FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

Ministry of Health

ROAD MAP FOR ACCELERATING THE REDUCTION OF MATERNAL AND NEWBORN MORBIDITY AND MORTALITY IN ETHIOPIA

2012 - 2015

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Road Map for Accelerating the Attainment of the Millennium Development Goals Related to Maternal and Newborn Health in Ethiopia

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This National Road Map for Accelerating Reduction of Maternal and Newborn Mortality and Morbidity is the result of repeated consultations with various national and international experts who have been engaged in supporting the Federal Ministry of Health in its endeavor to improve Maternal and Newborn Health and survival. The ministry would like to express its appreciation to all individuals and organizations that have contributed to the development of this document. The ministry recognizes the significant role played by members of the National Safe Motherhood/PMTCT Technical Working Group who were at the fore front of the task from the beginning to end.

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FOREWORD

The firm resolve of the Ethiopian Government to address maternal and neonatal morbidity and mortality has been reflected in the health sector development programs. The current Health Sector Development Plan (HSDP) IV has put reduction of maternal and neonatal morbidity and mortality as one of its foremost objectives.

The Federal Ministry of Health (FMOH) has also undertaken a number of actions to assess the Reproductive Health Status of population of Ethiopia and design strategies to implement the National Health and related policies. A comprehensive assessment of Reproductive Health Needs in Ethiopia was conducted back in 1999. This assessment laid the foundation for the development and implementation of the National Reproductive Health Strategy (2006-2015). The Strategy identified six priority areas including the social and cultural determinants of women's reproductive health; maternal and newborn health, fertility and family planning, HIV/AIDS; RH of young people; and reproductive organ cancers.

In 2008, the FMOH conducted a national Emergency Obstetric and Neonatal Care (EmONC) assessment to provide data on achievement of the Millennium Development Goals (MDGs) 4& 5 and to guide policy, planning and prioritization to strengthen the health system using EmONC as a point of entry. The results of this assessment provided valuable inputs for the design of HSDP IV and the revision of the National RH Strategy.

This Maternal and Newborn Health Road Map has been developed in response to the current high maternal and neonatal mortality rates in Ethiopia, and to the Global and Regional calls for each country to develop a country-specific Road Map. The six specific objectives of the Road Map focus on achieving targets of major components of maternal and newborn health, and strengthening health system and the capacity of Individuals, families and communities to improve Maternal and Newborn Health.

Effective implementation of the Road Map entails ensuring inclusion of specific activities and the corresponding budget in yearly action plans at different levels and relevant tools and guidelines. To give emphasis, a separate specific objective on Newborn health, which in many cases appeared to be overlooked, is devoted in this Road Map, while ensuring the perspective of integrated MNH approaches.

The Road Map sets objectives and stipulates various strategies and actions which guide policy makers, development partners, training institutions and service providers in supporting government efforts towards the attainment of MDGs related to maternal and neonatal health. To this end, I wish to urge all concerned to use this document to the maximum and for the benefit of Ethiopian mothers and children.

ACRONYMS

ANC…….. ..Antenatal care
ART…….....Antiretroviral Therapy
BCI……..Behavior Change Intervention
BEmONC……Basic Emergency Obstetric and Newborn Care
CEmONC……Comprehensive Emergency Obstetric and Newborn Care
CFR……..Case Fatality Rate
CPR …….Contraceptive Prevalence Rate
DHS…….....Demographic and Health Survey
EmOC …….....Emergency Obstetric Care
FP…….....Family Planning
FWCW…….....Fourth World Conference on Women, held In Beijing, China, 1995
GNP……..... Gross National Product
GTP……..Growth and Transformation Plan
HAD……..Health Development Army
HMIS……Health Management Information System
HIV…….. Human Immunodeficiency Virus
HR……... Human Resources
ICPD…….International Conference on Population and Development
IMR……..... Infant Mortality Rate
IPC……Internal Procurement Committee
ITN……Insecticide Treated Bed net
IUCD …… .. Intra Uterine Contraceptive Devices
MDG…….Millennium Development Goal
EDHS……Ethiopia Demographic and Health Survey
MMR…….Maternal Mortality Ratio
MNH…….Maternal and Newborn Health
FMOH……Federal Ministry of Health
PMTCT……. Prevention of Mother to Child Transmission
POA…….. …Plan of Action
POW……. Program of Work
RHU…….. Reproductive Health Unit
SMI…….. .Safe Motherhood Initiative
SMP…….. Safe Motherhood Project
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 Counseling and Testing
WHO…… World Health Organization

EXECUTIVE SUMMARY

1. Maternal and neonatal mortality are high in Ethiopia. The maternal mortality ratio (MMR) is estimated at 350/100000 live births (UN interagency estimate for 2010 released by WHO). According to EDHS 2011, the MMR was 676/100,000 live births while the neonatal and infant mortality rates were 37/1000 and 59/1000 live births, respectively.

2. In general, high rates of maternal and newborn mortality are the result of a combination of factors. The delays which contribute to maternal and newborn morbidity and mortality are delays in making decision to seek health care, delay in reaching a health facility, and delay in receiving care at the health facility. These delays result from a number of health and non-health factors such as inadequate number of skilled birth attendants, inadequate emergency obstetrics and newborn care services, weak referral system at health center level, financial barriers, and socio-cultural values, practices and beliefs.

3. In response to the high maternal and neonatal mortality rates and to the Global and Regional calls for each country to develop a country-specific Road Map, the Federal Ministry of Health in collaboration with its development partners developed this Road Map for accelerating the "Reduction of Maternal and Newborn Morbidity and Mortality" in the country.

4. The Road Map has a rationale, goal, and the following objectives: The general objective of the Road Map is to reduce maternal mortality ratio to 267/100,000 live births and newborn mortality rate to15/1000 live births by 2015. Its specific objectives are to:(i) strengthen the capacity of Individuals, Families and Communities to improve Maternal and Neonatal Health (ii) increase skilled attendance during pregnancy, childbirth and postnatal period; (iii) scale up the provision and utilization of quality Basic and Comprehensive Emergency Obstetric and Neonatal care; (iv) increase use of key newborn care services and practices by households; (v) increase access to Family Planning information and services at all levels; (vi) Strengthen the Health System Management and Partnership to Deliver Effective and Efficient MNH Services;

5. These are followed by twenty one strategies, which will guide policy makers, program managers, development partners, training institutions and service providers in supporting government efforts towards the attainment of MDGs related to maternal and newborn health. Each strategy has interventions, which are presented in detail from page 10 – 25. Yearly targets are set and interventions are costed.

6. The follow-up actions include the (i) organization of a country-level stakeholders meeting with the participation of partners and formulation of an implementation plan; (ii) promoting the Road Map in order to mobilize resources for its implementation; (iii) periodic assessment of Road Map implementation by the MOH and (iv) signing up to the Road Map by the heads of RHBs and partner organizations.

7. The Road Map will be implemented over the coming four-year period (2012-2015). Four types of indicators viz. impact, outcome, output and policy commitment indicators, drawn from HSDP IV, are proposed for purposes of monitoring the implementation of the Road Map. Mid-term reviews and end of implementation evaluation will be made in collaboration and with the support of partners.

8. The successful implementation of this Road Map will require: sustainable funding mechanisms, development of human resources, provision of quality services, improvement of the information system, mobilization of political will, community involvement, creation of supportive legal and regulatory mechanisms and strengthening monitoring, assessment and accountability mechanisms.

1. BACKGROUND

1.1 Geography and People

Ethiopia is the tenth largest country in Africa and has a total surface area of 1.1 million square kilometers. It is bordered on the north and north-east by Eritrea, on the east by Djibouti and Somalia, on the south by Kenya and on the west and south-west by Sudan. Administratively, the country is composed of nine Regional States and two City Administrations. These are subdivided into 817 administrative Woredas (districts) which are further divided into around 16,253 Kebeles, the smallest administrative units in the governance structure. The size of the country and its location has accorded it with diverse topography, geography and climatic zones and resources.

According to the projections of the 2007 population and housing census, the total population of the country for the year 2011 is estimated to be 80 million. It is one of the least urbanized countries in the world with 83.6 percent of the population living in the rural areas and only 16.4% residing in urban areas. Females comprise 49.5% of the total population, of whom 24% are in the reproductive age bracket (15-49 years). The population is predominantly young with 44.9 % under the age of 15 years; and is reported to grow by 2.6 percent every year. The average size of a household is 4.7. The fertility trend in recent years shows that there has been a marked decline in the total fertility rate from the 1990 level of 6.4 births to 4.8 births per woman [1].

1.2 Socio-economic Situation

The Government of Ethiopia follows a market–based and agricultural-led industrialization policy for the development and management of the economy. The economy is predominantly agriculture-based, with agriculture accounting for 83.4 percent of the labor force, about 43.2 percent of the Gross Domestic Product (GDP) and 80 percent of exports. The country has gross domestic product (GDP) of US$29.7 billion and a per capita income of US$ 390[2].

Despite serious challenges to economic development, Ethiopia has shown an impressive economic growth over the last seven years and the Poverty Head Count Index has declined from the 1996 level of 45.5% to 32.7% in 2007/08[3]. During the SDPRP I period (2002/03 - 2004/05), real GDP grew on average by about 5 percent per annum. Subsequently, during the first three years of PASDEP period the country registered an average of double digit economic growth of 11.8% per annum with steady and strong positive performance in real GDP[3]. This steady growth marks a significant progress, not only compared to the 7% annual growth target that would be required to meet the MDGs, but also to realize Ethiopia's objective to become a middle-income country in the next two decades through the current Growth and Transformation Plan (GTP). Another important feature of the economic reform in Ethiopia is the introduction of equal opportunity for women in the economic development of the country[3].

Although major progress has been made in education, national literacy levels are still low. The total adult literacy rate (persons above 15 years who can read and write) is 36% (50% for male and 23% for female). According to the MOE 2010 Progress Report, the Gross Enrolment Ratio (GER) has increased from 2.2% in 2004/05 to 4.2% in 2008/09.[3] The gross enrolment ratio in primary school rose from 32% in 1990/91 to over 94.2% in 2009/10, with a male-to-female proportion of 98.7% and 93%, respectively[4].

1.3 Health System Organization and directions to improve MNH

Ethiopia has a three-tier health care delivery system which is characterized by a first level of Woreda /district health system comprising a primary hospital (with population coverage of 60,000 –100,000 people), health centers (1/15,000-25,000 population), and their satellite health posts (1/3000-5,000 population)[5] . A second level in the tier made up of a general hospital with population coverage of 1-1.5 million people; and the third a specialized hospital that covers a population of 3.5-5 million. A primary hospital and each health center with five satellite health posts form a Primary Health Care Unit (PHCU). The Ethiopian health care system is augmented by the rapid growth of the private-for-profit and NGOs sector playing significant role in expanding the health service coverage and utilization.

The devolution of power to regional governments has resulted in the shifting of decision making for public service deliveries from the center to the regions and down to the district level. Regions and districts have regional health bureaus (RHBs) and district health offices, respectively for the management of public health services at each level. The FMOH and the RHBs focus more on policy matters and technical support while Woreda health offices have basic roles of managing and coordinating the operation of the district health system under their jurisdiction.

Since the development of the Health Policy in 1993 and HSDP I in 1998, the Federal Ministry of Health has formulated and implemented a number of policies and strategies that afforded an effective framework for improving health in the country including the recent addition of maternal and neonatal health. This includes implementations of far reaching and focused strategies such as Making Pregnancy Safer (2000), Reproductive Health Strategy (2006), Adolescent and Youth Reproductive Health Strategy (2006) and the Revised Abortion Law (2005). Others include strategies on free service for key maternal and child health services, the training and deployment of new health workforce (all female HEWs) for the institutionalization of the community health care services including clean and safe delivery at community level, and training of health officers with MSc degree level training in skills of Integrated Emergency Obstetrics and Surgery (IEOS) and training of anesthetists. In addition, the establishment of the MDG fund and the priority given to maternal health therein is expected to mobilize the much required additional funding opportunities.

1.4 Health Status

Considerable progress has been made to improve the health status of the population in the last one and half decades. However, Ethiopia's population still faces a high rate of morbidity and mortality and the health status of Ethiopians remains low when compared with worldwide standards. The major health problems of the country remain largely preventable communicable diseases and nutritional disorders, although the country is increasingly facing the double burden of diseases due to chronic health problems such as cardiovascular diseases, diabetic mellitus and cancers. Vital health status indicators show a life expectancy of 54 years (53.4 years for males and 55.4 for females), IMR of 77/1000 and under-five mortality rate of 123/1000, according to the 2005 EDHS. The neonatal mortality rate was estimated to be 39 per1000 live births[6].Results from the EDHS 2011show that there is sharp decrease in the under five mortality rate to 88 per 1000 live births in 2010. The infant mortality rate has also decreased to 59 deaths per 1000 live births in 2010[7] while Neonatal mortality rate was reported to be 37/1000 live births'

Maternal mortality ratio (MMR) estimates in Ethiopia vary considerably. However, most agree that the country's maternal mortality is among the highest in the world. The Ethiopian Demographic Health Surveys of 2000, 2005and 2011 gave figures for the period 0-6 years prior to the surveys, of 871[8,] 673 and 676 per 100,000 live births[6] respectively. A recent publication in the Lancet[9]on global maternal mortality trend provides more optimistic figures for Ethiopia both in terms of decline in maternal mortality ratio (MMR= 590/100 000)[8] and improvement of rank among sub-Saharan African countries (28 out of 46 countries in the list, in 2008); while the UN has given a lesser estimate of 350/100,000[10].

2. INTRODUCTION

2.1 Causes and determinants of MNH in Ethiopia

Globally, each year, nearly 350,000 women die while another 50 million suffer illness and disability due to complications associated with pregnancy and child birth. In recognition of the huge magnitude of the problems and their direct link to development, two of the eight MDGs (MDG 4 and MDG 5) deal with maternal and child health. It has been reported that Ethiopia is one of the six countries that contribute to about 50% of the maternal deaths; the others being India, Nigeria, Pakistan, Afghanistan and the Democratic Republic of Congo.[9]

About 15% of pregnant women are estimated to develop obstetric complications that require expert assisted care. An estimated 2.6 million births occur each year in Ethiopia. Direct obstetric complications account for 85% of the deaths as well as many acute and chronic illnesses. The distribution of maternal deaths due to all causes in health facilities showed that the most important causes of death include: obstructed labor (13%), ruptured uterus (12%) severe pre-eclampsia/ eclampsia (11%), severe complications of abortion (6%), post- partum hemorrhage /retained placenta (7%), postpartum sepsis (5%), ante-partum hemorrhage (5%) and direct complications from other causes (9%)[11]. Indirect causes such as HIV/AIDS (4%), anemia (4%), malaria (9%), and complications from other causes (9%) contribute to about 21% of the maternal deaths. A host of long-term conditions disable women who survive delivery-related complications, such as fistula, uterine prolapse, chronic pelvic pain, depression and exhaustion. Fistula is especially common in Ethiopia, primarily due to the frequency of adolescent pregnancy combined with neglected prolonged labor.

Most maternal deaths occur during delivery and the postpartum period. Recent global evidence indicates that availability of Emergency Obstetric and Newborn Care (EmONC) and skilled attendance at birth are key factors to the reduction of maternal mortality. A recent survey found that less than half of available hospitals and much fewer health centers provided basic and comprehensive emergency obstetric care (BEmONC and CEmONC) and only 174 obstetricians/gynecologists and fewer anesthetists were available nationwide[11]**.** There is now consensus that the MDGs cannot be achieved without effectively addressing population dynamics and reproductive health issues. Cognizant of that Ethiopia initially conducted "An Assessment of Reproductive Health Needs" in 1999 and a "National Baseline Assessment for Emergency

Obstetric and Newborn Care" in 2008. The results of the latter assessment clearly show poor access and utilization of EmONC services, very low critical life-saving services (0.6%), poor quality of health care services as evidenced by high still birth rates (more than 30%) in eight regions with the exception of Addis Ababa, Gambella and Somali (3%) [11]. Only 51% of hospitals qualified as comprehensive and only 1% of health centers, or 25, could be considered basic EmONC. Nationally, only 7% of births occurred in hospitals and health centers. The EmONC Assessment also indicated that less than 1% of deliveries in Ethiopia were caesarians. In short, most of the EmONC indicators show that few facilities are fully functioning to provide EmONC.

