delays' that can make a difference between life and death: (1) The time it takes to decide whether to get help, (2) The transport problems women face in going for help, (3) The lack of skilled staff once they arrive at the health centre or hospital.

We will not be able to solve those problems alone. We will need to work with other sectors and local authorities to address wider social and economic barriers to maternal health.

The Ministry of Health has taken measures to accelerate progress in the area of reproductive, maternal, new born and child health through implementation of the Health Sector Strategic Plan 2008-2015 especially by putting in place for each programme area of the strategic plan a taskforce to coordinate the planning, implementation and monitoring of annual action plans. However limitation of resources, human and financial is a major constraint to scale up essential and life saving health interventions that will reduce maternal mortality.

The Fast Track Initiative Road-Map for maternal mortality reduction, developed by the Ministry of Health, outlines all those initiatives and strategies that can help women survive and their children, families and communities thrive. I hope that this roadmap will effectively guide our efforts and investments, so that rapid, significant and lasting reductions in maternal mortality are achieved in Cambodia.

MDG 5 is the most under funded of all health related MDGs. While Cambodia Government will continue to increase investments in maternal health, I call upon development partners to channel more funds into this area and especially to make the implementation of the Fast Track interventions effective and successful so that Cambodia will achieve its MDG5 by 2015.

List of the members who contributed to the Fast Track Initiative Road Map

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Contents

Acronyms

24h/7d	24 hours per day/7 days per week
AMTSL	Active Management of Third Stage of Labour
ANC	Antenatal Care
BCC	Behaviour Change Communication
BEmONC	Basic Emergency Obstetric & Newborn Care
CAS	Cambodia Anthropometric Survey 2008
CBD	Community Based Distribution
CBHI	Community Based Health Insurance
CCT	Conditional Cash Transfer
CEmONC	Comprehensive Emergency Obstetric & Newborn Care
CDHS	Cambodia Demographic and Health Survey
CMDG	Cambodia Millennium Development Goals
COC	Combined Oral Contraceptive
COMBI	Communication for Behavioural Impact
CPA	Complementary Package of Activities
CPA1	Complementary Package of Activities Level 1
CPA2	Complementary Package of Activities Level 2
CPA3	Complementary Package of Activities Level 3
CPR	Contraceptive Prevalence Rate
C-Section	Caesarean section
CSES	Cambodia Socio-Economic Survey
DP	Development Partners
DPHI	Department of Planning & Health Information
EmONC	Emergency Obstetric & Newborn Care
FP	Family Planning
FTI	Fast Track Initiative
FTIRM	Fast Track Initiative Road Map
GPCC	General Population Census of Cambodia
HC	Health Centre
HEF	Health Equity Fund
HIS	Health Information System
HIV+	Human Immunodeficiency Virus Positive
HSP2	Health Strategic Plan II (2008-2015)
IMCI	Integrated Management of Childhood Illness
MCH	Maternal and Child Health
MCH-SubTWG	MCH Sub Technical Working Group
MDG	Millennium Development Goals
MDSR	Maternal Death Surveillance & Response
M&E	Monitoring & Evaluation
MgSO4	Magnesium Sulphate
MMR	Maternal Mortality Rate
MNH	Maternal & Newborn Health

MoH	Ministry of Health
MoI	Ministry of Interior
MPA	Minimum Package of Activities
N/A	Not Available
NCDD	National Committee for the Management of Decentralization and De-concentration Reform
NGO	Non-Government Organization
NMCHC	National Maternal & Child Health Centre
NRHP	National Reproductive Health Program
OD	Operational District (Health)
PHD	Provincial Health Department
PNC	Postnatal Care
PSDD	Project to Support Democratic Development through Decentralization and De-concentration
RH	Reproductive Health
RH	Referral Hospital
RMNH	Reproductive, Maternal & Newborn Health
SBA	Skilled Birth Attendance
TBD	To Be Determined
TFR	Total Fertility Rate
UN	United Nations
WHO	World Health Organization

Fast Track Initiative Road Map
For Reducing Maternal & Newborn Mortality in Cambodia 2010-2015

Background

Cambodia's Maternal Mortality Ratio (MMR) has remained stagnant at an unacceptably high level over the last decade. This is of grave concern to the Government, particularly as it contrasts to the significant improvements seen in other socio-economic and health indicators over the same period. The newborn mortality is becoming an increasing proportion of the under five mortality. The Ministry of Health is committed to reducing the number of maternal deaths and recognizes that the country is currently at risk of failing its Millennium Development Goal 5 (CMDG 5) commitment to reduce the MMR to less than 250 deaths per 100 000 live births by 2015.

CMDG5: Improve Maternal Health	Benchmarks		Most Recent Available			Targets	
	Value	Year	Value	Year	Source	2010	2015
Target : Reduce the maternal mortality ratio							
5.1 Maternal mortality ratio (per 100,000 live births)	437	1997	461	2008	GPCC		250
5.2 Total fertility rate	4	1998	3.1	2008	GPCC	3.4	3
5.3 Proportion of births attended by skilled health personnel	32	2000	63	2009	HIS	70	80
5.4 Proportion of married women using birth spacing methods	18.5	2000	28	2009	HIS	40	60
5.5 Proportion of pregnant women with 2 or more ANC with skilled health personnel	30.5	2000	83	2009	HIS	75	90
5.6 Proportion of pregnant women with iron deficiency anaemia	66	2000	57	2005	CDHS	39	33
5.7 Proportion of women 15-49 years with BMI<18.5 kg/sq. meter	21	2000	16.1	2008	CAS	12	8
5.8 Proportion of women 15-49 years with iron deficiency anaemia	58	2000	47	2005	CDHS	32	19
5.9 Proportion of pregnant women delivered by Caesarean Section	0.8	2000	1.4	2009	MoH	2.5	4

After taking office in 2008, the Minister of Health, H.E. Dr. Mam Bun Heng announced a *Fast Track Initiative* (FTI) for improving reproductive, maternal, newborn and child health. This document, which constitutes the Fast Track Initiative Road Map for Reducing Maternal & Newborn Mortality, describes components of government's existing maternal and newborn health programmes which, if given focused attention and adequate funding, have the potential to dramatically reduce maternal and newborn mortality between now and 2015.