SWOT analysis during the design phase of HSDP IV showed the strengths of the health sector most of which are directly or indirectly related to MNH. These include high coverage of Health Extension Program, adoption of cost effective strategies (IMCI, DOTS, RBM, MPS etc.); success in the prevention and control of malaria; sustained high coverage of EPI; accelerated training of health professionals; rapid expansion of health centers and health posts; increased coverage of ART and establishment of the MDG Fund[5]. On the other hand some of the weaknesses were: low utilization of health services; weak referral system; low coverage of skilled delivery and newborn care, shortage of drugs, medical supplies, equipment and commodities , slow implementation of Health Commodities Supply System (HCSS); inadequate quality of trainings; persistently inadequate and inequitable distribution of resources compared to needs and priorities (E.g. Health system, MNCH & health infrastructure expansion); and weak M&E and use of information for evidence-based decision making at lower levels.

In general, high rates of maternal and newborn mortality are the result of a combination of factors. Shortage of skilled midwives, weak referral system at health centre levels, lack of or inadequate availability of BEmONC and CEmONC equipment, and under financing of the service were identified as major supply side constraints that hindered progress. Complications are likely to be fatal for mother and newborn due to delays in seeking skilled emergency obstetric care (EmOC), in reaching the health facility, and/or to receiving a timely intervention even after reaching the facility.

On the demand side, lack of awareness on importance of skilled care, cultural norms, distance to functioning health centers and financial barrier were found to be the major factors associated with maternal and neonatal mortality in Ethiopia. Some of the underlying causes of the high maternal death include early childbearing and the high fertility rate. Age at first marriage has a major effect on childbearing because women who marry early have on average a longer period of exposure to pregnancy and a greater number of lifetime births. The median age at first marriage among women age 25-49 is 16.1 years[6]. The relationship between maternal age at birth and childhood mortality is generally U-shaped, being relatively higher among children born to mothers under age 20 and over age 40 than among mothers in the middle age groups. Adolescent pregnancies comprise about 12% of all births and a relatively high mortality occurs among adolescent pregnant women. Perinatal mortality is also considerably higher among women whose age at birth was under 20 years.

A mother's nutritional status during pregnancy is important for preventing maternal morbidity and mortality and the child's intrauterine development. Consumption of Vitamin A and iron rich foods and intake of iron and folate supplements during pregnancy are generally low in Ethiopia. Anaemia may be the underlying cause of maternal mortality, spontaneous abortion, premature

birth, and low birth weight[6]. Seventeen percent of women have been reported to be anemic, with 13 percent mildly anemic, 3 percent moderately anemic, and over 1 percent severely anemic. In 2011, there has been a modest improvement[7]compared to the findings of the 2005 EDHS.

The accelerated construction and expansion of PHC facilities and the roll out of HEP have greatly increased access to and delivery of important interventions including family and community based care, population oriented outreach services and clinical care. The Government of Ethiopia launched the Health Extension Program (HEP) in 2003 to improve equitable access to promotive, preventive and selected curative health interventions through community or *kebele* based health services thereby creating the means to attain its health related MDGs. Since the advent of the HEP, there have been encouraging developments and the achievements of the HEP over the years have been impressive. More than 33,000 Health Extension Workers have already been trained and deployed across Ethiopia since 2002[12.] In 2009/2010 it was planned to train 3990 urban HEWs and a total of 3401 were trained. There was a steep upward trend in the cumulative number of Health Posts (HPs) constructed during the HSDP III period from 6,191 in EFY 1998 to 14,192 in EFY 2002 (2009/2010). This together with the recently developed strategy of deploying the Health Development Army is expected to provide greater access to MNH services and improve maternal and newborn health.

2.2 Newborn Health Status

As indicated above, the causes and determinants of maternal and newborn mortality are generally interrelated. In order to give more attention to newborn mortality, whichis a major contributor of infant and under-five mortality with negligible improvement through time, this section describes the status of newborn health and briefly mentions the factors and practices that affect it.

Of the nearly four million neonatal deaths globally, 99% occur in developing countries. In Ethiopia some 120,000 newborns die of preventable causes annually, making Ethiopia one of the ten countries with the highest number of neonatal deaths per year globally[13]. Despite Ethiopia's remarkable reductions in infant and under-5 mortality, neonatal mortality has seen little change[7]. Currently newborn deaths contribute to more than half of infant deaths and over 40% of under-5 deaths. The unacceptably high neonatal mortality rate in the country is attributable to various factors: low coverage of maternal and child health care services, high levels of unskilled home delivery, little postnatal care follow-up, and lack of recognition of maternal and newborn danger signs.

Ethiopia has a target of reducing neonatal mortality to 18 per thousand live births by 2015, which will not be possible at the current rate of progress. Half of newborn deaths occur within the first 24 hours after birth, three-quarters of all deaths within the first week of life (11). Moreover within Ethiopia there are substantial disparities in levels of child mortality between different regions, socio-economic strata, and rural and urban populations. The neonatal mortality rate in rural areas of Ethiopia is 43per thousand live births whereas in urban areas it is 41per thousand live births. Rates in Amhara region are 54 per thousand live births whereas in Somali Region it is 34per thousand live births (EDHS 2011). The major causes of neonatal mortality are infections (46 percent); birth asphyxia (25 percent); and complications associated with low birth weight (17 percent) [14].General neonatal epidemiological data show that between 60 and 90% of newborn deaths are in small babies and that better care of small babies reduces newborn deaths.

In Ethiopia, the period following birth is often marked by cultural practices. Some cultural practices hinder the health and survival of the newborn. Delay in the initiation of breast feeding right away, giving newborns bath immediately, discarding colostrums, providing food other than breast milk soon after birth, applying butter or other substances such as cow dung to the umbilical stamp which increases risk of infection are some of the household and community practices that lead to newborn morbidity and mortality. A Survey conducted in four large regions by JSI/L10K [14]in December 2010 revealed that only 53% of the mothers reported to initiate breast feeding within an hour after birth. Feeding of the colostrum was reported only by 43% of the mothers. Pre-lacteal feeds were given by 23% of the mothers to children age 0-11months. A quarter of the mothers also applied butter to the umbilical stump. Fifty seven percent of the newborns were bathed within six hours of delivery.

3. PRIORITY ISSUES AND CHALLENGES IN MNH

Community level

- Harmful traditional practices including early marriage and pregnancy, FGC, discriminatory feeding practices for women and girls, including dietary restrictions during pregnancy, inadequate exposure of infants to sunshine, self delivery, delayed initiation of breast-feeding, early bathing of the newborn, not tying the cord and applying substances on the cord, discarding the colostrum, giving prelacteal feeding, immediate bathing of the newborn with cold water.
- Delay in seeking and receiving skilled care
- Home delivery/ low utilization of service
- Poverty and the low status of women
- High fertility preferences common in much of the country
- Lack of access to a core set of maternal and new born health services at community level
- Low community participation in alleviating access to barriers to health services.
- Inadequate capacity and communication
- Low level of public satisfaction on services including interactions with providers
- Delay in disclosure of pregnancy
- Lack of recognition of newborn danger signs
- Low levels of care seeking for neonates at health facilities
- Cultural beliefs that discourage recognition or mourning of newborn deaths that reinforces fatalism

Health Service Delivery Level

- Access to skilled care during delivery and emergency obstetric and newborn care
- Weak referral systems, too few ambulances and other emergency transport systems, and lack of serviceable roads.
- Limited human resources (especially midwives) including high turnover,
- Shortages of supplies and equipment for obstetric care, which are often attributable to insufficient budgets and weak management skills and logistics support.
- Poor quality of care
- Weak logistics Management Information System (LMIS)
- Absence of maternal and perinatal death audit

- M&E tools (HMIS) not producing some important data and data not used for action
- Poor human resource management
- Health facilities being not mother-newborn friendly.
- Low level of health workers attitude and commitment towards provision of MNH services

Policy level

- Need for optimum coordination, creating synergy and value for investment among the various actors in the sector
- Use of clear and common project appraisal criteria and follow-up of policy dissemination and implementation.
- Need for policies and procedures for delivery of key newborn care services at Primary health care unit.
- Need for increased resource allocation to MNH

4. THE ROAD MAP

4.1 Rationale

Global initiatives and conferences launched during the last three decades such as the Global Safe Motherhood Initiative (Nairobi, 1987), the International Conference on Population and Development (Cairo, 1994), and the Fourth World Conference on Women (Beijing, 1995) brought to the attention of the world the widespread problem of pregnancy related deaths and disability, established the reproductive health concept and called for reduction in MMR. In response to the Global SMI, Ethiopia established its national safe motherhood program back in 1987.

Concerned by the worsening poverty situation and its relationship with health, especially for the most vulnerable groups, the United Nations[13] 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), and in particular MDGs 4 & 5 have direct bearing on maternal and neonatal health.

About half of the global maternal deaths take place in Sub-Saharan Africa. This led the African Union (2004) to urge each Member State to develop a country-specific Road Map to accelerate attainment of MDGs 5&4. The Regional Reproductive Health Task Force together with other stakeholders developed a generic Road Map[15] to accelerate the attainment of MDGs related to maternal and neonatal health, and to guide Member States to develop their own Road Maps.

The Lancet Newborn Series, published six years ago, identified the need to address newborn deaths as a prerequisite to achieve MDG 4[16]. The series outlined major causes and timing of newborn deaths and called for implementation of an integrated package of cost-effective interventions along the continuum of care along with increased investment by donors, governments and partners.

Consequently, the Government of Ethiopia has renewed its commitment to address maternal and newbornhealth in a more comprehensive manner. This Ethiopian National Road Map draws and builds on the National Reproductive Health Strategy and HSDP IV. It is being developed in response to the current high maternal and neonatal mortality rates in Ethiopia, and to the Global and Regional call for each country to develop a country-specific Road Map. It also conforms with government commitment to accelerate the attainment of the MDGs related to maternal and neonatal health.Representatives of the government and its development partners came together and developed this National Road Map. The preparation of the Road Map generally followed the outlines provided by the African MNH Road Map while keeping in mind Ethiopian realities and the above mentioned parent documents. It also benefited from MNH Road Maps developed earlier by some other African countries [17,18,19,20].

This Road Map is meant to provide a framework for strategic partnerships for increased investments in maternal and newborn health. The aim is to focus on the availability of skilled attendance during pregnancy, childbirth and postpartum including post-partum family planning services and emergency obstetric and neonatal care at the health service delivery points. This should be supported by strong referral system, as well as provision of essential equipment and supplies that will save the lives of women and newborns at all levels. The Road Map will be implemented over the coming five years (2011-2015).

4.2 Guiding Principles

To ensure effectiveness and sustainability, the development of this Road Map and its eventual implementation are based upon the following guiding principles:

- Evidence-based planning and actions
- Integrated and coordinated health systems approach
- Complementarities at all levels
- Promoting partnership, coordination and joint programming among stakeholders
- Clear definition of roles and responsibilities
- Quality and appropriateness
- Transparency and accountability on the part of the government as well as other stakeholders
- Equity and accessibility
- Phased planning and implementation with timelines and benchmarks that enable re-planning for best results and scale up
- Community involvement and participation.
- Client centered services
- Performance based staff motivation

4.3 Goals and Objectives

4.3.1 Goal

The goal of this Road Map is to accelerate the reduction of maternal and newborn morbidity and mortality in order to achieve the Millennium Development Goals (MDGs) related to maternal and newborn health in Ethiopia.

4.3.2 Objectives

General Objective

The general objective of this Road Map is to reduce by 2015

1. Maternal mortality ratio to 267/100,000
2. Newborn mortality rate to15/1000.

Specific Objectives

Objective 1: To strengthen the capacity of Individuals, Families and Communities to improve Maternal and Neonatal Health.
Objective 2: To increase Skilled Attendance during pregnancy, childbirth and postnatal period
Objective 3: To scale up the provision of Basic and Comprehensive Emergency Obstetric and Neonatal care
Objective 4: To increase use of Key Newborn care services and practices by households
Objective 5: To increase access to Family Planning information and services at all levels
Objective 6: To strengthen the Health System Management and Partnership to Deliver Effective and Efficient MNH Services

The primary impact and outcome targets that will be achieved by the end of 2015 are:

- Reduce maternal mortality ratio (MMR) to 267 per 100,000 live births.
- Reduce neonatal mortality to 15 deaths per 1,000 live births.
- Increase Focused ANC4+ from 31% to 86%
- Increase deliveries attended by skilled birth attendants from 18.4 % to 62%
- Increase postnatal care coverage from 34% to 78%
- Decrease teen age pregnancy rate from 12% to 5%
- Increase CPR from 29% to 66%
- Decrease unmet need for FP from 25% to 10%.
- Increase Protection at Birth (PAB) against Neonatal tetanus from 42% to 86%
- Increase proportion of newborns who initiate breastfeeding within one hour of delivery from 53% to 90%

4. 4 Strategies, Targets and Main Activities for MNH

Objective 1: To strengthen the Capacity of Individuals, Families and Communities to improve Maternal and Neonatal Health

Strategy 1: Work through the Health Development Army platform to dramatically improve the uptake of key MNH services

Targets

- By 2014 all kebeles will have functional women-centered health Development teams (a team is comprised of up to 30 women who work as a team) and a one-to-five network of women that serves as a support system to enhance and consolidate the implementation of the health extension program
- By 2014, all kebeles have established mechanisms to continuously engage the community and address bottlenecks that hinder the uptake of key MNH services
- By 2014, a robust system will be put in place to identify, document and scale up best practices using the health development army as a platform

Activities

- Organize women-centered health development teams in every kebele and facilitate the establish of one-to-five network of women as per the HDA manual.
- Set up a command post to lead, monitor and support the establishment of a functional HDA at different levels, i.e. from Kebele to Federal level
- Conduct regular public conferences every quarter in each Kebele to review the progress of HDA and its impact in improving uptake of key MNH services
- Hold monthly meetings with all pregnant women to discuss birth preparedness and facilitate the participation of health workers from the PHCU
- Use HDA and HEWs as a vehicle to disseminate information, to create demand and awareness on:
    - pregnancy-related danger signs and the benefits of seeking skilled care,
    - Birth preparedness and complication readiness[1]
    - importance of antenatal care, skilled attendance at delivery, PNC and family planning
    - the negative health and social consequences of HTPs associated with pregnancy and delivery,

[1] Birth preparedness means:

- Planning for a skilled attendant, and identifying danger signs during pregnancy, child birth and the postpartum period

Complication readiness implies:

- Planning for emergency funds and transport, and Planning for blood donor and decision- maker

    - proper nutrition and micronutrients
- Promote institutional delivery through the HDAs.
- Engage traditional birth attendants, religious leaders and elderly using the HDA network and encourage to promote institutional delivery
- Establish recognition schemes for best performing families, one-to-five networks, development teams, Kebeles, woredas, zones and regions .
- Mobilize community resources for emergency blood donors and transport.
- Ensure representation of women groups into the governing structure of PHCUs
- Empower women, men, families and communities to take responsibility for developing and implementing appropriate responses for MNH.
- Advocate for increased community resources and investment in MNH and FP.
- Promote male involvement as part of shared responsibility and collective action to improve household health seeking behavior.
- Mobilize resources at woreda level by involving development partners, NGOs/CSOs to disclose their resources and provide TA

Strategy 2: Strengthen the legal frameworks that protect and advance women's reproductive health and rights.