Globally, there is strong association between low MMR and high rates of family planning and skilled attendance at birth, and between low MMR and access to safe abortions. Maternal deaths are concentrated around the time of child birth and in the period after an

unsafe abortion. Four conditions, post-partum haemorrhage, pregnancy-induced hypertensive disorders (eclampsia and pre-eclampsia), obstructed labour and infections, are responsible for the majority of deaths. There is no single intervention that will reduce mortality. A strategy for reducing MMR must comprise of a package of the most effective interventions including: contraception to avoid unwanted pregnancies, safe abortion, active management of the third stage of labour (AMTSL), management of hypertensive disorders (pre-eclampsia and eclampsia), management of post partum haemorrhage, management of sepsis, management of obstructed labour, and aim for high coverage across the country. The health centre and number of health staff to population proportion has increased considerably over the last decade although the health staff ratio still falls short of global recommendations and needs faster expansion. Newborn and maternal mortality are closely linked and by saving mother's lives we in turn give their infants a much greater chance of surviving and thriving.

Along with the medical interventions, an enabling environment for reducing maternal deaths must be fostered and scaled up. This includes initiatives outside the health sector such as infrastructure development, increasing gender equity and education for girls. It also involved interventions within the health sector such as removing the often considerable financial barriers to access appropriate life saving maternal health services, and behaviour change communication for improved care and care-seeking practices and community participation. In addition, strengthening maternal death reporting, vital registration and performing maternal death audits needs to be augmented in order to better understand and work towards solving the complex health systems and community issues impacting on maternal health and mortality.

Positioning of the Fast Track Initiative Road Map for Reducing Maternal and Newborn Mortality

This Fast Track Initiative Road Map for Reducing Maternal and Newborn Mortality is not a stand alone scheme, but rather is situated in the broader context of the continuum of care for reproductive, maternal, newborn and child health. It is difficult to differentiate the contribution of each component of maternal and newborn health care to achieving healthy outcomes, but research suggests that providing modern family planning and maternal and newborn health services for all women who need them would save one million lives annually, cutting maternal deaths by three-fourths and newborn deaths by nearly one-half.[1] Linkages among the components are also crucial. For example, receiving antenatal care increases the chances that a woman will deliver at a health facility and obtain emergency care if she needs it. Timely care for complications of pregnancy and delivery that meets recommended standards not only saves women's and infant's lives, but also protects their future health.[2]

Many aspects of this continuum of care are already successfully implemented in Cambodia but need strengthening in terms of scaling up and quality improvement. It is felt that

[1] Facts on Investing in Family Planning and Maternal and Newborn Health, South Central and Southeast Asia, Guttmacher Institute and UNFPA, December 2009
[2] Adding It Up (p 21)

interventions that are specifically targeting the **rapid** reduction of maternal and newborn mortality are urgently needed if Cambodia is to have any opportunity for meeting the Cambodian MDG 5. Of note, antenatal care and postnatal care have been scaled up to a considerable degree; the implementation of the Cambodia Child Survival Strategy with its 12 scorecard interventions is moving ahead acceptably with Cambodia poised to meet the Cambodia MDG 4 by 2015. To this end, these interventions and activities are not included in this Fast Track Initiative Road Map while still acknowledging and seeking full technical and financial support for their continued success.

Purpose, content and structure of the document

The main purposes of the Fast Track Initiative Road Map For maternal and newborn mortality reduction are:
1. To outline major areas and evidence-based interventions which, if provided at scale, have a potential to dramatically reduce maternal and newborn mortality
2. To identify resources needed for rapidly expanding recommended interventions and to highlight funding gaps which could inform resource mobilisation strategy
3. To suggest specific maternal and newborn health activities to be included in the annual operational plans of various implementing units at the national and sub-national level

This document describes the overall goal and objectives for the Fast Track Initiative Road Map for Reducing Maternal & Newborn Mortality and is intended for policy and decision makers at the national level, as well as donors interested to support maternal health interventions in Cambodia. Implementing units will recommend specific activities by each of the intervention areas for planning by health managers at the national and provincial level.

Summary

Following a period of consultation, seven critical areas of interventions were identified that would contribute most effectively to reducing maternal and newborn mortality in Cambodia. 4 components are core and 3 components are targeting the enabling environment linked to the health sector. These intervention areas are:

Core Components:

1. **Emergency Obstetric and Newborn Care (EmONC):** Life-threatening complications of pregnancy and child birth are rare and unpredictable events. Three-quarters of maternal and newborn deaths happen around the time of birth. In order to reduce maternal and neonatal deaths, it is critical to assure universal access to emergency services, including post-abortion care, vacuum delivery, caesarean section, blood transfusions and management of hypertensive disorders.

2. **Skilled Birth Attendance (SBA):** **T**here is overwhelming evidence and broad consensus among experts that giving birth in a health facility with the assistance of a skilled health professional is the safest delivery option. Consequently, the Government's policy is for all women to give birth in a health facility with the

assistance of a midwife. Currently, an estimated 44% of mothers deliver in a public facility in Cambodia and 63% give birth with a skilled provider. In-service training, coupled with follow-up after training, supportive supervision and coaching are key components to strengthen the quality of skilled birth attendance.

3. **Family Planning (FP):** Birth spacing, delaying the first pregnancy and reducing unwanted pregnancies reduces the risks associated with child-bearing. In Cambodia the Contraceptive Prevalence Rate (CPR) for modern methods, although increasing, remains low, and as of 2005 unmet need for family planning was 25%.[3]

4. **Safe Abortion:** An induced abortion is the result of an unwanted pregnancy. Even universal access to modern contraception will not completely eliminate the demand for termination of pregnancy. Although abortions have been legal in Cambodia since 1997, access to safe abortions in the public health system remains poor. The consequence is that many women who decide to terminate their pregnancy seek unsafe abortion services.

Enabling Environment Components:

5. **Behaviour Change Communication (BCC):** Contraceptive use and safe practices around birth can be influenced through communication and social marketing. There are numeral examples of the effectiveness of BCC campaigns and broader communication efforts in Cambodia, not least in the area of HIV and condom use. The communication activities, including campaigns, are needed to improve practices, stimulate demand for services and thus, scale up key interventions both for the general public and for health care providers.

6. **Removing Financial Barriers:** Financial barriers to reproductive and maternal health services, including emergency obstetric, contraception and safe abortion services contribute directly to the high maternal mortality in Cambodia. Women in need of key reproductive and maternal health services are in some cases denied these services because of the demand for up-front payments for service fees. Scaling up of Health Equity Funds and other financing mechanisms are needed to ensure all women, but especially the poor have access to the key interventions they need.

7. **Maternal Death Surveillance & Response (MDSR):** Experiences from other countries illustrate the importance of MDS for visualizing the problem of maternal mortality and for informing programme implementation and the design of new interventions. Today, only a fraction of all maternal deaths are captured by the Health Information System (HIS) and the estimated 1,600 maternal deaths annually are largely invisible in the national health statistics.

[3] CDHS 2005

Overall Goal:

- To contribute to the achievement of Cambodia's Millennium Development Goal 5 target of less than 250 maternal deaths per 100 000 live births by 2015

Key Objectives:

- To scale up as fast as possible to achieve universal coverage with the most essential maternal, newborn and reproductive health services.
- To improve accessibility and affordability of maternal and reproductive health services by removing financial barriers to care
- To improve individual, family and community care practices before and during pregnancy, childbirth and postpartum, including appropriate care seeking and increased demand for priority RMNH services

In order to achieve the above objectives the FTIRM intentions are:

- To identify priority areas and interventions that needs to be scaled up for each of the key objectives and core areas.
- To mobilize substantial financial support for expanding priority interventions aiming to reduce maternal and newborn mortality.
- Identify policy issues that need to be strengthened in order to enable access for all women to appropriate reproductive and maternal care
- To guide the implementing units of the Ministry of Health at the national and provincial level in prioritizing interventions for reducing maternal and newborn mortality

To be successful in rapidly and substantially reducing the Maternal and Newborn Mortality Ratio in a sustainable way, the Fast Track Initiative Road Map will have to attract additional and predictable external funding in the area of USD 25-35 million per year between 2010 and 2015 and beyond. An accelerated reduction in mortality requires a stronger focus on the components of reproductive, maternal and newborn health that are most critical for saving lives. Cambodia's health system has strengthened during the last decade. Access to health services has increased along with better quality of care. The number of midwives, nurses and doctors is increasing and so is utilization of delivery services. Now is an opportune time to invest in rapidly improving the health of women and newborns.

Monitoring and Evaluation

Monitoring of the Fast Track interventions should be integrated into the overall Ministry of Health monitoring and evaluation framework and system with reporting at the Joint Annual Performance Review

Objectives & Indicators:

Fast Track Initiative Road Map for Reducing Maternal & Newborn Mortality			
Goal: To rapidly reduce maternal mortality in Cambodia to meet the CMDG 5 of MMR 250 per 100,000 live births by 2015			
Objectives:			
1. That each province has at least one fully operational Comprehensive EmONC facility and that each Operational District (OD) has at least one fully functioning Basic EmONC facility following the UN standards of at least 1 CEmONC facility per 500 000 population and at least 1 BEmONC facility per 100 000 population			
2. To increase the proportion of women who deliver in a health facility with the assistance of a skilled birth attendant			
3. To increase access for obstetric care through removing financial barriers			
4. To decrease unmet need and increase the proportion of couples using modern contraception			
5. To ensure that all women have access to safe and confidential abortion services			
6. To improve individual, family and community care practices, including care seeking before/during pregnancy, during childbirth and postpartum period			
	Baseline	**Targets**	
Indicators	**2008**	**2010**	**2015**
1. Number of functioning CEmONC facilities	25	26	42
2. Number of functioning BEmONC facilities	19	34	132
3. Proportion of deliveries by Caesarean Section	1.8%	2.5%	4%
4. Proportion of women delivering in a health facility with a skilled birth attendant	39%	50%	70%
5. Proportion of women delivering with a skilled birth attendant	58%	70%	80%
6. Proportion of referral health facilities covered for obstetric care by HEF's	67%	75%	85%
7. Proportion of the poor covered by HEF's	73%	80%	95%
8. Proportion of women using modern contraception	26%	40%	60%
9. Number of health facilities offering comprehensive safe abortion and/or post abortion services	25	151	933
10. Proportion of women attending two or more ANC consultations	81%	88%	90%
11. Number of Health Centre catchment areas implementing community care of mothers and newborns	0	25	TBD
12. Number of health Centre catchment areas implementing community based distribution of contraceptives	N/A	TBD	TBD

Component 1: Emergency Obstetric and Newborn Care

1.1 Rationale:

To respond to the high maternal and newborn morbidity and mortality, Cambodia recently[4] undertook a national assessment of availability, quality and utilisation of EmONC services. The assessment comprised a complete enumeration of all hospitals and a purposive selection of 34% of health centres providing maternity services. Altogether 347 Health Facilities were surveyed, public and private.

The assessment found that the following factors are contributing to high maternal and newborn mortality in Cambodia:

- There were not enough facilities providing EmONC. 139 health facilities need to be upgraded to make EmONC available nationwide.
- The facilities providing EmONC are not equitably distributed across the country.
- There is a critical shortage of EmONC at the first level of care in the health system.
- Emergency services for mothers and newborns are being under-utilized.
- The needs of women with complications of pregnancy are not being met.
- There are women who require caesarean sections who are not receiving them.
- The quality of EmONC services is poor.

Barriers contributing to the *availability of functional EmONC Services* include:

- Lack of standardisation of services
- Policy not supporting the implementation of some life saving procedures
- Lack of qualified and competent staff
- Weak procurement and logistics system for drugs, supplies and equipment
- Problems of infrastructure
- Poor patient flow
- Services which are not “women friendly”
- Weak referral system
- A safe blood supply which is not universally available
- Weak monitoring, supervision and evaluation

As a consequence of this, the findings of the EmONC assessment have been to identify appropriate strategies and evidence-based interventions to develop an EmONC improvement plan that targets the causes of maternal and newborn deaths in Cambodia. Successful implementation of this plan is expected to impact positively on the survival of women and newborns.

[4] Ministry of Health (2009) National Emergency Obstetric and Newborn Assessment in Cambodia

1.2 Key Strategies for Implementation:

The key strategy components for improving the coverage/availability and quality of EmNOC services are as follows:

- Standardisation of EmONC facilities and training sites
- Facilitating policy change to support implementation of EmONC
- Capacity building and investing in clinical training
- Delegation of responsibility to local leadership/management
- A team approach to 24 hour availability of EmONC

The strategies will be implemented across 4 areas in 4 stages. Activities at a national and provincial level will start almost simultaneously.