Targets:

- By 2015, establish Integrated Care and Justice Center for Women and Children at all tertiary care facilities

Activities

- Sensitize judges, prosecutors, and law enforcement agencies on existing laws, and strengthen their capacities in the protection of women's rights, especially those pertaining to FGC, gender-based violence including domestic violence, and early marriage.
- Ensure that relevant legislation/ regulations are distributed to all levels of law enforcement.
- Ensure that all regions have the technical support needed to establish multi-sectoral committees which have women's reproductive health in their agenda.
- Organize functional and operational working groups on women's issues at all levels.
- Create mechanisms to support adolescent girls to prevent early marriage, unwanted pregnancies, STIs/HIV/ AIDS.
- Support Health facilities for establishment and smooth function of Integrated Care and Justice Center for Women and Children and monitor its operation

Strategy 3: Improve key community and household practices for maternal and newborn care and increase awareness and positive attitude towards elimination of HTP

Targets:

- By 2013, IEC/BCC messages and materials addressing specific maternal and newborn issues developed for community members reach all kebeles

- By 2015, increase awareness on harmful consequences of HTPs of households to 100%
- By 2015 decrease the prevalence of FGC from 74% in 2005 to 20%

Activities

- Design and develop IEC/BCC messages and materials for community members (men, women, adolescents) on specific MNH issues with emphasis on:
    - Postnatal and newborn care
    - Advantages of early attendance at health facilities (ANC)
    - Birth preparedness
    - Essential nutritional practices and actions for MNH
    - Causes of Maternal and Newborn deaths and identification of danger signs
    - Early care seeking and compliance
    - Disease prevention (ITNs, Immunization, Hygiene and Sanitation)
    - Interventions to prevent HIV and Mother to Child Transmission of HIV
    - Prevention of early and unwanted pregnancies
    - Role of Men in MNH care
- Disseminate and distribute IEC/BCC messages and materials for community members through HDA and other media
- Design targeted messages for popular mobilization on common HTPs
- Develop and implement innovative informational campaigns to heighten awareness on
    - The existence and details of the new Family Law and Penal Code
    - Risks and negative health consequences of early marriage, FGC, and the feasibility of alternative options
    - Benefits associated with girl's education
    - Laws protecting and promoting women's rights
- Develop special IEC and advocacy campaigns for Somali, Afar, and possibly other regions that specifically address the risks associated with Type III FGC and the health services available to address them.
- Enlist religious and other community leaders to institute and apply cultural sanctions or disincentives that discourage FGC, especially Type III
- Provide in-service training to those HEWs serving populations in the Afar and Somali regions, covering the skills needed to manage and report to police and refer complications related to Type III FGC.

Objective 2: To increase skilled attendance during pregnancy, childbirth and postnatal period [2]

[2]Skilled attendant refers exclusively to people with midwifery skills (for example midwives, doctors and nurses) who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose, manage or refer obstetric complications

Strategy 1: Ensure access to a core package[3] of maternal and neonatal health services at all levels of the health system including the health extension program[4].

Targets

By 2015:

- increase national antenatal care coverage (at least once) levels to 90 %
- increase national antenatal care coverage (at least four) levels to 86%
- increase the proportion of women and newborns receiving postnatal visit within 48 hours and 7 days of birth to 80%
- increase the proportion of deliveries attended by HEWs from 11% to 38%
- increase deliveries attended by skilled birth attendants from 18.4 % to 62%

Activities

- Provide training to enhance HEW's skills on maternal and newborn health.
- Avail misoprostol for prevention of post-partum hemorrhage (PPH) for deliveries attended at community level.
- Facilitate provision of Postpartum FP information and services (condom, oral, injectable and implants, referral for IUCDs and permanent methods).
- Build capacity for recognition of pregnancy complications at community level, including abortion complications, and make arrangements for early referral.
- Create mechanisms such as redesigning health facilities, establishing mobile service outlets and outreach services to make services accessible to vulnerable and marginalized groups (disabled, displaced, out of school youth etc.)
- Establish a mechanism for midwives, along with the HEWs, to be engaged in educating the community on pregnancy/birth and its complications, including birth preparedness and estimated date of delivery by creating forums at kebele level.
- Provide in-service training for service providers to enable them acquire appropriate competencies/skills, and proper attitudes and ethics.
- Strengthen pre-service training institutions to equip graduates with the necessary skills and competencies by
    - updating pre-service curricula to address current changes in MNH including FP and Nutrition
    - developing and providing an orientation package and other educational materials to tutors and clinical instructors
    - updating and standardizing knowledge, clinical and teaching skills of tutors and instructors.
    - providing schools and clinical practice sites with necessary teaching and clinical practice and equipment
- Link health posts with health centers and health centers with hospitals with a functional referral system

[3] Core Package of maternal and neonatal health services includes antenatal care, skilled attendance at birth, clean and safe delivery, postnatal care and neonatal care.

[4] HEW's MNH functions include health education, antenatal care, family planning, clean and safe delivery and postnatal care, diagnosis and treatment of malaria, Vit A supplementation, and referral of obstetric complications.

…

- Establish mechanisms for communications and feedback among different levels of health institutions.
- Train resource persons (HDAs , ambulance drivers) in emergency response and preparedness
- Ensure Provision of FANC including PMTCTto all pregnant women
- Introduce performance improvement system
- Promote early initiation of breastfeeding through media messages, group education and training of maternity staff
- Ensure provision of comprehensive PNC including treatment of post natal complications
- Ascertain essential newborn care services are routinely provided at all levels
- Make sure that women with all forms of puerperal problems including infections, psychosis & fistula are appropriately cared for.
- Expand the fistula treatment outlets to include all CEmoNC facilities
- Revise the current policy on the fee structure of MNH services to come up with a uniform policy on waiving fees and payment

Strategy 2:Strengthen human resources to provide quality skilled care for maternal and newborn health

Targets

By 2015:

- Staff all HCs with at least two midwives each bytraining and deploying 8635 midwives
- Staff all hospitals withat least two clinicians trained on CEmONC by training and deploying 1868 Integrated Emergency Surgical Officers and Physicians
- Staff all CEmONC facilities with at least 2anesthesia professionals by training and deploying 1868 anesthetists/anesthesiologists

Activities

- Capacitate midwifery schools in terms of adequate staff, equipment and training materials to increase the number of midwives trained per year.
- Support implementation of midwifery curriculum so that graduates can satisfy the requirements of a "skilled birth attendant".
- Provide coaching and mentoring to enhance skills of providers at different levels
- Train anesthetists to ensure adequate staffing for provision of CeMONC
- Train health officers and physicians on IEOS and comprehensive EmONC respectively.
- Improve in service training of skilled attendants through capacity building of faculty, supporting establishment of skill laboratories and others based on EmONC and midwifery school situation assessment.
- Increase motivation of skilled health workers by providing a package of incentives and give special emphasis to deployment and retention of skilled attendants especially in hard to reach/underserved areas
- Provide pre or in-service training to obstetrician-gynecologists to build capacity for treatment of fistula

- Mobilize donor support for capacity building of health workers with a strong set of integrated skills (basic signal functions, partograph, AMTSL etc).
- Integrate/strengthen CEmONC in to doctors training curricula

Strategy3: Scale up PMTCT services within the context of integrated RH programs

Targets

- By 2013, make PMTCT and HCT services available to all mothers attending maternal health services.
- By 2014, increase the proportion of eligible pregnant women who are receiving ART to 95%
- By 2015, increase proportion of HIV+ pregnant women that receive ARV prophylaxis from 8% to 90%

Activities

- Expand the provision of PMTCT and HCT services to all MNH service provision sites.
- Expand services so that all eligible mothers attending antenatal, labor and postnatal care will receive PMTCT services.
- Expand EID services to all health centers
- Integrate RH/HIV services at all health facilities to provide FP information counseling and services for women living with HIV/AIDS.
- Implement continuous quality improvement systems at all health facilities
- Ensure HIV positive eligible pregnant women are linked to ART programs
- Ensure continuation of chronic care for women living with HIV/AIDS following delivery
- Monitor follow-up services for all HIV exposed infants
- Promote couple counseling at all levels of the health system
- Ensure provision of infant feeding counseling as part of the routine MNCH services.

Strategy 4: Improve the nutritional status of pregnant and lactating women and newborn

Targets

By 2015:

- Increase the proportion of newborns breastfed within one hour of birth from 69% to 92%.
- Reduce the prevalence of anemia in women of childbearing age (15-49) from 19% to 12%.
- Increase the proportion of pregnant women supplemented with Iron during their pregnancy from 10% to 86%.

Activities

- Use IEC, media and group education to educate pregnant women on importance of EBF and additional meal during pregnancy and postpartum
- Supplement pregnant women with iron/foliate tablets.
- Shift from current Enhanced Outreach Service (EOS) activities to providing Community Based Nutrition (CBN) program components
- Give pregnant women de-worming tablets after their third month of pregnancy/ the first trimester.
- Ensure continuous availability of Iron-Folate at all levels.

Objective 3: Scale up the provision of basic and comprehensive emergency obstetric and newborn care

Strategy 1: Increase access and coverage of quality EmONC services 24 hours a day 7 days a week

Targets

By 2015:

- Increase proportion of health centers with available BEmONC services from 5% to 100%
- Increase proportion of hospitals with available CEmONC services from 51% to 100%
- Increase the met need for Emergency Obstetric care from 12 to 75%
- Increase Cesarean section as a proportion of all births from 1% to 7%
- Decrease case fatality rate of obstetric complications to less than 1%

Activities

- Strengthen the capacity of all health centers to provide BEmONC and essential Newborn care through:
    - Deployment of skilled health workers (Nurses, midwives, Laboratory assistants)
    - Provision of essential equipment and supplies
    - Infrastructural improvement for services delivery (Delivery room, Postnatal room, Laboratory)
    - Establish newborn corners
    - Mechanisms for prompt referral & transportation of emergencies
- Strengthen the capacity of all hospitals and upgrade selected health centers to provide CEmONC and essential newborn care through:
    - Deployment of skilled health workers (Nurses, midwives, medical doctors, IESOs, anesthetists, laboratory technicians)
    - Provision of essential equipment and supplies
    - Infrastructural improvement for service delivery (Operating theatres, labor ward, blood storage facilities, incinerators)
    - Establish neonatal ICUs
- Strengthen Essential Newborn Care provided by HEWs at community level

- Construct/upgrade health facilities to provide the minimum package of BEmONC and CEmONC services where needed
- Strengthen capacity of providers on BEmONC
- Distribute and avail national guidelines and clinical management protocols for obstetric and newborn complications at all health centers and hospitals followed by training and supportive supervision
- Conduct regional TOTs for teaching the partograph and develop a policy for nationwide implementation of the partograph
- Advocate for the revision of the Health Center Drug List to enable health centers to provide the seven basic EmONC signal functions
- Establish standards of care for EmOC at all levels
- Apply performance and quality improvement approaches to strengthen facility based service delivery
- Ensure appropriate management of LBW, Asphyxia and Newborn infection
- Create enabling environment for provision of emergency services by availing essential and emergency drugs for round the clock services and qualified health workers
- Provide comprehensive post abortion care and safe abortion services when indicated.

Strategy 2: Ensure availability of safe and adequate blood and blood products for transfusion at CEmONC facilities

Target

- By 2015, preposition adequate stocks of blood and blood products in all CEmONC facilities.
- Increase blood collection from Voluntary non remunerated blood donors to 120,000 units per years by 2015

Activities

- Improve capacity for reduction of unnecessary blood transfusion as well as its safe administration to patients in all CEmONC facilities through training of clinicians on appropriate clinical use of blood and its safe administration to patients
- Ensure availability of proper blood product storage facilities at each CEmONCfacility
- Establish of hospital transfusion committees in each CEmONC facility
- Establish and reinforce links between regional blood banks and CEmONC facilities

- Create voluntary blood donors groups to maintain availability of adequate and safe blood pool.

Objective 4: Increase Use of Essential Newborn Care Practices and Newborn Care Services by Households

Strategy 1: Ensure home visits during pregnancy, labor and delivery, and the early postnatal period by HEW

Targets

- By 2015, increase the proportion of women and newborns who receive two postnatal home visits, the first within 48 hours, the second within seven days of birth to 80%
- By 2015, increase the proportion of newborns who have received ENC to 62%[5]
- All targets ***listed in Objective2, Strategy 1***

Activities

- Build capacity of HDA to conduct active surveillance of newly pregnant women.
- Timely notification to HEW by HDA of women in labor and deliveries
- Train HEWs on clean and safe delivery and newborn care
- Build capacity of HEW to provide ENC, conduct two PNC home visits
- Build the capacity of HDA to recognize and refer maternal/ new born danger signs

Strategy 2: IEC/BCC to improve household level care practices in ENC

Targets

- By 2014, distribute family health card to 85% of pregnant mothers and mothers with children under the age of two years
- By 2014, promote ENC by training 34,000 health extension workers and HDA members through national IRT
- By 2015, increase the proportion of newborns breastfed within one hour of birth from 69% to 92%
- By 2015, reduce newborns with butter application on their cord from 25% to less than 5%
- By 2015, increase the proportion of newborns who were bathed after 24 hours from 28% to 60%

Activities

- Use HDA and HEWs as a vehicle to disseminate information, to create demand and awareness on issues mentioned in Objective 6, Strategy 1.
- Advocate and convince the community and administrative leaders to make maternal and newborn health their priority agenda

[5] Essential Newborn Care includes, clearing the airway, drying and warming, initiation of breast feeding, cord care, eye care, vitamin K, weighing, delay bathing, resuscitation when indicated

- Build the capacity of HEWs through IRT

Strategy 3: Build capacity of health care providers in ENC and management of newborn problems

Targets

The targets to be reached by this strategy are related to targets of Objective 2 Strategies 1 and 3, and Objective 3 Strategy1 and include:

- Increase deliveries attended by skilled birth attendants from 18.4 % to 62%
- Provide ARVs for PMTCT purposes for 90% of eligible women and their newborns.
- Reduce prevalence of teenage pregnancy from 12% to 5%
- Increase postnatal care coverage from 34% to 78%.

Activities

- Provide skilled delivery services 24 hours
- Provide PNC services at least 05 days a wee
- Ensure Provision of FANC including PMTCT to all pregnant women
- Promote early initiation of breastfeeding through media messages, group education and training of maternity staff
- Ensure provision of comprehensive PNC
- Ascertain essential newborn care services are routinely provided at all levels
- Revise the current policy on the fee structure of MNH services to come up with a uniform policy on waiving fees and payment
- Train HEWs on clean and safe delivery and newborn care
- Train health care providers on essential newborn care and management of neonatal complications

Activities that refer to Objective 1, strategy 1 also pertain to this strategy

Objective 5: Increase Access to adequate information and FP services at all levels

Strategy 1: Create demand and improve acceptance of FP through behavior change communication (BCC)

Targets

By 2015:

- Increase couples approval of FP to 75%

- Increase knowledge about implants and IUCDs among married couples from 7.6 % and 4.3%, respectively to 50%

Activities

- Support implementation of BCC activities based on the National MNCH Communication Strategy and the National Family Planning Service Guideline
- Conduct operational research to identify barriers of utilization of FP services
- Develop and use IEC/BCC tools targeting populations rendered vulnerable by geographic dispersion, gender, age, culture, religion and wealth
- Ensure male involvement in activities targeting increased community awareness and utilization of FP services

Strategy 2: Scale up provision of quality family planning services

Targets

By 2015:

- Increase contraceptive prevalence rate from 29% to 66%
- Decrease unmet need for family planning from 25 to 10%
- Increase contraceptive acceptance rate from 56% to 82%
- Increase the proportion women using Long Acting Family Planning Methods to 50%

Activities

- Ensure that all health facilities have at least two providers trained on FP counseling and service provision
- Ensure that training for health center staff addresses long acting FP methods including IUCDs
- Ensure that training for hospital staff addresses long acting and permanent methods of contraception.
- Ensure that all HEWs are proficient in counseling for FP and provision of all short acting methods through supportive supervision.
- Support the provision of FP counseling and short acting FP methods outside the health post, at household level
- Train all HEWs to provide Implanon at the health post level
- Support expansion of long acting and permanent FP services using out-reach by health centers and hospitals to hard-to-reach areas
- Support expansion of social marketing and provision of FP services in the private sector
- Initiate and roll out training of all MNCAH and HCT providers on FP counseling and provision
- Ensure that health facilities have appropriate guidelines to provide integrated FP counseling and services

- Provide at least 3 FP methods at all health posts, including Implanol.
- Provide long acting FP methods in all health centers and long acting and permanent methods in all hospitals.
- Integrate FP, MNCAH and HCT services in all health centers and hospitals

Strategy 3: Promote demand and utilization of FP services by adolescent and youth

Targets:

By 2015

- Reduce adolescent pregnancy rate from 12% to 5%

Activities:

- Train at least two health workers in each health facility to provide adolescent/youth friendly services
- Provision of adolescent/youth friendly FP services in public and private health facilities
- Provision of adolescent and youth friendly FP services through school based programs, youth centers etc
- Apply IEC/BCC tools and standards for Youth Friendly FP Services

Objective 6: Strengthen the Health System Management and Partnership to Deliver Effective and Efficient MNH Services

Strategy 1: Strengthening Logistics Management System and Commodity Security

Target

- By 2013, 90% of the health centers and all of the hospitals will have a functional LMIS in place
- By 2015, none of the public health facilities will experience stock out for essential drugs including contraceptives.
- By 2015, increase percentage of service delivery points offering at least three modern methods of contraceptives from 90% to 100%.
- By 2012, reduce to 10 percent public sector health facilities experiencing stock outs of essential MNH drugs (oxytocin, magnesium sulfate and IV antibiotics) within a 12 month period.