- Preparation and Planning: Putting in place support networks, standards, guidelines, policies and planning to support implementation, and beginning to develop local capacity to support implementation.
- Upgrading facilities and staffing: By 2015, 139 facilities – 105 health centers and 34 hospitals - will be upgraded to provide a minimum package of CEmONC at CPA3 and CPA2 referral hospitals and BEmONC at CPA1 referral hospitals and selected health centres. Among these facilities, 6 hospitals will be strengthened as clinical training sites. Medical staff will be trained to enable 24h/7d availability of emergency obstetric and caesarean section services and laboratories strengthened to provide safe blood transfusions at all CEmONC facilities.
- Strengthening Service Delivery: Once facilities have been upgraded a process of continuous quality improvement will ensure 24 hour availability of EmONC. Activities will focus on maintaining a quality service and strengthening linkages between facilities and the community.
- Management and Coordination: This component focuses on developing partnerships, mobilising resources and the effective and efficient management of EmONC across all stages of implementation.

Full details can be found in EmONC Improvement Plan.

1.3 Coordination:

This sub-component of the plan focuses on advocating for an increased commitment and resources for EmONC; establishing strategic partnerships to improve coordination; collaborating between partners and galvanising resources for long-term sustainable action for EmONC and the effective and efficient management of EmONC across all implementation stages.

The MoH will implement the EmONC plan through a coordination team in the NMCHC under the NRHP. In addition to carrying out activities in the plan, the EmONC coordination unit will oversee day to day operations, and monitor the progress of EmONC interventions.

The current Maternal Child Health Sub Technical Working Group (MCH Sub-TWG) will be tasked with ensuring that technical support is in place and that activities are being implemented and monitored in a timely fashion.

Component 2: Skilled Birth Attendance

2.1 Rationale:

Only 63% of births in Cambodia take place with a skilled birth attendant present and only 44% of all births take place in health facilities.[5] This shows a marked improvement since 2005 in part due to the midwife incentive given for women who deliver at a health facility which began in late 2008. However, there are still many factors impeding skilled birth attendance including: the lack of qualified midwives, limited working hours of Health Centres, high costs of care and transportation, long distances from health facilities, unavailability of transport, and traditional beliefs.

Evidence shows that women are more likely to receive skilled assistance and the full range of interventions needed if they deliver at a health facility rather than at home[6]. Underlying this strategy of facility delivery are important principles of safety, primary prevention, and early detection and management of problems including life-threatening complications. The treatment component would include all basic emergency obstetric functions, with blood transfusions and surgery available at the referral level as comprehensive emergency obstetric care. Most of the interventions that make up the package supplied through a health centre intra-partum strategy have been assessed with robust experimental designs, and are widely regarded as being effective at reducing maternal mortality[7].

Reduction in MMR will only be possible through increasing the coverage of services through competent skilled attendants.

Cambodia is considered to have a critical shortage of health staff, particularly secondary/graduate midwives. Against WHO normative recommendation of 2.5 skilled birth attendants per 1000 population[8], Cambodia has only 0.77 per 1000 population (10,333 skilled birth attendants[9] including secondary nurses, secondary midwives and doctors/medical assistants). Health facilities are often under-staffed and health providers are not always available in the right numbers and skills mix to provide good quality reproductive, maternal and newborn health services

Secondary midwives are the main providers of 24 hour care and only 61% hospitals and 7% Health Centres have secondary midwives available for 24 hour service (RH costing 2006-2015). As of 2009, all health centres have at least one midwife, however around 60% of these health centres have only primary midwives with 12 months or less training. This,

[5] RMNCH Task Force Report 2009
[6] Adding It Up (p 22)
[7] Lancet Series on Maternal Health
[8] Working Together for Health , WHO World Health Report 2006
[9] MoH Personnel Dept 2009

along with lack of authority and competence for performing certain life saving interventions and lack of sufficient monitoring and supervision may not prepare them adequately to provide the service and quality needed to address the key causes of maternal mortality

Whilst secondary midwives have more comprehensive training, standardised in-service training is needed in the short to medium term to support them in building the knowledge and competencies necessary for managing the main causes of maternal mortality.

2.2 Key Strategies for Implementation:

2.2.1 New Interventions:

- Ensure at least one secondary midwife is employed at each health centre, and adequate numbers of midwives are employed at all health facilities to ensure 24h/7 day coverage for all deliveries
- Rationalize and improve the In-Service Training for Skilled Birth Attendants**:**
    - Review the in-service training for midwives based on the updated Safe Motherhood Protocol and develop a **standardized in-service modular training package** to be positioned as Minimum Package of Activities (MPA) modules for Health Centre midwives and Complementary Package of Activities (CPA) modules for Referral Hospital midwives to include:
        - Antenatal Care
        - Normal delivery including AMTSL and essential newborn care
        - Integrated Post Partum Care of mother and newborn
        - EmONC
            - Management of Post Partum Haemorrhage
            - Management of hypertensive disorders (Eclampsia)
            - Management of prolonged/obstructed labour
            - Management of puerperal sepsis
            - Newborn resuscitation & care of the sick newborn
        - Safe abortion and post-abortion care
        - Family planning
    - Prioritise revision and roll out of training of the modules to those most likely to impact a rapid reduction in maternal mortality over the next 3 years, namely: Normal delivery, AMTSL & essential newborn care, EmONC, safe abortion and family planning.
- Review the roles and responsibilities of primary midwives and prioritise training for those health centres that currently only have a primary midwife to allow the primary midwife to be able to perform safe deliveries and basic emergency obstetric care. This will include use of oxytocin in all deliveries and MgSO4 for eclampsia.
- Bridging training course to allow upgrading of primary midwives to secondary midwives
- Training of doctors to perform emergency obstetric interventions and caesarean sections at all referral hospitals and technicians/nurses/medical assistants to provide anaesthesia

- Health Information System data collection to include specifically neonatal (0-28days) and infant (0-11months) data as well as children under 5 years data for morbidity and mortality

2.2.2 Interventions for further rapid scale up:

- Strengthening supportive supervision and coaching by senior hospital midwives to health centre midwives
- Midwife Alliances including RH/HC midwifery quarterly meetings
- Refresher training of Obstetricians in the use of Magnesium Sulphate for eclampsia
- Improve Pre-Service Training for Midwives**:**
    - Increase the number of midwives being trained through the new three year associate degree midwifery programme following the Ministry of Health strategies to prioritise the recruitment of midwives within the MoH staff allocation from the Office of Public Function
    - Move to competency based curriculum for all pre-service midwifery courses
    - Upgrade capacity of midwifery tutors and regional training centres
    - Strengthen practical training and expand preceptor programmes

- Expanding health facilities to provide adequate room for labour, delivery and postpartum care for mothers and families
- Increase the number of maternity waiting homes in remote rural areas and in EmONC facilities following MoH guidelines
- Improving referral mechanisms from health centres to hospitals and scaling up community based transportation systems.
- Ensure adequate drugs, equipment and supplies required to safely deliver and manage complications
- Ensure 24 hour lights and running water supply for all health facilities
- Removing financial barriers to enable all women to access key reproductive, maternal health services through scaling up of health equity funds, CBHI schemes, voucher systems, etc.
- Strengthen BCC promoting skilled birth attendance at health facilities

2.3 Coordination:

Skilled birth attendance strengthening to be led and coordinated by the National Reproductive Health Programme in close collaboration with Department for Human Resource Development, health development partners, in particular the reviewing and developing of the midwife in-service training package. PHD/OD's to lead the implementation, coordination, monitoring and evaluation of skilled birth attendance services.