Activities

- Develop capacity for IPLS for different levels of health care delivery system
- Conduct regular supportive supervision
- Print and distribute IPLS formats

- Initiate automation of the Integrated Pharmaceutical Logistic Systems for data collection and reporting purposes
- Support the National Forecasting Exercise led by PFSA
- Develop a National RH Commodity Security Strategic Plan (2012- 2015) based on the results of the Situation Analysis conducted in 2009
- Ensure the availability of basic equipment, drugs, and supplies through strengthening of the LMIS and supply chain management system
- Provide trainings on FP and logistics management
- Provide health facilities with at least 3 methods of FP commodities
- Ensure local resource allocation for FP commodities at all administrative levels
- Strengthen procurement, forecasting, distribution and storage capacity
- Develop supply chain management and quantification manual for RH and FP commodities
- Provide medical equipment and kits along with FP commodities and supplies
- Conduct supportive supervision to promote appropriate use and maintenance of medical equipment

Strategy 2: Review and Improve the HMIS to comprehensivelymonitor and promote use of information for evidence based decision making on MNH

Targets:

- By 2013 all health facilities use data for decision making and annual planning for MNH
- By 2012, HMIS and community information system will be in place at all levels of the health system.
- By 2015, institutionalize maternal and perinatal death audit in all hospitals and health centers

Activities:

- Develop and update M&E Framework for MNH
- Update monitoring data collection tools to include EmONC process indicators and other missing information on nutrition, post-abortal care, newborn care and referral forms
- Produce, disseminate and distribute updated data collection tools at all levels
- Implement the community health information system by involving HDAs, HEWs and community leaders
- Strengthen capacity for conducting MNH operations research
- Orient health service providers/supervisors on MNH monitoring and evaluation frame work and effective data management (Data collection, analysis and utilization)
- Orient Kebele and Woreda councils on the community health information system
- Document and share best practices on MNH
- Provide training on HMIS/M&E and data utilization at all levels
- Undertake supportive supervision at different levels of the health system
- Conduct operations research to determine access, utilization and quality of services

- Establish and initiate maternal and perinatal death audit committees at all hospitals and follow performance
- Orient service providers and program managers on maternal and perinataldeath audit
- Involve administrative/ community leaders in maternal and perinatal death audit.
- Improve capacity of health facilities to utilize local data for improved services and reporting on MNH indicators

Strategy 3: Strengthen the referral system for MNH at all levels

Targets:

By 2015:

- Functional referral systems in place at all levels of the health delivery system
- All districts will have functioning ambulances and motorbikes for referral.

Activities:

- Procure and install communication equipment (two way radio communication phones) in primary hospitals, selected health centers and health posts
- Procure and utilize ambulances for referral purposes
- Procure motorbike ambulance for health centers/ health posts where applicable
- Provide sufficient fuel for vehicles/motorbikes
- Maintain communication equipments and vehicles/motorbikes
- Orient regional and woreda joint steering committees on obstetric and newborn emergency preparedness
- Orient support staff (ambulance drivers and attendants) on emergency and response preparedness.
- Establish community emergency committee and/or involve kebele development committee to mobilize community resources for emergency transport and for blood donors.
- Develop Standard Operating Procedures for referral linkages among catchment area facilities
- Establish intra/inter facility/catchment collaborative mechanism
- Set up referral mentorship in the catchment health facilities
- Involve private facilities in the referral network
- Conduct referral audits by catchment team members on regular basis.

Strategy 4: Strengthen leadership and management of the health system

Targets

By 2015,

- All district health offices will be staffed by managers trained on district heath management including MNH
- All health facilities will have MNH guidelines, protocols and standards in place

Activities

- Strengthen health management skills at district, zonal, and regional levels by conducting needs assessment and need based training.
- Assess and map availability of the required number of skilled attendants in health facilities.
- Conduct supportive supervision to maintain quality of MNH services.
- Enhance and follow up the implementation of Priority MNH services by level of care.
- Support and ensure key MNH targets and major activities are included in the annual and five year plans at all levels.
- Strengthen the skills and capacity of District Health Management Teams in program management, including monitoring and supervision.
- Improve record-keeping and documentation and ensure that the EmONC signal functions and obstetric complications are included in the delivery register and also accelerate implementation of the new HMIS system

Strategy 5: Strengthen Quality Assurance and Management (Supervision, Client Satisfaction and Performance Assessment) for MNH

Targets

By 2015:

- Regular supportive supervision is conducted four times a year that includes MNH
- Ensure that at least 75 % of the clients express satisfaction on MHN services/care
- National guidelines for the clinical management protocols for obstetric and newborn complications will be available in all BEmONC and CEmONC facilities.

Activities:

- Adapt quality assurance approaches for MNH (E.g. PIA, COPE)
- Orient supervisors and service providers on quality assurance methods for MNH services
- Update code of conduct and job descriptions
- Orient health facility boards and woreda health councils on client service provider relationship
- Strengthen regulatory framework on MNH quality of services
- Conduct periodic surveys on quality of care, client satisfaction and care seeking behavior in selected woredas and factors facilitating or hindering access for MNH care.
- Conduct biennial review meetings to assess progress on the implementation of the Road Map
- Conduct supportive supervision on MNH in both public and private health facilities
- Conduct follow up of health workers after training on MNH

Strategy 6: Enhance partnership with relevant sector ministries, NGOs/CBOs/Private sector and international organizations to scale up interventions

Targets

By 2015:

- All private hospitals and higher clinics will be service outlets for family planning services
- Double the number of partners contributing to the MDG Pooled Fund.
- Conduct joint planning and coordination meetings four times per year

Activities

- Collaborate with stakeholder organizations (NGOs, CBOs, Private organizations and International Organizations) to strengthen safe motherhood and newborn health interventions
- Establish technical working groups at regional level to follow implementation of MNH interventions and document and disseminate best practices
- Make the TWGs more formal bodies by institutionalizing them with clear TOR, duties and responsibilities
- Improve the coordination and involvement of the private sector to enhance service delivery and promote social marketing of relevant commodities.
- Develop and implement advocacy plans for resource mobilization
- Orient partners on one plan, one budget and one report
- Conduct joint planning and coordination meetings with stakeholders/partners for MNH at all levels
- Establish/strengthen fora to conduct quarterly and biannual MNH meetings
- Ensure close collaboration with Ministry of Water Resources and EELPA for provision of water and electricity to health facilities on a priority basis
- Engage the private sector, NGOS and CBOs in woreda based planning
- Engage professional societies to undertake operations research on MNH

4.4 Logical Framework for Accelerating Reduction of Maternal and Newborn Mortality and Morbidity

The following log frame summarizes the main strategies and activities that would be carried out to achieve the six objectives of the MNH together with the indicators and yearly targets. It also indicates the roles and responsibilities of stakeholders

Logical Framework for Accelerating Reduction of Maternal and Newborn Mortality and Morbidity

Objective 1: To strengthen the Capacity of Individuals, Families, Communities, and Civil Society Organizations to improve Maternal and Neonatal Health

Strategy	Objectively Verifiable indicators	Base line	Yearly Targets I	II	III	IV	V	Activities	Who is responsible	Who will be involved
1. Work thorough the Health Development Army to identify bottle necks, build community capacity and enhance service utilization of MNH	Availability of Health Development Army in Kebeles			100%	100%	100%	100%	• Organize women-centered health development teams in every kebele and facilitate the establish of one-to-five network of women as per the HDA manual. • Set up a command post to lead, monitor and support the establishment of a functional HDA at different levels, i.e. from Kebele to Federal level • Conduct regular public conferences every quarter in each Kebele to review the progress of HDA and its impact in improving uptake of key MNH services • Hold monthly meetings with all pregnant women to discuss birth preparedness and facilitate the participation of health workers from the PHCU • Use HDA and HEWs as a vehicle to disseminate information, to create demand and awareness on: ○ pregnancy-related danger signs and the benefits of seeking skilled care, ○ Birth preparedness and complication readiness[6] ○ importance of antenatal care, skilled attendance at delivery, PNC and family planning ○ the negative health and social consequences of HTPs associated with pregnancy and delivery, ○ proper nutrition and micronutrients	RHB, ZHD WoHO Woreda administrative council Kebele administrative council HEWs/HDAs	FMOH Regional/Zonal administrative councils Health committees at different levels NGOS International Organizations (WHO, UNICEF, UNFPA)
	Availability of mechanisms to mobilize resources for referral of pregnant women during delivery					100%	100%			
	Eligible households make informed decision for delivery at a health facility					100%	100%			

[6]Birth preparedness means:

- Planning for a skilled attendant, and identifying danger signs during pregnancy, child birth and the postpartum period

Complication readiness implies:

- Planning for emergency funds and transport, and Planning for blood donor and decision- maker

								• Promote institutional delivery through the HDAs. • Engage traditional birth attendants, religious leaders and elderly using the HDA network and encourage to promote institutional delivery • Establish recognition schemes for best performing families, one-to-five networks, development teams, Kebeles, woredas, zones and regions . • Mobilize community resources for emergency blood donors and transport. • Ensure representation of women groups into the governing structure of PHCUs • Empower women, men, families and communities to take responsibility for developing and implementing appropriate responses for MNH. • Advocate for increased community resources and investment in MNH and FP. • Promote male involvement as part of shared responsibility and collective action to improve household health seeking behavior. • Mobilize resources at woreda level by involving development partners, NGOs/CSOs to disclose their resources and provide TA		
2. Strengthen the legal frameworks that protect and advance women's reproductive health rights.	Law enforcement personnel are/ aware/ trained in the protection of women's rights, especially those pertaining to FGC, gender-based violence, and early marriage			100%	100%	100%	100% 100%	Conduct workshops to sensitize judges, prosecutors, and law enforcement agencies on existing laws, and strengthen their capacities in the protection of women's rights, especially those pertaining to FGC, gender-based violence including domestic violence, and early marriage in all regions. Ensure that relevant legislation/ regulations are distributed to all levels of law enforcement.. Ensure that all regions have the technical support needed to engage relevant sectors to mainstream women's reproductive health in their agenda.	FMOH, RHB	Sector ministries (Ministry of Justice , Ministry of Women, Youth and Children) and their regional bureaus. Regional/Zonal/Woreda administrative councils Health committees at different level

Strategy	Objectively Verifiable indicators	Baseline	Yearly Targets					Activities	Who is responsible	Who will be involved
			I	II		III	IV	V		
3: Improve key community and household practices for maternal and newborn care and increase awareness and positive attitude towards elimination of HTP	Proportion of kebeles where messages and materials addressing specific maternal and newborn issues have reached		100%	100%		100%		Design targeted messages for popular mobilization on common HTPs. Develop and implement innovative informational campaigns to heighten awareness on:	FMOH/RHB, WoHOs HEWs/HDAs	Ministry of Women, Youth and Children) and their regional bureaus. Regional/Zonal/Woreda administrative councils Regional/Zonal Health Bureaux Development committees at different levels NGOs, International Organizations (WHO, UNICEF, UNFPA)
1. Ensure access to a core package of maternal and neonatal health services at all levels of the health system including the health extension program	National antenatal care coverage levels FANC (1+)	68%	76%	83%	88%	89%	90%	• Provide training to enhance HEW's skills on maternal and newborn health. • Prevent post partum hemorrhage (PPH) using misoprostol for deliveries attended at community level. • Provide Postpartum FP information and services (condom, oral, injectable and implants, referral for IUCDs and permanent methods) • Recognize complications at community level, including abortion complications, and make arrangements for early referral.	Woreda Health Office (WoHO), HCs / HEWs HDAs	Woreda administration Kebele administration Woreda and Kebele Development Committees FMOH NGOs
	National antenatal care coverage levels FANC (4+)	31%	53%	70%	81%	83%	86%			
	Proportion of deliveries						100%			
	Proportion of households who are aware of the harmful consequences of all HTP.							The existence and details of the new Family Law and Penal Code Risks and negative health consequences of early marriage, FGC, and the feasibility of alternative options Benefits associated with girl's education Laws protecting and promoting women's rights.		
	Prevalence of FGC	74%				20%		Develop special IEC and advocacy campaigns for Somali, Afar, and possibly other regions that specifically address the risks associated with Type III FGC and the health services available to address them.. Enlist religious and other community leaders to institute and apply cultural sanctions or disincentives that discourage FGC, especially Type III. Provide in-service training to those HEWs serving populations in the Afar and Somali regions, covering the skills needed to manage and report to police and refer complications relating to Type III FGC		

Objective 2:To increase skilled attendance during pregnancy, childbirth and postnatal period

	attended by HEWs Proportion of women and newborns receiving postnatal visit within 48 hours and 7 days of birth Proportion of births attended by Skilled Birth Attendants	11% 34% 18.4 %	22% 52% 36%	30% 65% 49%	35% 74% 58%	37% 76% 60%	38% 80% 62%	Create mechanisms such as redesigning health facilities, establishing mobile service outlets and outreach services to make services accessible to vulnerable and marginalized groups (disabled, displaced, out of school youth etc.) Provide in-service training for service providers to enable them acquire appropriate competencies/skills, and proper attitudes and ethics. Strengthen pre-service training institutions to equip graduates with the necessary skills and competencies by ○ updating pre-service curricula to address current changes in MNH including FP and Nutrition ○ developing and providing an orientation package and other educational materials to tutors and clinical instructors ○ updating and standardizing knowledge, clinical and teaching skills of tutors and instructors. ○ providing schools and clinical practice sites with necessary teaching and clinical practice and equipment Link health posts with health centers and health centers with hospitals with a functional referral system Establish mechanisms for communications and feedback among different levels of health institutions. Train resource persons (HDAs , ambulance drivers) in emergency response and preparedness Provide FANC including PMTCT service to all pregnant women Introduce performance improvement system Promote early initiation of breastfeeding through media messages, group education and training of maternity staff Provide comprehensive PNC including treatment of post natal complications Provide initial immunization at birth & follow up doses to those coming for other services and from catchment areas. Provide essential newborn care and manage danger signs of newborn at all levels of the care Provide treatment for all forms of puerperal problems including infections, psychosis & fistula. Incorporate fistula prevention in RH communication strategy Expand the fistula treatment outlets to include all CEmoNC facilities Revise the current policy on the fee structure of MNH services to come up with a uniform policy on waiving fees and payment	FMOH RHB WoHO Hospitals Health centers	International Organizations (WHO, UNICEF, UNFPA) Regional, Zonal, District councils FMOE NGOs International Organizations (WHO, UNICEF, UNFPA

2: Strengthen human resources to provide quality skilled care for maternal and newborn health	Number of trained and deployed midwives. Proportion of HCs staffed by two midwives Proportion of hospitals staffed by clinicians trained in CEmOC Proportion of CEmONC facilities by anesthetist						8635 100% 100% 100%	Capacitate midwifery schools in terms of adequate staff, equipment and training materials to increase the number of midwives trained per year. Support implementation of midwifery curriculum so that graduates can satisfy the requirements of a "skilled birth attendant". Provide coaching and mentoring to enhance skills of providers at different levels Train anesthetists to ensure adequate staffing for provision of CeMONC Train health officers and physicians on IEOS and comprehensive EmONC respectively. Improve in service training of skilled attendants through capacity building of faculty, supporting establishment of skill laboratories and others based on EmONC and midwifery school situation assessment. Develop service provision guidelines that specify the roles and responsibilities of service providers at each level of the health system. Increase motivation of skilled health workers by providing a package of incentives and give special emphasis to deployment and retention of skilled attendants especially in hard to reach/underserved areas Provide pre or in-service training to build capacity for treatment of fistula Mobilize donor support for capacity building of health workers with a strong set of integrated skills (basic signal functions, partograph, AMTSL etc). Integrate/strengthen CEmONC in to doctors training curricula	FMOH RHB ZHD/WoHO	FMOE Institutions of higher learning International Organizations (WHO, UNICEF, UNFPA) NGOs,
3. Scale up PMTCT services within the context of integrated RH/MNCH programs	PMTCT and HCT services available to all mothers attending maternal health services. Proportion of eligible pregnant women who are receiving ART Percentage of deliveries of HIV+ pregnant women that receive full course of ARV prophylaxis All health facilities provide FP information counseling	24%		100% 46	100% 60	100% 75	100% 95% 90% 100%	Expand the provision of PMTCT and HCT services to all MNH service provision sites. Expand services so that all eligible mothers attending antenatal, labor and postnatal care will receive PMTCT services. Provide follow-up services for all HIV exposed infants Link HIV/RH programs through common messages Ensure HIV positive eligible pregnant women are linked to ART programs Ensure continuation of chronic care for women living with HIV/AIDS following delivery Provide FP and other RH services to women in HIV clinics	RHB/ZHD WoHO Hospitals Health centers HEWs/HDAs	FMOH Development committees at different levels

	and services for women living with HIV/AIDS.							Provide couple counseling at all levels of the health system Provide infant feeding counseling.		
4: Improve the nutritional status of pregnant and lactating women and newborn	Proportion of newborns breast fed within an hour of birth Prevalence of anemia in women of child bearing age (15-49) Proportion of pregnant women supplemented with Iron	69% 17% 10%	78% 41%	85% 15% 63%	90% 14% 79%	91% 13% 82%	92% 12% 86%	Use IEC, media and group education to educate pregnant women on importance of EBF and additional meal during pregnancy and postpartum Supplement pregnant women with iron/foliate tablets. Shift from current EOS activities to providing Community Based Nutrition (CBN) program components Give pregnant women de-worming tablets after their third month of pregnancy/ the first trimester. Offer vitamin A capsule to lactating mothers within the first 45 days after delivery. Undertake specific targeting of food aid to nutritionally vulnerable groups including the needy pregnant and lactating women.	HDAs/ HEWs Health Centers Hospitals WoHOs Regional, Zonal, District councils	NGOs International Organizations (WHO, UNICEF, UNFPA)

Objective 3: Scale up the provision of basic and comprehensive emergency obstetric and neonatal care

Strategy	Objectively Verifiable indicators	Baseline	Yearly Targets I	II	III	IV	V	Activities	Who is responsible	Who will be involved
1. Increase access and coverage of quality EmONC 24 hours a day 7 days a week.	Proportion of health centers with available B-EmONC services	5%	43%	72%	91%	95%	100%	Strengthen the capacity of all health centers to provide BEmOC and essential Newborn care through: ○ Deployment of skilled health workers (Nurse midwives, IESOs, Laboratory assistants) ○ Provision of essential equipment and supplies ○ Infrastructural improvement for services delivery (Delivery room, Postnatal room, Laboratory) ○ Establish newborn corners ○ Mechanisms for prompt referral & transportation of emergencies Strengthen the capacity of all hospitals and upgrade selected health centers to provide CEmOC and essential newborn care through: ○ Deployment of skilled health workers (Nurse midwives, medical doctors, IESOs, anesthetists, laboratory technicians) ○ Provision of essential equipment and supplies ○ Infrastructural improvement for service delivery (Operating theatres, labor ward, blood storage facilities, incinerators) ○ Establish neonatal ICUs Strengthen Essential Newborn Care provided by HEWs at community level Construct/upgrade health facilities to provide the minimum package of BEmONC and CEmONC services where needed Strengthen capacity of providers on BEmONC Distribute and avail national guidelines and clinical management protocols for obstetric and newborn complications at all health centers and hospitals followed by training and supportive supervision Conduct regional TOTs for teaching the partograph and develop a policy for nationwide implementation of the partograph Advocate for the revision of the Health Center Drug List to enable health centers to provide the seven basic EmONC signal functions Establish standards of care for EmOC at all levels Apply performance and quality improvement approaches to strengthen facility based service delivery Ensure appropriate management of LBW, Asphyxia and Newborn infection Create enabling environment for provision of emergency services by availing essential and emergency drugs for round the clock services and qualified health workers Provide comprehensive post abortion care and safe abortion services when indicated.	FMOH RHB, ZHDs WoHOs, Hospitals HCs	Regional/Zonal/Woreda administrative councils Health committees at different levels NGOs, CBOs, International Organizations (WHO, UNICEF, UNFPA)
	Proportion of hospitals with available C-EmONC services	51%	71%	85%	95%	98%	100%			
	Proportion of women with major direct obstetric complications who are treated in B-EmONC facilities	12%					75%			
	Cesarean section rate	1%	4%	5%	7%	7%	7%			
	Increase proportion of (pre) eclampsia cases receiving Magnesium Sulfate in health facilities						75%			
	Case fatality rate of obstetric complications	7%					< 1%			
	Proportion of women that received safe abortion services and emergency post abortion care						90%			
	Unmet need for Emergency Obstetric Care						< 20%			

2. Strengthen and Scale up availability of safe and adequate blood transfusion services at CEmONC facilities	**Proportion of CEmONC facilities providing safe and adequate blood transfusion services**						100%	Opertionalize the regional blood banks through the provision of equipment and staffing. Strengthen capacity of laboratories to perform screening for safe blood transfusion by providing the necessary supplies and equipment. Reinforce and establish links of regional blood banks with CEmONC facilities Train blood bank and laboratory staff Create voluntary blood donors groups to maintain availability of adequate and safe blood pool. Advocate and mobilize resources for the expansion of transfusion services	FMOH RHB, ZHDs WoHOs, Hospitals HCs HEWs/HDAs	Ethiopian Red Cross Society Regional/Zonal/Woreda administrative councils Development committees at different levels NGOs, CBOs, International Organizations (WHO, UNICEF, UNFPA)

Objective 4: Increase Use of Essential Newborn Care Practices and Newborn Care Services by Households

Strategy	Objectively verifiable indicators	Baseline	Yearly Targets					Activities	Who is responsible	Who will be involved
			I	II	III	IV	V			
1: Ensure home visits during pregnancy, labor and delivery, and the early postnatal period by HEW	Proportion of women and newborns who receive two postnatal home visits, the first within 48 hours, the second within seven days of birth Proportion of newborns who have received ENC						80% 62%	Build capacity of HDA to conduct active surveillance of newly pregnant women. Timely notification to HEW by HDA of women in labor and deliveries Train HEWs on clean and safe delivery and newborn care Build capacity of HEW to provide ENC, conduct two PNC home visits Build the capacity of HDA to recognize and refer maternal new born danger signs	Woreda Health Office (WoHO) HCs Health posts/ HEWs HDAs	Regional/Zonal Health Bureaux Woreda administration Kebele administration Woreda and Kebele Development Committees FMOH NGOs International Organizations (WHO, UNICEF, UNFPA)
2: IEC/BCC to improve household level care practices in ENC	Proportion of households who have family health cards Number of Trained HEWs on IRT Proportion of newborns breastfed within one hour of birth Proportion of newborns on whom butter was applied to the cord Proportion of newborns who were bathed after 24 hours		68% 25% 28%			85% 34000	85% 34000 92% 5% 60%	Use HDA and HEWs as a vehicle to disseminate information, to create demand and awareness on issues mentioned in Objective 6, Strategy 1. Advocate and convince the community and administrative leaders to make maternal and newborn health their priority agenda Build the capacity of HEWs through IRT	Woreda Health Office (WoHO) HCs Health posts/ HEWs HDAs	Regional/Zonal Health Bureaux Woreda administration Kebele administration Woreda and Kebele Development Committees FMOH NGOs International Organizations (WHO, UNICEF, UNFPA)
3: Build capacity of Health Development Army and health care providers in ENC and management of newborn problems	*Please refer to Objective 1 Strategies 1 and 3, and Objective 2 Strategy1 for strategies and targets*							Provide FANC including PMTCT service to all pregnant women Introduce performance improvement system Promote early initiation of breastfeeding through media messages, group education and training of maternity staff Provide comprehensive PNC including treatment of post natal complications Provide initial immunization at birth & follow up doses to those coming for other services and from catchment areas. Train HEWs on clean and safe delivery and newborn care Train health care providers on essential	Regional Health Office/Zonal Health Office Woreda Health office HCs Health posts/ HEWs	Woreda administration Kebele administration Woreda and Kebele Development Committees FMOH NGOs International Organizations (WHO, UNICEF, UNFPA)

								newborn care and management of neonatal complications Provide treatment for all forms of puerperal problems including infections, psychosis & fistula. *All activities that refer to Objective 6, strategy 1 also pertain to this strategy*		

Objective 5: Increase Access to adequate information and FP services at all levels

Strategy	Objectively verifiable indicators	Baseline	Yearly Targets					Activities	Who is responsible	Who will be involved
			I	II	III	IV	V			
1. Create demand and improve acceptance of FP through BCC	Proportion of couples approving FP Proportion of married couples who know implants and IUCDs	7.6%; 4.3%					75% 50% 50%	Support implementation of BCC activities based on the National MNCH Communication Strategy and the National Family Planning Service Guideline Conduct operational research to identify barriers of utilization of FP services Develop and use IEC/BCC tools targeting populations rendered vulnerable by geographic dispersion, gender, age, culture, religion and wealth Ensure male involvement in activities targeting increased community awareness and utilization of FP services		
Scale up provision of quality family planning services	Contraceptive prevalence rate Unmet need for family planning Adolescent pregnancy rate Contraceptive acceptance rate	29% 25% 12% 56%		45.6% 17%	52.4% 12%	59.2% 11%	66% 10% 5% 82%	Ensure that all health facilities have at least two providers trained on FP counseling and service provision Ensure training for health center staff addresses long acting FP methods including IUCDs Ensure that training for hospital staff addresses long acting and permanent methods of contraception. Ensure that all HEWs are proficient in counseling for FP and provision of all short acting methods Support the provision of FP counseling and short acting FP methods outside the health post, at the community level Ensure that all HEWs are trained to provide Implanon at the health post level Support expansion of long acting and permanent FP services using out-reach by health centers and hospitals to hard-to-reach areas Support expansion of social marketing and provision of FP services in the private sector Initiate and roll out training of all MNCAH and HCT providers on FP counseling and provision Train at least two health workers in each health facility to provide adolescent/youth friendly services Support all health facilities to make arrangements for the provision of adolescent/youth friendly services Ensure that health facilities have appropriate guidelines to provide integrated FP counseling and services Provide at least 3 FP methods at all health posts, including Implanonl Provide long acting FP methods in all health centers and long acting and permanent methods in all hospitals	FMOH RHBs ZHDs WoHOs Health centers and Hospitals HEWs/HDAs	UN Agencies Partners &stakeholders CBOs & relevant CSOs

								Ensure integration of FP, MNCAH and HCT services in all health centers and hospitals		
3: Promote demand and utilization of FP services by adolescent and youth	Adolescent pregnancy rate Adolescent and youth friendly health services in health centers and hospitals	12%					5% 100%	Train at least two health workers in each health facility to provide adolescent/youth friendly services Provision of adolescent/youth friendly FP services in public and private health facilities Provision of adolescent and youth friendly FP services through school based programs, youth centers etc Apply IEC/BCC tools and standards for Youth Friendly FP Services	FMOH RHBs ZHDs WoHOs Health centers and Hospitals Ministry of Women, Youth and Children Youth Centers NGOs HEWs/HDAs	FMOE Schools International Organizations (WHO, UNICEF, UNFPA)

Objective 6: Strengthen the Health System Management and Partnership to Deliver Effective and Efficient MNH Services

Strategy	Objectively Verifiable indicators	Base line	Yearly Targets I	II	III	IV	V	Activities	Who is responsible	Who will be involved
1: Strengthening Logistics Management System and Commodity Security	Proportion of health centers and hospitals with functional LMIS. Proportion of health facilities that experience essential drugs or contraceptive stock out Percentage of service delivery points offering at least three modern methods of contraceptives Percent public sector health facilities experiencing stock outs of essential MNH drugs (oxytocin, magnesium sulfate and IV antibiotics) within a 12 month period				90%	95%	100% 0% 100% 10%	Develop capacity for IPLS for different levels of health care delivery system Conduct regular supportive supervision Print and distribute IPLS formats Initiate automation of the Integrated Pharmaceutical Logistic Systems for data collection and reporting purposes Support the National Forecasting Exercise led by PFSA Develop a National RH Commodity Security Strategic Plan (2012- 2015) based on the results of the Situation Analysis conducted in 2009 Ensure the availability of basic equipment, drugs, and supplies through strengthening of the LMIS and supply chain management system Provide trainings on FP and logistics management Provide health facilities with at least 3 methods of FP commodities Ensure local resource allocation for FP commodities at all administrative levels Strengthen procurement, forecasting, distribution and storage capacity Develop supply chain management and quantification manual for RH and FP commodities Provide medical equipment and kits along with FP commodities and supplies Conduct supportive supervision to promote appropriate use and maintenance of medical equipment	FMOH, RHB, ZHD WoHO Hospitals, Health centers, Health posts	FMOH Regional/Zonal administrative councils Development committees at different levels NGOS International Organizations (WHO, UNICEF, UNFPA)
2: Review and Improve the HMIS to comprehensively monitor and promote use of information for evidence based decision making on MNH	Proportion of health facilities that use data for decision making and annual planning for MNH Proportion of health facilities where HMIS and community is place. Proportion of health centers and hospitals where maternal and perinatal deat audit is institutionalized						100% 100% 100	Develop and update M&E Framework for MNH Update monitoring data collection tools to include EmONC process indicators and other missing information on nutrition, post-abortal care, newborn care and referral forms Produce, disseminate and distribute updated data collection tools at all levels Implement the community health information system by involving HDAs, HEWs and community leaders Strengthen capacity for conducting MNH operations research Orient health service providers/supervisors on MNH monitoring and evaluation frame work and effective data management (Data collection, analysis and utilization) Orient Kebele and Woreda councils on the community health information systemDocument and share best practices on MNH.	FMOH, RHB ZHD WoHO Hospitals and Health centers Health posts/HEWs	NGOS International Organizations (WHO, UNICEF, UNFPA)