Component 3: Family Planning

3.1 Rationale:

Family planning reduces unintended pregnancies, abortions and unplanned births which then results in a reduction in the number of maternal and newborn deaths. There are also many less quantifiable benefits of family planning for individual women, families and the society. Smaller families lead to better health and improved education for both women and children.

Fertility is declining rapidly in Cambodia and the use of modern contraceptives is slowly increasing. In 1995 the CPR among married/cohabiting couples was 7%, in 2000 it was 18.5% and by 2005 it had increased to 27%. However, the public sector Contraceptive Prevalence Rate (CPR) for modern methods was only 28% in 2009 and this falls short of national targets. This places Cambodia in the group of countries with the lowest CPRs in the world.
Despite the increase in CPR, there remains a substantial unmet need for modern contraception, 25% in 2005, with a high risk of unintended pregnancies. Use of long term contraception is rare among women and account for only about one third of the modern method mix.. Long-term family planning commodity security is also an issue as current donor support for commodity procurement finishes in 2012.

Total Fertility Rate, Contraceptive Prevalence and Unmet Need

Year	1995	2000	2005	2015 target
TFR	4	4	3.4	3
CPR	7%	18.5%	27%	60%
Unmet need	N/A	32.5%	25.5%	18%
TFR=Total Fertility Rate CPR=Contraceptive Prevalence Rate, Unmet needs for modern contraception				

3.2 Key Strategies for Implementation:

Improving access to quality contraceptive services is a key step to increase utilization. Access to modern contraceptives together with good counselling of women post delivery/abortion and for those who are HIV+ are key to ensure the continuity and increase in uptake of contraceptive use .

The availability of the services should be complemented with BCC efforts to increase knowledge and awareness of the benefits of using modern contraceptives. Further promotion of community based distribution of contraceptives must continue, as well as strengthening linkages with the private sector and social marketing initiatives.

3.2.1 New Interventions:

- Ensure contraceptive commodity security for the country beyond 2012 with support from both government and development partners.
- Include contraceptive commodities in the CPA package so that they are available for women after delivery and abortion/post abortion services at referral hospitals.
- Introduce new and long term contraceptive methods.
- Establish linkage between family planning services and other reproductive and maternal health services such as delivery at referral hospitals, abortion and post – abortion care services and counselling, HIV testing and treatment, etc.

3.2.2 Interventions for further rapid scale up:

- Scale up the implementation of Community Based Distribution (CBD)of contraceptives
- Improve and expand the CBD programme Continue behaviour change communication to reduce fear of side effects and health concerns
- Improve family planning counselling skills of health staff
- Promote use of long term methods

3.3 Coordination

The National Reproductive Health Programme will coordinate, monitor and evaluate the activities with support from DPs and NGOs. . PHDs and ODs will lead at provincial, district and HC level to implement, monitor, and evaluate the efforts.

The Sub-TWG MCH will provide a venue for government-donor consultation on family planning issues, and The Contraceptive Security Working Group will provide a forum for discussion on commodity security issues specifically. For this forum to be most effective, membership should be expanded to include The MoH's Department of Budget and Finance and its procurement unit, and the private sector.

Component 4: Safe Abortion

4.1 Rationale:

In 2002 it was estimated that 20-29% (130 per 100,000) of all maternal deaths in Cambodia were related to unsafe abortion (WHO 2002)[10]. Vital registration, death certification and maternal death surveillance are not yet accurate and complete enough to provide good estimates of the number of deaths resulting from abortions. According to the CDHS 2005, 51% of all abortions were self induced or used traditional methods or unsafe providers. While recognizing the uncertainties of the estimate, it is clear that unsafe abortions contribute substantially to maternal mortality in Cambodia.

Abortion has been legal in Cambodia since 1997, for woman, up until 12 weeks of pregnancy, but real access has been limited and provided mainly by untrained providers in the private sector. This contributes significantly to maternal deaths in the country. National Health Statistics have been recording data on abortion and show that number of induced abortions reported by public facilities was 354 in 2008, 280 in 2007, and 379 in 2006. Although induced abortions in public facilities appear to be grossly under-reported, it is probable that the majority of abortions are performed outside of the government health system, either in private clinics or in the home of providers and clients.

An induced abortion is the result of an unwanted pregnancy. Nearly half of all women in Cambodia terminating their pregnancy have had a previous abortion. Young women and multi-parous women are particularly at risk. If access does not increase over the coming years the unmet need will remain high placing a large number of women at risk of an unwanted pregnancy and vulnerable to an unsafe abortion.

Reducing the number of unwanted pregnancies is critical for reducing the overall number of abortions, safe and unsafe. This is best done by increasing knowledge and awareness about contraception and improving access to family planning services as described in the Family Planning component of the Fast Track Initiative Road Map. Secondly, access to safe, legal abortion should be increased.

4.2 Key Strategies for Implementation:

- Improving availability of safe abortion services
  - Infrastructure
    - Ensure services meet minimum operating standards (infrastructural and equipment and supplies).
  - Deployment of human resources
    - Ensure that the safe abortion curriculum is fully integrated into all medical education and pre-service training and that all national standards and

[10] WHO, 2004.Unsafe abortion: Global and regional estimates of the incidence of unsafe abortion and associated mortality in2000. Geneva: WHO

protocols are in place to accredit all providers who complete the training successfully

- Supplies and equipment (included in infrastructure section above)

- Improving accessibility of safe abortion services
  - Removing financial barriers
    - Reduce the financial barriers to accessing safe abortions through ensuring that safe abortion is included in all health equity funds and community based health insurances schemes. In addition we need to address the weak regulation of pricing in both public and private facilities care because abortion, like other emergency treatments, is vulnerable to excessive over-pricing and therefore creates a particular risk for poor women.

- Improving quality of safe abortion services
  - In-service training
    - Expand the training in safe abortion and post abortion care, including in post-abortion contraceptive provision to provinces not currently part of the current programme of training
  - Quality improvement/assurance (supportive supervision, coaching)
    - Maintain quality assurance where providers have been trained, including increased on-site coaching and support in critical areas such as infection prevention and waste management, as well as clinical skills.

- Improving utilization of safe abortion services
  - Develop a well designed advocacy and community mobilisation strategy to increase community access to information about the legality of abortion, the dangers of unsafe abortions.(link to BCC component).

4.3 Coordination:

Safe abortion should be fully integrated into all maternal health, reproductive health and family planning/birth spacing programs. As such, oversight and monitoring can be provided by the NMCHC/NRHP with support from DPs and NGOs.

Enabling Environment Components

Component 5: Behaviour Change Communication

5.1 Rationale:

Reproductive, maternal and newborn healths are greatly influenced by individual, family and community practices and decisions for appropriate care-seeking. Therefore, promotion of appropriate practices before and during pregnancy, childbirth and early postnatal period, including timely care-seeking, represent an important component of preventing maternal and newborn deaths.

From the communication perspective, the inadequate care practices, as well as care-seeking, before and during pregnancy, childbirth and postnatal period are mainly attributed to:

(i) Inadequate knowledge of individuals, families and communities about care before and during pregnancy, childbirth and after delivery;

(ii) Relatively widespread traditions and cultural perceptions favouring deliveries in home environment with traditional birth attendants;

(iii) Inadequate quality and responsiveness of health services to the need of women and their families;

The BCC component is in line with the Health Strategic Plan 2008-2015 (HSP2) that articulates the BCC role in stimulating demand for health services and for improving family and community practices. Similar endorsement of the BCC is reflected in the National Reproductive and Sexual Health Strategy of Cambodia 2006-2010, which outlines approaches for improving the reproductive and sexual health status of women through effective and appropriate health programmes that strengthen community understanding of reproductive and sexual health needs and rights and increase demand for services.

The Communication for Behavioural Impact (COMBI) approach was used in designing and implementing two nation-wide communication efforts in Cambodia - antenatal care promotion and breastfeeding promotion. Both experiences have shown positive behavioural impact and lessons learnt from the breast feeding and ANC campaigns will be used to design and implement the intended BCC interventions.

The BCC component promotes key practices includes:

1. Use of modern contraception to prevent unwanted pregnancies,
2. Use of safe abortion services for terminating unwanted pregnancies,
3. Making at least four, antenatal care visits to the health center during pregnancy,
4. Delivery with a skilled birth attendant at a health facility ,
5. Seeking postnatal care from the trained provider after the delivery,
6. Care-seeking for danger signs for the mother and the newborn during pregnancy, delivery and postpartum period.

5.2 Key Strategies for Implementation:

The Communication for Behavioural Impact (COMBI) model approach will be used which strategically blends a variety of communication interventions intended to mobilize societal and personal influences on the individual and families in order to trigger adoption or to support the maintenance of the desired practices. COMBI works through employment of a comprehensive mix of sustained mass media, interpersonal communication, community mobilization, out-door and point-of-service promotion.

Four areas listed above: promotion of modern contraception, antenatal, delivery and postnatal care will make use of all the communication strategies. Promoting the use of safe abortion services and care-seeking for danger will be based primarily on interpersonal communication with particular attention being paid to ensuring culturally appropriate communication.

The interpersonal communication component will make extensive use of the community care of mother and newborns package as well as other relevant Community-IMCI modules. Communication efforts will be nation-wide in scope; however, priority attention will be given to the un-reached (difficult-to-access and poor) population. This component will be implemented through the health facility network and health care staff down to the village volunteers. Synergies with already on-going efforts to scale up community-based health promotion will be promoted.

Promotion of positive care and care-seeking practices in the population will be complemented with the efforts to improve responsiveness of the service providers to the needs of the women and their families.

An advocacy strategy, targeting local authorities will be developed and implemented with aim to increase availability of and accessibility to essential reproductive and maternal health services. Based on the current experience, local authorities can play an essential role in ensuring the latter through establishment or funding of community based transportation/referral systems; endorsing and providing support to the work of village volunteers; providing health centers with appropriate sources of light, water and sanitation facilities.

5.3 Coordination:

The work will be coordinated and overseen by the National Reproductive Health Programme and the National Center for Health Promotion (NCHP). This will be supported by DPs, NGOs and private sector companies involved in BCC promotion.

Local authorities will be involved in the planning and implementation of communication efforts in order to increase the effectiveness and expand the reach of communication, but also to facilitate access to promoted services.

Partnership with media/TV companies will be strengthened in order to ensure wide coverage and to get the lowest possible prices for the broadcasting.

Component 6: Removing financial barriers to access

6.1 Rationale:

6.1.1. Financial access barriers for pregnant women

Financial barriers to access health services for pregnant women are threefold:

- User fees at health facilities
- Transport costs:
  - Transport from home to health facility, especially in case of emergency or during the night
  - Transport for referral between health center and hospital and from district to province / Phnom Penh
- Opportunity costs: caretaker cost for other children staying at home, food for the caretaker accompanying the woman to the health facility, missed income generating activities or missed agricultural work (this often is important for routine ANC and PNC attendance)

All three financial access barriers need to be addressed to enable access to key reproductive, maternal and newborn health services. A combination of approaches needs to be used with the objective of granting **free access at the point of care for all poor women**.