								Provide training on HMIS/M&E and data utilization at all levels Undertake supportive supervision at different levels of the health system Conduct operations research to determine access, utilization and quality of services Establish and initiate maternal and perinatal death audit committees at all hospitals and follow performance Orient service providers and program managers on maternal and perinatal death audit Involve administrative/ community leaders in maternal and perinatal death audit. Improve capacity of health facilities to utilize local data for improved services and reporting on MNH indicators		
3: Strengthen the referral system for MNH at all levels	Proportion of health facilities where a functional referral system is in place Proportion of hospitals and selected health centers that have functioning ambulances and motorbikes for referral						100% 100%	Procure and install communication equipment (two way radio communication phones) in primary hospitals, selected health centers and health posts Procure and utilize ambulances for referral purposes Procure motorbike ambulance for health centers/ health posts where applicable Provide sufficient fuel for vehicles/motorbikes Maintain communication equipments and vehicles/motorbikes Orient regional and woreda joint steering committees on obstetric and newborn emergency preparedness Orient support staff (ambulance drivers and attendants) on emergency and response preparedness. Establish community emergency committee and/or involve kebele development committee to mobilize community resources for emergency transport and for blood donors.	FMOH, RHB ZHD WoHO Hospitals and Health centers Health posts/HEWs	NGOS International Organizations (WHO, UNICEF, UNFPA)
4: Strengthen leadership and management of the health system	Proportion of district health offices will be staffed by managers trained on district heath management including MNH Proportion of health facilities that have MNH guidelines, protocols and standardsin place						100% 100%	Strengthen health management skills at district, zonal, and regional levels by conducting needs assessment and need based training. Assess and map availability of the required number of skilled attendants in health facilities. Conduct supportive supervision to maintain quality of MNH services. Enhance and follow up the implementation of Priority MNH services by level of care. Support and ensure key MNH targets and	FMOH, RHB ZHD WoHO	NGOS International Organizations (WHO, UNICEF, UNFPA)

								major activities are included in the annual and five year plans at all levels. Strengthen the skills and capacity of District Health Management Teams in program management, including monitoring and supervision. Improve record-keeping and documentation and ensure that the EmONC signal functions and obstetric complications are included in the delivery register and also accelerate implementation of the new HMIS system		
5: Strengthen Quality Assurance and Management (Supervision, Client Satisfaction and Performance Assessment) for MNH	Proportion of health facilities to which supportive supervision is conducted four times a year Percent clients who express satisfaction with MNH services Proportion of BEmONC and CEmONC facilities that have national guidelines for the clinical management protocols for obstetric and newborn complications						100% 75% 100%	Adapt quality assurance approaches for MNH (E.g. PIA, COPE) Orient supervisors and service providers on quality assurance methods for MNH services Update code of conduct and job descriptions Orient health facility boards and woreda health councils on client service provider relationship Strengthen regulatory framework on MNH quality of services Conduct periodic surveys on quality of care, client satisfaction and care seeking behavior in selected woredas and factors facilitating or hindering access for MNH care. Conduct biennial review meetings to assess progress on the implementation of the Road Map Conduct supportive supervision on MNH in both public and private health facilities Conduct follow up of health workers after training on MNH	FMOH, RHB ZHD WoHO Hospitals, Health Centers, Health Posts	NGOS International Organizations (WHO, UNICEF, UNFPA)
6: Enhance partnership with relevant sector ministries, NGOs/CBOs/Private sector and international organizations to scale up interventions	Proportion of private hospitals and higher clinics that will be service outlets for family planning services Number of partners contributing to the MDG Pooled Fund. Conduct joint planning and coordination meetings four times per year						100% 2X the 2011 number 100%	Collaborate with stakeholder organizations (NGOs, CBOs, Private organizations and International Organizations) to strengthen safe motherhood and newborn health interventions Establish technical working groups at regional level to follow implementation of MNH interventions and document and disseminate best practices Make the TWGs more formal bodies by institutionalizing them with clear TOR, duties and responsibilities Improve the coordination and involvement of the private sector to enhance service delivery and promote social marketing of relevant commodities. Develop and implement advocacy plans	FMOH, RHB ZHD WoHO Hospitals, Health Centers, Health Posts	Regional, Zonal and District/Woreda, Kebele administrative councils NGOS International Organizations (WHO, UNICEF, UNFPA)

								for resource mobilization Orient partners on one plan, one budget and one report Conduct joint planning and coordination meetings with stakeholders/partners for MNH at all levels Establish/strengthen fora to conduct quarterly and biannual MNH meetings Ensure close collaboration with Ministry of Water Resources and EELPA for provision of water and electricity to health facilities on a priority basis Engage the private sector, NGOS and CBOs in woreda based planning Engage professional societies to undertake operations research on MNH		

4.5 Road Map cost 2012-2015

The One Health Tool was used to compute the resource requirements for implementing this road map. One Health tool is a policy projection modeling tool that allows users to create short and medium term plans for scaling up essential health services. It is a bottom-up tool that allows for modeling based on population demographics, disease and health profiles, clinical practices, service provision and coverage. The tool, used comprehensively in national health plans, helps to identify the resource requirements for building and maintaining the infrastructure, training, deploying and retaining the health workforce, availing medicines and supplies and other aspects of the health system management including equipment, logistics, health information, health financing and governance. As used in costing for specific health programs, as in the case here for the national road map for maternal and new-born health, it helps to identify the resource requirements such as medicines and supplies and other specific program management requirements including in-service training, supervision and monitoring and evaluation. In addition, it also helps in computing the health man-power time required to provide the services to the targeted number of clients. The manpower requirement can also be calculated from the targeted number of staffing, as in the Human Resource plan.

The costing exercise undertaken here focused on drugs and supplies required to provide MNH services and program specific activities. It:

- Uses the best available information on disease profiles
- Uses official figures for population demographics
- Assumes that facilities are functioning
- Assumes that the minimum required staffs are in place
- National protocols and expert opinions are used for clinical practices
- Costs not considered in this program specific exercise include capital costs, such as building health facilities and basic pre-service training of health workers and cross cutting issues that are shared among all health services like salaries, logistics and HMIS

The following table shows summary of the resource requirements for the National Road Map for Maternal and New-born Health covering the years 2012 to 2015 compiled by its objectives. Cost related factors such as number of services to be provided and different categorization of the cost like by service area or activity are shown in Annex 2.

Table 1: MNH roadmap cost by major Objective areas

Road map objective	Year				Total
	2012	2013	2014	2015	
Objective I: Community engagement/empowerment	398,000	345,000	345,000	345,000	1,433,000
Objective II: Skilled attendance during pregnancy, childbirth and postnatal period	54,811,971	54,795,079	46,807,180	37,345,142	193,759,373
Objective III : Emergency Obstetric and newborn care services	11,857,764	12,673,988	10,874,110	8,614,209	44,020,073
Objective IV*: Key Newborn care services and practices	1,672,584	1,539,994	1,150,682	800,337	5,163,599
Objective V: Family Planning information and services	28,381,610	37,736,611	48,766,535	61,878,484	176,763,239
Objective VI: Health Program management	44,710,303	35,498,553	34,827,903	27,742,903	142,779,661
Total	**141,832,232**	**142,589,225**	**142,771,410**	**136,726,075**	**563,918,945**

****newborn care service cost limited to those not addressed in objective 1 or 2.***

5. IMPLEMENTATION ARRANGEMENTS

The implementation of this Road Map will be led by the Ministry of Health and conducted jointly by stakeholders within the framework of the national reproductive health strategy. The stakeholders include development partners, concerned ministries and agencies, the civil society, community based organizations,professional associations, faith-based organizations, voluntary agencies and the private sector.

The implementation arrangement of the Road Map falls within the general implementation framework of HSDP-IV, which is elaborated in the HSDP Harmonization Manual[21]. The consultative and review institutional frameworks of HSDP such as the Central, Regional, Zonal and Woreda Joint Steering Committees, the FMOH-Donors Joint Consultative Forum, the Kebele Health Committee and the others will be involved in the overall coordination, planning and monitoring of the Road Map at each level. At central level the National Safe Motherhood Technical Working Group (TWG) will be entrusted with the responsibility of technically advising MOH in the coordination and implementation at national level. Similar working groups should be available at regional, woreda, and facilities levels that take the responsibility to coordinate and implement MNH activities of the road map through their working structures. At grass roots level the Road Map for MNH will be implemented by the Health Development Army guided by HEWs, woreda health offices and Woreda councils.

The implementation arrangements for the Road Map which are summarized in the following section reflect the mandates, roles and responsibilities of stakeholders at different levels.

5.1 National Level (FMOH)

The FMOH will mobilize resources and advocate for improving maternal and newborn health. It will also be responsible for the overall technical leadership and guidance on the implementation and monitoring of the Road Map. The specific roles and responsibilities of the various Directorates of the FMOH are indicated below.

The Health Promotion and Disease Prevention General Directorate will supervise and coordinate all activities with respect to all Directorates under its charge for the realization of the Road Map objectives. It will particularly undertake the following activities:

- Advocate for the implementation of the MNH Road Map by all stakeholders
- Coordinate the implementation and monitoring of MNH activities
- Involve and collaborate with various stakeholders at all levels for preparation of action plans for implementation of the MNH Road Map
- Facilitate capacity development at national, regional, zonal and woreda (district) levels by developing protocols and training packages for MNH
- Oversee the design and development of IEC/BCC materials with stakeholders and disseminate them to the intended users
- In collaboration with the Procurement Agency , facilitate procurement of communication equipment and its installation at hospitals and health centers

- Guide the updating of monitoring data collection tools
- Guide the development and/or review and harmonization of existing CHIS, in collaboration with the Woreda Councils, HEWs and Health Development Army
- Facilitate integration of nutrition actions in maternal and newborn programmes.
- Promote research on MNH including FP and nutrition
- Enhance capacity development for the implementation of maternal and newborn health

The Policy and Planning Directorate will ensure mainstreaming of MNH indicators into policy frameworks and allocation of adequate budget for MNH. The HMIS section will facilitate the monitoring of indicators from routine data collection systems including setting up/ strengthening and implementing of community-based data through Community Health Information System (CHIS).

The Medical Services Directorate with PFSA will ensure the availability of essential drugs, supplies, equipment and diagnostics by facilitating efficient procurement and distribution to all levels of service delivery.

The Human Resources Directorate will review and update pre- and in-service curricula to ensure that relevant issues for MNH are adequately addressed. The Directorate will also promote accelerated training of health cadres in order to increase the available number of skilled health workers. It will also facilitate their effective development, recruitment and deployment at health units to address the acute shortage of trained human resources such as obstetricians, midwives and anesthetists.

5.1.2 Regional Level (RHBs)

- Provide technical support for effective planning and implementation of the integrated MNHactivities at zonal, woreda, health facility and community levels
- Coordinate, monitor and supervise MNH activities in the region
- Provide technical support for training and ensure quality in service provision
- Support districts in analysis and utilization of MNH data and disseminate report to the national level
- Build research capacity and conduct relevant research in the regions and districts
- Enhance capacity development for facility and community MNH interventions
- Provide technical support for quality MNH services
- Provide technical support to woreda health offices and woreda councils for planning and implementation of woreda plans
- Mobilize funds to support implementation of Woreda core plans including community Health d information system (CHIS)
- Support infrastructural development, rehabilitation and maintenance to improve access for MNH services

5.1.3 Zonal Level (ZHDs)

- Disseminate the MNH Road Map to their respective woredas
- Support capacity development in MNH in the districts
- Maintain effective partnership with key stakeholders (Zonal councils, NGOs, CBOs)

5.1.4 Woreda Level (Woreda Health Offices)

- Disseminate MNH Road Map to all stakeholders in the Woreda including NGOs, FBOs and other private sector partners.
- Incorporate MNH activities into the Woreda Based Core Plan
- Coordinate and supervise all MNH activities planned and implemented by all stakeholders in the Woreda
- Provide technical support for quality MNH services
- Follow up maternal and perinatal death reviews at health facility (health centers, district hospitals, as well as voluntary agencies and private hospitals) and community levels
- Woreda Councils and Facility Health Boards ensure adequate resource allocation for implementation and monitoring of the MNH interventions

5.1.5 Health Facility Level (Health Post, Health Centre and Hospital)

- **I**ncorporate MNH activities in the road map in their annual health plans
- Provide quality MNH services
- Implement quality improvement approaches
- Ensure timely availability of essential equipment, supplies and drugs for MNH service provision
- Conduct maternal, and perinatal death reviews, involving the community
- Organize or strengthen health facility committees to monitor and ensure quality MNH service provision
- Provide technical and supportive supervision to community interventions
- Implement the Community Health Information System

5.1.6 Community Level

The Kebele council through the Health Committee, Health Development Army and health facility governing boards will be responsible for implementation of MNH activities of the road map in their respective areas.
Other responsibilities include:

- Facilitate development and monitoring of community MNH action plans
- Mobilize the community to participate in community interventions
- Establish and/or strengthen Community Health Information System (CHIS) which will be operated by HEWs in collaboration with the Health Development Army
- Leverage community resources for the implementation of MNH interventions

5.1.7 Roles and responsibilities of other ministries

Concerned ministries should be involved to ensure that the reduction of maternal and newborn mortality is high on their agenda. These include Ministry of Finance and Economic Development (MoFED), Ministry of Education (MOE), Ministry of Agriculture (MOA), Ministry of Women, Youth and Children,Ministry of Labour and Social Affairs, Ministry of Works and Urban Development (MoWUD), Ministry of Communication and others.

Tasks of ministries include:

- MoFED, giving priority to health, especially MNH, in budget guidelines for allocation of itemized resources and increase financial resources for health to meet the need and especially implementation of MNH activities as guided by the MNH Road Map
- MOE, reviewing and updating components of MNH and SRH in various school and pre-service curricula in collaboration with FMOH
- Ministry of Agriculture, promoting food security at household, community, district and national levels
- Ministry of Works and Urban Development, improving road networks to facilitate access to services at primary and referral levels, especially in rural areas**.**
- Ministry of Women Youth and Children facilitating the establishment of community mechanisms to support emergency transportation for MNH services, advocating for gender issues to improve MNH decision-making at all levels, supporting and promoting rights-based approach to programming for MNH and advocating for revision of laws, legislations and policies to improve MNH.
- Ministry of Communication, giving priority to messages and educational programs on mass media.

5.1.8 Roles and Responsibilities of Development Partners

- Provide technical and financial support for the coordination, planning, implementation, capacity development and monitoring and evaluation of MNH services in the road map
- Advocate for increased global and national commitment to the reduction of maternal and newborn morbidity and mortality.
- Mobilize and allocate resources for the implementation of MNH interventions

5.1.9 Roles and Responsibilities of Civil Society Organizations (NGOs, FBOs, CBOs, Professional Associations)

- Advocate for the rights of women and children.
- Forge partnership with different stakeholders including political leaders to promote MNH.
- Implement community based strategies to promote healthy behaviours during pregnancy, child birth, and the post partum period

- Complement government efforts in the provision of quality MNH services
- Disseminate the MNH Road Map to accelerate the reduction of maternal and newborn morbidity and mortality
- Mobilize and allocate resources for implementation of the MNH Road Map

5.1.10 Roles and Responsibilities of Private Sector

- Complement Government efforts in the provision of quality MNH services
- Invest in commodities and supplies for MNH interventions

5.1.11 Role of Training and Research Institutions

- Undertake relevant MNH research to provide evidence for policy directions and implementation guidance
- Review and update curricula to ensure whether relevant MNH issues are adequately addressed by training institutions
- Provide technical advice and updates on current developments on MNH to policy makers.

6. MONITORING AND EVALUATION

The objectives of Monitoring and Evaluation are to improve the management and optimum use of resources of programs and to make timely decisions to resolve constraints and/or problems of implementation. The sources of information for timely monitoring are routine service and administrative records compiled through the Health Management Information System (HMIS). Monitoring happens regularly throughout the lifetime of a plan. It includes the collection and review of information available from HMIS sources, supervisory visits; review meetings and annual reports.