6.1.2. Existing health financing mechanisms

1. User fees are charged in all health facilities in Cambodia. They are systematically paired with an exemption system. Exemptions from user fees can be granted in all facilities after an assessment of the socio-economic status of a patient by the health staff. The obstacles to accessing exemptions are as follows:

- The exemption system is not subsidized. Therefore, for each exemption granted, the health staff will receive less money from user fee revenues.
- The assessment of a patient's socio-economic status may take time and delay care in the case of an emergency
- The socio-economic assessment by health staff is subjective
- Transport, food and opportunity costs are not covered and are still a major burden for the patient and her family

2. Health Equity Funds exist in 49/77 operational districts. These funds cover the user fee, transport and food costs for poor people (and caretaker) when they seek care. Health Equity Funds have largely been implemented at hospital level, but in some locations have now been expanded to cover health centers, and they are often accompanied by a scheme that pre-identifies the poor. The challenges of financing key reproductive, maternal and newborn services through HEFs are as follows:

- Subsidies through HEF target the poor. However financial barriers still exist for people who are marginally poor, who may have housing and food but lack available cash for health care costs. This is especially valid for more expensive services and especially cares at hospitals in case of Emergency Obstetric Care.
- Some HEFs still rely on post-identification of patients upon arrival at the facility:
  - As the patient is not certain or aware of her entitlements, she may delay seeking

care
- Post-identification of a patient's socio-economic status upon arrival at facility may take time and delay emergency care

- Transport costs need to be paid up-front by the patient, and are later reimbursed once they reach the health facility
- Some HEFs do not cover health center care: this discourages poor people from seeking key services at the primary care level
- HEFs do not cover opportunity costs for child care and other costs
- HEF's often do not cover abortion

3. Community-Based Health Insurance is essentially voluntary, private health insurance. It grants free access to health services in selected ODs upon payment of a premium to a private non-profit insurance organization. Most CBHI do not deploy specific mechanisms to reproductive, maternal or newborn health and do not cover opportunity costs.

4. The government's midwifery incentive payment system pays public sector midwifes for each delivery they perform at a health facility (15US$ at hospital and 10US$ at HC level). This is a pure staff incentive and motivates midwives to promote and support deliveries in public health facilities. However all health care and opportunity costs remain the same for the patient.

5. Commune Council support for referral of poor pregnant women for delivery at health facility.

6.2 Key Strategies for Implementation:

The proposed health financing approach to remove financial barriers for women to access key RMN health services must build on and strengthen existing financing mechanisms including both provider and demand side financing schemes.

6.2.1 Provider Side Financing:

6.2.1.1.1 The government midwifery incentive is motivating providers and producing good results and should be continued at least for the medium term

6.2.1.1.2 Remote Area Allowances for midwives should be strongly considered in order to ensure good RMNH quality of care at all health centres and referral hospitals regardless of geographical location

6.2.2 Demand Side Financing:

6.2.2.1 In areas where HEFs are present, the package of HEFs should be extended to cover emergency obstetric care and all reproductive health care services including safe abortion for all poor women. HEFs should be scaled up nation-wide and consider covering both referral hospital level and health centre level for EmONC and reproductive health services, particularly safe abortion care.

6.2.2.2 In geographical areas without HEF coverage, exemption of user fees should be more fully used and/or a RH/EmONC voucher system could be used.

6.2.2.3 Commune council support for referrals through funds allocated to each commune council for this purpose should be fully implemented

6.2.2.4 Cash Transfers to Cover Opportunity Costs

Opportunity costs could be financed through conditional cash transfers (CCT). The advantage of CCT is that they will address the opportunity costs of health seeking, but also serve as a mechanism to boost utilization of health care services by pregnant women. The condition would be completion of a health centre delivery package including: 4 ANC visits, delivery at health center, PNC visits, post-partum family planning.

6.3 Coordination:

Removing financial barriers component will be coordinated by the Bureau of Health Economics and Financing and the Department of Planning and Health Information of the Ministry of Health in the context of the wider Public Administrative Reform.

Component 7: Maternal Death Surveillance & Response

7.1 Rationale:

"Avoiding maternal deaths is possible, even in resource-poor countries, but it requires **the right kind of information** on which to base programmes"[11]

Currently the Health Information System only captures a very small proportion of the number of expected maternal deaths. It is recognized that by reporting deaths in a timely manner and exploring why, when and how women are dying, it will enable the MoH to better provide the services needed and better inform communities on how to help their women in and around the time of child birth. It also helps emphasize the challenge of maternal deaths among decision makers, galvanizing long term effects to reduce MMR. The Maternal Death Surveillance & Response System (MDSRS) will link communities, local authorities, health facilities, operational districts, provincial health departments, and the central MOH through a weekly reporting system on maternal deaths occurring in communities and health facilities across the country. Information will be collected through a multiple reporting system including a simple one page notification form to be filled in immediately upon initial report of a death. Operational Districts will follow-up on each confirmed maternal death with a Maternal Death Audit. DPHI will retain primary responsibility for the collection, analysis, and dissemination of the surveillance data through close cooperation with the NRHP of the NMCHC, sub national MOH units, local authorities, and concerned health partners. For this purpose, a Maternal Death Situation Room was established in the MOH housing a maternal death database compiled by DPHI. The database will be updated on a weekly basis to permit intensive monitoring by the MOH leadership, NMCHC/NRHP program managers, and PHD and OD management teams. The information will be displayed through large scale maps highlighting locations of maternal deaths by commune and linking these to the location of health facilities and availability of EmONC care, road infrastructure and transport network, trend graphs of key performance indicators relating to maternal health, and tables detailing available human, physical and monetary resources for improving maternal care services.

7.2 Key strategies for interventions:

- Establish Maternal Death Notification system
    - Reporting through the health system
    - General public and community reporting (toll free number) to the Maternal Death Situation Room
    - Promotion of MDSR system and hotline
    - Inclusion of maternal death in death certificates
- Strengthen Maternal Death Follow-Up System
    - Review and ensure nationwide implementation of Maternal Death Audit systems

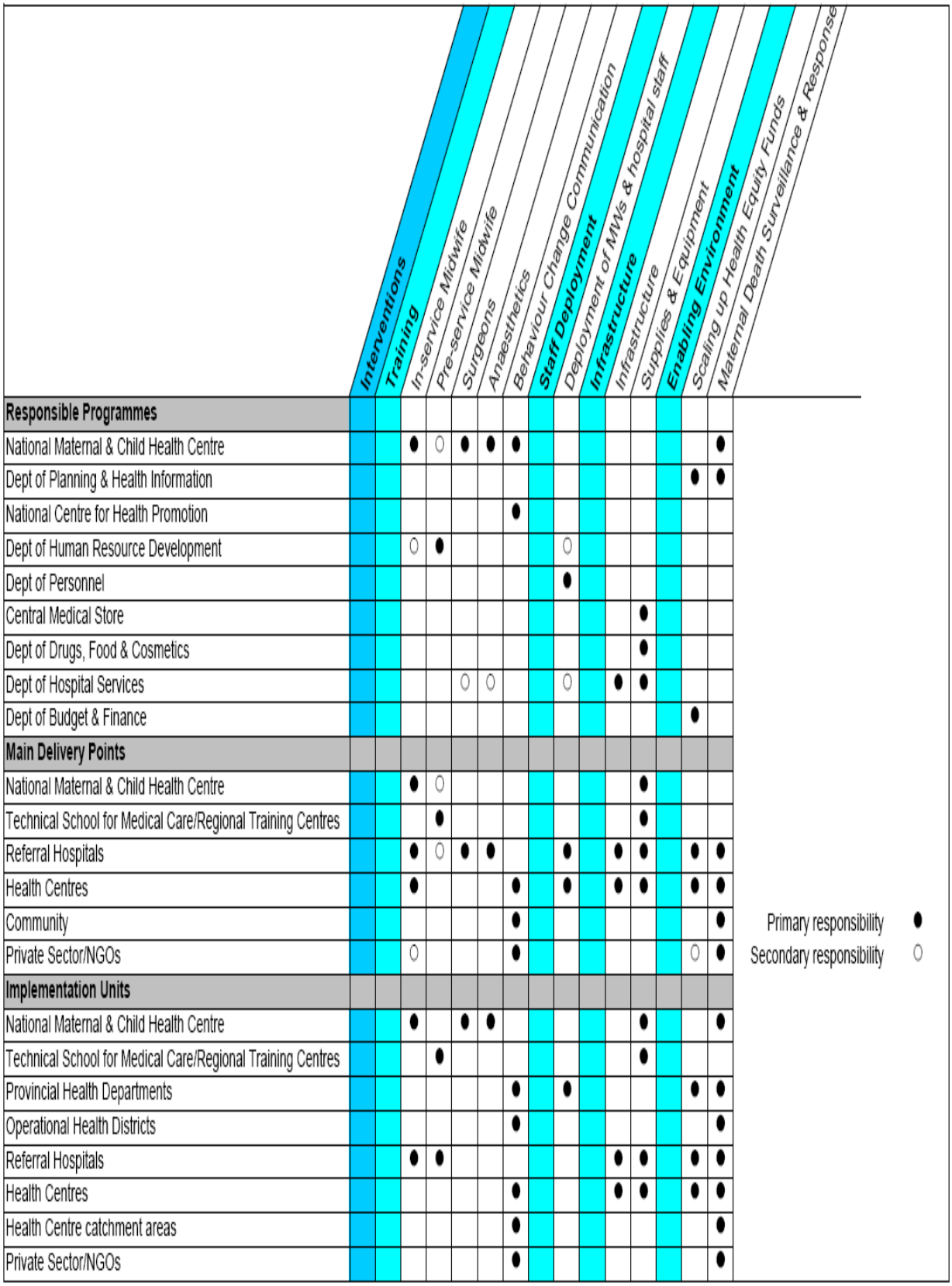
[11] WHO, 2004, Beyond the Numbers: Reviewing Maternal Deaths and Complications to Make Pregnancy Safer, Geneva, page 1.

    - Expand current system to include maternal death audits of deaths in community as well as health facilities
- Cross link with Vital Registration system
- Share epidemiological information on maternal deaths inter-sectorally through Council of Ministers and parliament, and with the general public, through media

7.3 Coordination:

DPHI will work closely with NRHP to implement the MDSR system and to identify provinces and ODs in critical need of support for both demand-side and supply-side interventions and appraise provincial plans accordingly to ensure that these interventions have been incorporated with national budget and health partner support. DPHI will liaise with the MOI's NCDD PSDD M&E unit to access the Commune Database (CDB) which contains information on key socioeconomic indicators, such as poverty head count ratios, that will be critical to analysis of health information data, and compile relevant information from such other information sources that are available, including Maternal Death Audits, CDHS, CSES, CAS, and the EmONC Assessment conducted in 2008.

Responsibilities Matrix



Responsible Programmes	Interventions	Training	In-service Midwife	Pre-service Midwife	Surgeons	Anaesthetics	Behaviour Change Communication	Staff Deployment	Deployment of MWs & hospital staff	Infrastructure	Infrastructure	Supplies & Equipment	Enabling Environment	Scaling up Health Equity Funds	Maternal Death Surveillance & Response
National Maternal & Child Health Centre			●	○	●	●	●								●
Dept of Planning & Health Information														●	●
National Centre for Health Promotion							●								
Dept of Human Resource Development			○	●					○						
Dept of Personnel									●						
Central Medical Store											●				
Dept of Drugs, Food & Cosmetics											●				
Dept of Hospital Services					○	○			○		●	●			
Dept of Budget & Finance														●	
Main Delivery Points															
National Maternal & Child Health Centre			●	○								●			
Technical School for Medical Care/Regional Training Centres				●								●			
Referral Hospitals			●	○	●	●			●		●	●		●	●
Health Centres			●				●		●		●	●		●	●
Community							●								●
Private Sector/NGOs			○				●							○	●
Implementation Units															
National Maternal & Child Health Centre			●		●	●						●			●
Technical School for Medical Care/Regional Training Centres				●								●			
Provincial Health Departments							●		●					●	●
Operational Health Districts							●								●
Referral Hospitals			●	●							●	●		●	●
Health Centres							●				●	●		●	●
Health Centre catchment areas							●								●
Private Sector/NGOs							●								●

● Primary responsibility
○ Secondary responsibility

Signal Functions Used to Identify Basic and Comprehensive EmONC Facilities

Basic EmONC services	Comprehensive EmONC services
1. Administer parenteral** antibiotics	Perform signal functions 1-7, plus:
2. Administer uterotonic drugs (parenteral oxytocin, parenteral ergometrine, misoprostol)[33]	8 Perform surgery (caesarean section)
3. Administer parenteral anticonvulsants for pre-eclampsia and eclampsia (magnesium sulphate, diazepam)	9. Perform blood transfusion
4. Perform manual removal of placenta	
5. Perform removal of retained products (MVA, misoprostol, dilatation and curettage)	
6. Perform assisted vaginal delivery (vacuum extractor, forceps)	
7. Perform neonatal resuscitation (with bag and mask)	
A Basic EmONC facility is one that performs all functions 1-7.	
A Comprehensive EmONC facility is one that performs all functions 1-9.	

** Parenteral administration of drugs means by injection or intravenous infusion.

Adapted from The Indicators for Monitoring the Availability and Use of Obstetric Services: A Handbook UNICEF, UNFPA, WHO, 1997 p 26 (5)