A limited set of core indicators are used for monitoring the implementation of HSDP, GTP and the MDGs. They are relevant at the community, facility, woreda, zonal, regional and federal levels. These key indicators are also relevant for the road map.

Four types of indicators were selected for monitoring the implementation of the Road Map as follows:

- **Group 1:Impact indicators**
- **Group 2: Outcome indicators**
- **Group 3: Output indicators**
- **Group 4: Policy commitment indicators**

Group 1: Impact Indicators

Ser .No	Indicator	Target (2015)	Source	Periodicity	Level of Data Collection
1	Maternal Mortality Ratio (Number of maternal deaths per 100,000 live births)	267/100000	EDHS	Every 5 years	population
2	Neonatal Mortality Rate (Number of deaths among the live births)	15	EDHS	Every 5 years	population
3	Teen age Pregnancy rate (Proportion of pregnant women age 10-19 years)	5%	EDHS	Every 5 years	population
4	Prevalence of low birth weight (The proportion of live born babies who weigh less than 2500 grams,)	9%	HMIS	Every year	Health facilities

Group 2: Outcome Indicators

No	Indicator	Target (2015)	Source	Periodicity	Level of Data Collection
1	Focused Antenatal Care Coverage (1+) (The proportion of pregnant women attended, at least once during the current pregnancy, by a health professional, for reasons related to pregnancy)	90%	EDHS/ HMIS	Every5years / Quarterly	population/ All HF
2	Focused Antenatal Care Coverage (4+) (The proportion of pregnant women attended, at least four times during the current pregnancy, by a health professional, for reasons related to pregnancy)	86%	EDHS/ HFs	Every 5years/ 2-3 years	population/ HF
3	Skilled attendance at birth coverage / Skilled delivery coverage rate (Proportion of deliveries attended by a skilled health attendant)	62%	EDHS/HMIS	Every 5 years/ Quarterly	Population/ HFs
4	Proportion of deliveries attended by an HEW	38%	EDHS/HMIS	Every 5years/Quarterly	Population/ All HFs
5	Proportion of women with major direct obstetric complications who are treated in B-EmONC facilities	75%	HF Survey	2-3 years	HF
6	Postnatal Care Coverage (Postnatal care (PNC) coverage is the proportion of women attended, at least once during postpartum (42 days after delivery), by health professionals, including HEWs, for reasons related to post-partum)	78%	EDHS/ HMIS	Every 5 years/ Quarterly	Population/ All HF
7	Caesarian Section Rate (The proportion of Caesarean sections among the total number of expected deliveries)	7%	HMIS	Quarterly	Hospitals
8	Proportion of pregnant women who receive ANC at PMTCT site & who receive testing for HIV	95%	HMIS	Quarterly	All HF
9	Percent deliveries of HIV+ women that receive full course of ARV prophylaxis	90%	HMIS	Quarterly	All HF
10	Protection at Birth (PAB) against Neonatal tetanus	86%	HMIS	Quarterly	All HF
11	Proportion of newborn with neonatal sepsis who received treatment	74%	HFS	2-3 years	All HFs

12	Proportion of asphyxiated newborns who are resuscitated	75%	HFS	2-3 years	All HFs
13	Proportion of newborns breastfed within an hour of birth	92%	EDHS	Every 5 years	Population
14	Proportion of LBW newborns who receive Kangaroo Mother Care	25%	Survey	2-3 years	Population
15	Proportion of pregnant women supplemented with iron during pregnancy	86%	EDHS, Survey	Every 5 years or 2-3 years	Population
16	Contraceptive prevalence rate Proportion of women age 15-49 who are using any modern method	66%	EDHS	Every 5 years	Population
17	Contraceptive acceptance rate (proportion of women of reproductive age (15-49 years) who are not pregnant and are accepting a modern contraceptive method (new and repeat acceptors).	82%	HMIS	Quarterly	All HFS
18	Unmet need for family planning Proportion of women 15-49 years who do not want to have any more children or who do not want to have children in two years and do not use contraceptives	10%	EDHS	Every 5 years	Population

Group 3: Process / Output Indicators

Ser.No	Indicator	Baseline	Target	Source	Periodicity	Level of Data Collection
1	Percent of HCs & Hospitals providing PMTCT services	24%	100%	HMIS	Annually	All HF
2	Proportion of HCs with available B-EmONC services	5%	95%	HMIS	Annually	HC
3	Proportion of hospitals with available C-EmONC services	51%	100%	HMIS	Annually	Hospitals
4	Proportion of HFs with safe abortion services	4%	75%	HF Survey	Every 2-3 years	Target HFs
5	Proportion of HCs that implement IMNCI	52%	100%	HMIS	Annually	All HFs
6	Proportion of hospitals that implement IMNCI	62%	100%	HMIS	Annually	All HFs
7	Proportion of facilities offering minimum basic package of adolescent friendly services	10%	100%	HF Survey	2-3 years	All HFs

Group 4:Policy Commitment Indicators

S.N	Indicator	Baseline	Target	Source	Periodicity	Level of Data Collection
1	Share of health budget as a proportion of total budget	5.6%	15%	HMIS	Annually	FMOH/MoFED
2	Per capita public expenditure on health	16.1 USD	32 USD	HMIS	Annually.	FMOH/MoFED

Performance monitoring may be done internally, through self-assessment or it may use both internal and external resources. The HSDP Harmonization Manual calls for quarterly, biannual, and annual participatory review meetings at all levels.

Midterm review

Road Map targets will be revised and updated by mid term, possibly with an external consultant (s) and a consultative workshop. A mid-term evaluation and consultative workshop will be conducted by the end of 2013.

End term evaluation

By the end of the period, in 2015, a full evaluation will be conducted and this will coincide with the final year of the Millennium Development Goals.

7. FOLLOW-UP ACTIONS

Several follow-up steps have to be taken at Federal, regional, woreda (district), community and health facility levels. To ensure coordinated and effective implementation of the Road Map, the Ministry of Health will coordinate implementation of the Road Map and assume responsibility for its execution, supervision and monitoring in collaboration with key stakeholders and the broader membership of the RH Task Force.

One of the first steps in this respect is to hold country-level stakeholders meeting with the participation of relevant partners including civil society organizations and professional associations who will also be involved in the implementation of the Road Map.

The next major step in the process of implementation, therefore, will be to formulate an implementation plan with active input from the Regions. The output from the stakeholders' meeting will be a joint plan of action for the country with budget provision and technical assistance from all partners. This process will make possible meaningful cost estimates that are in line with existing allocations for HSDP IV and the realization of the MDGs.

The Government and its partners will make definite efforts to mobilize resources for the implementation of the Road Map towards the attainment of the MDGs related to MNH. Every opportunity will be taken to facilitate resource mobilization and the buy-in of key national and international partners. Advocacy activities should be stepped up to draw in as many of the HPN and other bilateral and multilateral partners as possible, to join the MDG Pooled Fund.

In order to increase advocacy for MNH and FP, and mobilize resources for its implementation; each institution is expected to promote the Road Map using all available means. To help this effort, priority will be given to the dissemination of results at the central and regional levels. The MOH will also establish an inter-agency group under the auspices of the National RH Task Force, which will serve as a forum for multi-sectoral dialogue on implementation of the Road Map on MNH.

The MOH will also undertake periodic assessments of Road Map implementation. This will help to identify program strengths, weaknesses, and, if necessary, the need for adjustments. Furthermore, steps will be taken to ensure effective monitoring of services using the above listed indicators. Mid-term reviews and end of implementation evaluation will be made in collaboration and with the support of partners.

The FMOH will prepare an HSDP-IV annual performance report that includes MNH implementation, which will be shared among partners including the African Union, the South African Development Community (SADC) as well as the Regional Committee of African Health Ministers.

At the Annual Review Meeting of HSDP-IV or through a special forum, arrangements will be made for all partners and participating agencies to sign up to the Road Map to affirm their commitment and to disseminate and support its implementation.

8. CONCLUSION

The Road Map is expected to impact the health and survival of mothers and their newborns as a means of attaining the MDGs. So far, the well coordinated and extensive efforts of the government, development partners, and the general public have resulted in relatively improved health status in Ethiopia. The substantial investment in the health sector in terms of human resources, construction of facilities, provision of equipment and pharmaceuticals in the past five years had a positive impact on the health status of the Ethiopian people, but there remains a lot for the country to achieve the MDG targets and move beyond the targets.

For the successful implementation of the national Road Map, it is important to ensure sustainable funding mechanisms, development of human resources, provision of quality services, utilization of the services, improvement of the information system, mobilization of political will, creation of supportive legal and regulating mechanisms and strengthening monitoring, assessment, and accountability mechanisms.

Therefore, to attain the goal of this Road Map, the Ministry of Health and all of its partners have to renew their commitment and invest more in maternal and newborn health; work towards improved planning, organization and management of services, provide adequate funding for the identified high impact interventions and monitor closely the progress made as a result of the implementation activities undertaken at all levels.

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ANNEXES

Annex 1: Priority MNH Services by Level of Care

1. The Household and Community:

Women, their families and the communities they live in have important role to play in ensuring safe pregnancy outcome for the women and the newborn in terms of self care in the home and in seeking and accessing skilled care, especially when complications arise.

The key elements of self care in the home include:

- Proper diet and nutrition
- Personal hygiene and healthy life style, including planning for pregnancies to ensure planned and wanted pregnancy
- Timely decision making related to care during pregnancy, childbirth and the postnatal period
- Knowledge of danger signs during pregnancy, child birth and the postnatal period
- Birth preparedness plan including planning for emergencies
- Care of the newborn in the home including preparations for birth, good cord care, eye care and general hygiene, keeping the baby warm and together with the mother, promotion of early and excusive breast feeding

2. The Health Extension Program

- Focused antenatal care,
- Clean birth services,
- Essential newborn care
- Prevention of PPH using misoprostol and post partum visit within the first two days after delivery
- Recognition of complications, including abortion complications, and early referral

3. *HealthCenter*

- Focused antenatal care (Family planning, Prevention of HIV in mothers including VCT, PMTCT of HIV, Ealry diagnosis detection such as the prevention and treatment of STIs/RTIs and malaria prevention treatment, tetanus toxoid immunization)
- Normal delivery including the use of partograph and active management of third stage of labor and manual removal of placenta
- Care for mother and newborn in the postnatal period (warmth, cleanliness, resuscitation, and management of sepsis)
- Early initiation of exclusive breastfeeding
- Basic Emergency Obstetric and Newborn Care services
    a. Parenteral oxytocic administration
    b. Assisted vaginal delivery
    c. Manual vacuum aspiration
    d. Treatment of eclampsia
    e. Treatment of sepsis using parenteral antibiotics and other measures
    f. Appropriate IV fluids for hemorrhage before referral
    g. Management of complications of the newborn

- Comprehensive Abortion Care services
    a. Safe abortion procedures
    b. Emergency treatment of incomplete abortion and potentially life threatening complications
    c. Post abortion family planning counseling and services
    d. Links between post abortion emergency services and the reproductive health care
- Early detection and timely referral with minimal first line management of women and newborns with pregnancy related complications
- provide ARV prophylaxis/treatment for PMTCT

4. Hospitals

- Provide all services that are rendered at health centers and include
    a. Surgical procedures including Caesarian section
    b. Control of hemorrhage including safe blood transfusion

Annex 2: Number of services to be provided, MNH roadmap 2012 to 2015

Total number of services by service package, Maternal and Newborn Health					
	2012	2013	2014	2015	Total
Family planning					
Pill	362,582	397,131	405,958	386,673	1,552,343
Condom	14,150	22,442	32,939	45,790	115,321
Injectable	3,757,828	4,378,617	4,854,294	5,169,204	18,159,943
IUD	253,305	573,053	1,011,488	1,577,218	3,415,064
Implant	845,000	1,308,550	1,889,227	2,594,778	6,637,554
Permanent methods	113,204	179,535	263,512	366,321	922,573
Safe abortion					
Safe abortion	305,051	334,447	285,186	219,359	1,144,043
Management of abortion complications					
Post-abortion case management	259,294	284,280	242,408	186,455	972,437
Management of ectopic pregnancy care					
Ectopic case management	7,503	11,131	12,925	12,793	44,352
Pregnancy care - ANC					
Tetanus toxoid (pregnant women)	2,355,899	2,253,655	1,879,939	1,466,961	7,956,454
Syphilis detection and treatment (pregnant women)	2,355,899	2,253,655	1,879,939	1,466,961	7,956,454
Basic ANC	2,355,899	2,253,655	1,879,939	1,466,961	7,956,454
PMTCT	22,097	24,913	25,250	23,028	95,289
Pregnant women sleeping under an ITN	1,602,011	1,532,486	1,278,359	997,533	5,410,389
Intermittent iron and folic acid supplementation (non-anaemic pregnant women)	1,762,083	1,736,414	1,448,896	1,144,229	6,091,623
Daily iron and folic acid supplementation (pregnant women)	496,998	489,758	408,663	322,731	1,718,150
Pregnancy care - Treatment of pregnancy complications					
Hypertensive disease case management	180,726	189,637	161,138	127,933	659,434
Management of preeclampsia (Mag.sulphate)	9,036	9,482	8,057	6,397	32,972
Management of other pregnancy complications	271,090	284,455	241,706	191,899	989,150
Deworming (pregnant women)	2,259,081	2,226,172	1,857,559	1,466,961	7,809,773
Childbirth care - Facility births					
Labor and delivery management	1,581,357	1,594,049	1,342,814	1,057,576	5,575,796
Active management of the 3rd stage of labour	1,581,357	1,594,049	1,342,814	1,057,576	5,575,796
Pre-referal management of labor complications	166,329	165,854	139,589	110,813	582,585
Management of eclampsia (Magnesium sulphate)	25,345	26,308	22,334	17,873	91,861
Neonatal resuscitation (institutional)	61,100	61,957	55,060	44,683	222,800
Management of obstructed labor	88,709	92,078	78,170	62,556	321,512
Treatment of local infections (Newborn)	63,363	65,770	55,836	44,683	229,651
Kangaroo mother care	177,418	184,155	156,340	125,112	643,024

Feeding counseling and support for low-birth-weight infants	177,418	184,155	156,340	125,112	643,024
Childbirth care - Home births					
Clean practices and immediate essential newborn care (home)	678,894	667,229	573,866	452,785	2,372,774
Administration of misoprostol	678,894	667,229	573,866	452,785	2,372,774
Childbirth care - Other					
Antenatal corticosteroids for preterm labor	90,363	94,818	80,569	63,966	329,717
Antibiotics for pPRoM	36,145	37,927	32,228	25,587	131,887
Induction of labor (beyond 41 weeks)	21,687	22,756	19,337	15,352	79,132
Postpartum care - Treatment of sepsis					
Maternal Sepsis case management	8,364	8,682	7,370	5,898	30,314
Postpartum care - Treatment of newborn sepsis					
Newborn sepsis - Full supportive care	6,563	6,577	5,506	4,409	23,054
Newborn sepsis - Injectable antibiotics	59,064	59,193	49,554	39,678	207,489
Postpartum care - Other					
Preventive postnatal care	1,470,937	1,410,712	1,178,751	929,401	4,989,801
Mastitis	12,673	13,154	11,167	8,937	45,930
Treatment of postpartum hemorrhage	38,018	39,462	33,501	26,810	137,791
Breastfeeding counseling and support	1,267,269	1,315,393	1,116,711	893,655	4,593,029
Total	**27,467,485**	**28,652,238**	**26,782,513**	**24,563,679**	**107,465,915**

Annex 3: Cost of drugs and supplies by service area, MNH roadmap 2012 to 2015

	Yearly cost in USD				Total cost
Service Area	**2012**	**2013**	**2014**	**2015**	
ANC	**21,599,205**	**20,853,540**	**17,410,164**	**13,626,244**	**73,489,155**
PMTCT	**4,688,404**	**5,202,964**	**5,155,858**	**4,633,094**	**19,680,321**
Labor and delivery	**35,839,534**	**36,390,676**	**30,784,276**	**24,352,977**	**127,367,462**
Newborn care	**1,672,584**	**1,539,994**	**1,150,682**	**800,337**	**5,163,599**
Postpartum care	**317,169**	**329,213**	**279,488**	**223,661**	**1,149,532**
Comprehensive Abortion Care	**3,853,432**	**4,219,678**	**3,593,822**	**2,760,950**	**14,427,882**
Family Planning	**28,381,610**	**37,736,611**	**48,766,535**	**61,878,484**	**176,763,239**

Annex 4: Program management cost, MNH road map 2012 to 2015

Item	Yearly cost in USD				Total cost
	2012	2013	2014	2015	
Program-Specific Human Resources*	5,297,553	5,297,553	5,297,553	5,297,553	21,190,211
Training (In-service)	16,532,600	16,323,850	14,128,200	7,018,200	54,002,850
Supervision	2,220,650	2,220,650	2,220,650	2,220,650	8,882,600
Monitoring and Evaluation	84,000	56,000	56,000	56,000	252,000
Infrastructure and Equipment*	20,100,000	11,100,000	12,600,000	12,600,000	56,400,000
Transport	385,000	410,000	435,000	460,000	1,690,000
Communication, Media & Outreach	350,000	300,000	300,000	300,000	1,250,000
Advocacy	48,000	45,000	45,000	45,000	183,000
General Programme Management	90,500	90,500	90,500	90,500	362,000
Total	**45,108,303**	**35,843,553**	**35,172,903**	**28,087,903**	**144,212,661**

* Human ***resource cost does not include salaries or benefits of service providers at health facilities***

**

*********Infrastructure and equipment cost limited to upgrading and maintenance***

Annex 4: In-service training, MNH road map 2012 to 2015

Annex 4.1 Number of health workers planned to be trained with available in-service training packages

Type of training	2,012	2,013	2,014	2,015	Total
BEmONC	2,000	2,500	1,900	0	6,400
CEmONC	300	300	120	0	720
Program management for MNH	811	811	0	0	1,622
Integrated MNH/PMTCT	2,000	2,000	2,000	2,000	8,000
Comprhensive Family planning	2,000	2,000	2,000	2,000	8,000
Implanon insertion training for HEW's	7,000	7,000	7,000	4,000	25,000
Integrated Refresher training	8,000	8,000	8,000	8,000	32,000
Comprhensive Abortion care	2,000	2,000	2,000	2,000	8,000
Clean and safe delivery	9,000	8,000	8,000	0	25,000
Communication for MNH	200	0	0	0	200
Mother support group training	500	500	500	500	2,000

Annex 4.2 Cost of in-service training excluding costs Training of Trainers and training material preparation

Type of training	Number of staff to be trained	Annual cost of training				Total
		2,012	2,013	2,014	2,015	
BEmONC	6,400	2,200,000	2,750,000	2,090,000	0	7,040,000
CEmONC	720	1,800,000	1,800,000	720,000	0	4,320,000
Program management for MNH	1,622	324,400	324,400	0	0	648,800
Integrated MNH/PMTCT	8,000	1,600,000	1,600,000	1,600,000	1,600,000	6,400,000
Comprehensive Family planning	8,000	1,800,000	1,800,000	1,800,000	1,800,000	7,200,000
Implanon insertion training for HEW's	25,000	1,260,000	1,260,000	1,260,000	720,000	4,500,000
Integrated Refresher training	32,000	1,440,000	1,440,000	1,440,000	1,440,000	5,760,000
Comprehensive Abortion care	8,000	1,400,000	1,400,000	1,400,000	1,400,000	5,600,000
Clean and safe delivery	25,000	4,230,000	3,760,000	3,760,000	0	11,750,000
Communication for MNH	200	14,000	0	0	0	14,000
Mother support group training	2,000	56,000	56,000	56,000	56,000	224,000

Excludes TOT and material preparation costs.

ANNEX 5: EmONC Drugs, Supplies and Equipment

Basic Emergency Obstetric and Newborn care Drugs and supplies

	Antibiotics:
1.	Amoxicillin
2.	Ampicillin
3.	Cephazoline Sodium
4.	Cefixime
5.	Ceftriaxone
6.	Cefotaxime injection (for newborn)
7.	Chloramphenicol
8.	Clindamycin
9.	Cloxacillin Sodium
10.	Erythromicin
11.	Oral flucloxacillin (for newborn)
12.	Gentamicin
13.	Metronidazole (injection)
14.	Procaine benzylpenicillin (procaine penicillin G)
15.	Trimethoprim/Sulfamethozazole
16.	Tetracycline eye ointment / drops
	Anticonvulsants:
17.	Magnesium sulfate
18.	Diazepam (injection)
	Antihypertensives*)*
19.	Hydralazine
20.	Labetalol
21.	Methyldopa

22.	Nifedipine
	Oxytocics& Prostaglandins:
23.	Ergometrine Maleate (injection)
24.	Misoprostol
25.	Oxytocin
26.	Prostaglandin E2 (Dinoprostone)
	Drugs used in Emergencies:
27.	Adrenaline (Epinephrine)
28.	Aminophylline
29.	Atropine sulfate
30.	Calcium gluconate
31.	Digoxin
32.	Diphenhydramine
33.	Ephedrine
34.	Frusemide
35.	Hydrocortisone
36.	Naloxone Hydrochloride
37.	Nitroglycerine
38.	Promethazine Hydrochloride
	Anesthetics
39.	Halothane
40.	Ketamine Hydrochloride
41.	Lignocaine / Lidocaine 2% or 1%
	Analgesics:
42.	Indomethacin
43.	Morphine Hydrochloride (injection)
44.	Paracetamol
45.	Pethidine Hydrochloride
	Tocolytics:

46.	Ritodrine Hydrochloride
47.	Salbutamol
	Steroids:
1.	Betamethasone
2.	Dexamethasone
3.	Prednisolone Corticosteriod
	IV Fluids:
4.	Dextrose
5.	Glucose 10%
6.	Glucose 50%
7.	Normal saline
8.	Ringer's lactate
	Antimalarials:
9.	Chloroquine
10.	Co-Artem
11.	Quinine Dihydrochloride
	Antiretrovirals:
12.	Nevirapine – mother
13.	Nevirapine – newborn
	Newborn Care
14.	Vitamin K (for newborn)
15.	Nystatin (oral) (for newborn)
16.	Oral rehydration solution
17.	Gentian violet paint
18.	Heparin
19.	Anti-tetanus serum
20.	Tetanus toxoid
21.	Anti Rho (D) Immune Globulin

INFECTION PREVENTION

No.	Basic items
1.	Soap
2.	Antiseptics
3.	Gloves
4.	Heavy duty gloves
5.	Non-sterile protective clothing
6.	Decontamination container
7.	Bleach or bleaching powder
8.	Regular trash bin
9.	Covered contaminated waste trash bin
10.	Puncture proof sharps container
	Disinfectants and antiseptics
11.	Berkina
12.	Ethanol
13.	Polyvidone iodine

EQUIPMENT AND SUPPLIES

No.	Basic items
1.	Oxygen cylinder with cylinder carrier and key to open valve
2.	Ultrasound
3.	BP cuff
4.	Stethoscope
5.	Fetal stethoscope
6.	Kidney basins
7.	Sponge bowls
8.	Clinical oral thermometer
9.	Rectal thermometer for newborn
10.	Low reading thermometer (32 or 35 degree C)
11.	Scissors
12.	Needles and Syringes (10-20cc)
13.	Syringes (1ml, 2ml, 5ml, 10ml)
14.	Needles (23-25 gauge)
15.	Suture needles/suture materials

No.	Basic items
16.	Branulla or other catheter for IV line (16-18)
17.	IV Infusion stand(s)
18.	Urinary catheters
19.	IV cannulae
20.	IV fluid (neonatal giving) set/umbilical catheter
21.	Uristix (dip stick for protein in urine)
22.	Adult ventilator bag and mask
23.	Mouth gag
24.	Wheelchair
25.	Stretcher with trolley
26.	Examination table
27.	Labor/delivery table with stirrups
28.	Labor/delivery table without stirrups
29.	Adult weighing scale
30.	Baby weighing scale
31.	Partographs (modified form)
32.	Neonatal resuscitating table
33.	Plain thumb forceps
34.	Dressing forceps
35.	Surgeon's handbrush w/ nylon bristles
36.	Watch or clock with second hand that can be easily seen
37.	Incubator
38.	Measuring tape
39.	Radiant warmer
40.	Nasogastric tubes or other tubing for oxygen administration
41.	Blood sugar testing sticks
42.	Icterometer
43.	Fluorescent tubes for phototherapy to treat jaundice
44.	Pulse oximeter
45.	Apnoea monitor
46.	Paladay / small cup for breast milk expression
47.	Instrument trolley
48.	Instrument tray
49.	Beds

No.	Basic items
50.	Linens
51.	Towels or cloth for newborn
52.	Blankets for cold weather
53.	Water filter (or other means to make potable water available to patients and staff)
	Delivery set / pack (s/s=stainless steel)
54.	Kocher's artery forceps 18 cm CVD
55.	Rampley dressing forceps, 250 mm s/s (sponge holding)
56.	Dissecting forceps standard pattern 145 mm s/s
57.	Pean artery forceps straight, 140 mm s/s
58.	Cord-cutting scissors curved 135 mm s/s
59.	Cord ties
60.	Clampcut
61.	Braun-stadler episiotomy scissors, angular, 145 mm s/s
62.	Straight stitch scissors 135
63.	Gloves
64.	Long gloves
65.	Plastic sheeting
66.	Gauze swabs
67.	Cloth
68.	How many complete delivery sets are there in total?
	Episiotomy / Perineal / Vaginal / Cervical repair pack
69.	Sponge forceps
70.	Artery forceps large/small
71.	Needle holder
72.	Sutures
73.	Stitch scissors
74.	Dissecting forceps, toothed
75.	Vaginal speculum, large (Sims)
76.	Vaginal speculum (Hamilton Bailey)
77.	Vacuum extractor with different size cups

No.	Basic items
78.	Obstetric forceps, outlet
79.	Obstetric forceps, mid-cavity
80.	Obstetric forceps, breech
	Uterine evacuation (s/s=stainless steel)
81.	Vaginal speculum (Sims)
82.	Sponge (ring) forceps or uterine packing forceps
83.	Dissecting forceps, serrated jaws 250 mm s/s
84.	Forceps towel approx. 100 mm s/s
85.	Ovum forceps, green haigh 240 mm s/s
86.	Uterine forceps VulselTeales 3x4 teeth curved s/s
87.	Uterine forceps Vulsellum Downs 241 mm s/s
88.	Uterine dilators, sizes 13-27 (French)
89.	Sharp uterine curettes, size 0 or 00
90.	Blunt uterine curettes, size 0 or 00
91.	Malleable metal uterine sound
	Manual vacuum aspiration
92.	Vacuum aspirators/syringes
93.	Silicone lubricant (for lubricating O-ring)
94.	Other oil (for lubricating O-ring)
95.	Flexible cannulae, 4 – 6 mm
96.	Flexible cannulae, 7-12 mm
	Dressing Instrument Set (s/s=stainless steel)
	Gally pot s/s
	Dissecting forceps Lane's 1x2 teeth 140 mm
	Needle holder, Mayo hegar's 180 mm s/s
	Scissors, sharp point straight 120 mm s/s
	Scissors, Metzenbalem flat s/s curved 180 mm
	Sponge forceps holding Rampley or Frostier s/s
	Sponge forceps – holding 200 mm
	Artery forceps, Halstead, mosquito 130 mm straight s/s
	MCH Diagnostic Kit (s/s=stainless steel)

No.	Basic items
101	SIMS or other type vaginal speculum
102	Cuscos or other type speculum, virgin size 75x17 mm
103	Cuscos or other type speculum, sm., heavy pattern 80x32mm
104	Sound, uterine Horrock's graduated 305 mm s/s
105	Tenaculum
106	Scissors, straight, sharp 145 mm s/s
	Neonatal Resuscitation Pack
107	Mucus extractor
108	Infant face masks (sizes 0, 1, 2)
109	Ventilatory bag
110	Suction catheter 10, 12 Ch
111	Infant laryngoscope with spare bulb & batteries
112	Endotracheal tubes 3.5, 3.0
113	Disposable uncuffed tracheal tubes (sizes 2.0 to 3.5)
114	Suction apparatus: Foot – or electrically-operated
115	Mucus trap for suction

CEmONC Drugs and Supplies

	Antibiotics:
48.	Amoxicillin
49.	Ampicillin
50.	Cephazoline Sodium
51.	Cefixime
52.	Ceftriaxone
53.	Cefotaxime injection (for newborn)
54.	Chloramphenicol
55.	Clindamycin
56.	Cloxacillin Sodium
57.	Erythromicin
58.	Oral flucloxacillin (for newborn)
59.	Gentamicin

60.	Metronidazole (injection)
61.	Procaine benzylpenicillin (procaine penicillin G)
62.	Trimethoprim/Sulfamethozazole
63.	Tetracycline eye ointment / drops
	Anticonvulsants:
64.	Magnesium sulfate
65.	Diazepam (injection)
	Antihypertensives*)*
66.	Hydralazine
67.	Labetalol
68.	Methyldopa
69.	Nifedipine
	Oxytocics& Prostaglandins:
70.	Ergometrine Maleate (injection)
71.	Misoprostol
72.	Oxytocin
73.	Prostaglandin E2 (Dinoprostone)
	Drugs used in Emergencies:
74.	Adrenaline (Epinephrine)
75.	Aminophylline
76.	Atropine sulfate
77.	Calcium gluconate
78.	Digoxin
79.	Diphenhydramine
80.	Ephedrine
81.	Frusemide
82.	Hydrocortisone
83.	Naloxone Hydrochloride
84.	Nitroglycerine
85.	Promethazine Hydrochloride

	Anesthetics
86.	Halothane
87.	Ketamine Hydrochloride
88.	Lignocaine / Lidocaine 2% or 1%
	Analgesics:
89.	Indomethacin
90.	Morphine Hydrochloride (injection)
91.	Paracetamol
92.	Pethidine Hydrochloride
	Tocolytics:
93.	Ritodrine Hydrochloride
94.	Salbutamol
	Steroids:
22.	Betamethasone
23.	Dexamethasone
24.	Prednisolone Corticosteriod
	IV Fluids:
25.	Dextrose
26.	Glucose 10%
27.	Glucose 50%
28.	Normal saline
29.	Ringer's lactate
	Antimalarials:
30.	Chloroquine
31.	Co-Artem
32.	Quinine Dihydrochloride
	Antiretrovirals:
33.	Nevirapine – mother
34.	Nevirapine – newborn
	Newborn Care

35.	Vitamin K (for newborn)
36.	Nystatin (oral) (for newborn)
37.	Oral rehydration solution
38.	Gentian violet paint
39.	Heparin
40.	Anti-tetanus serum
41.	Tetanus toxoid
42.	Anti Rho (D) Immune Globulin

INFECTION PREVENTION

No.	Basic items
14.	Soap
15.	Antiseptics
16.	Gloves
17.	Heavy duty gloves
18.	Non-sterile protective clothing
19.	Decontamination container
20.	Bleach or bleaching powder
21.	Regular trash bin
22.	Covered contaminated waste trash bin
23.	Puncture proof sharps container
	Disinfectants and antiseptics
24.	Berkina
25.	Ethanol
26.	Polyvidone iodine

	Anesthetics
95.	Halothane
96.	Ketamine Hydrochloride
97.	Lignocaine / Lidocaine 2% or 1%

CEmONC EQUIPMENT AND SUPPLIES

No.	Basic items
97.	Oxygen cylinder with cylinder carrier and key to open valve

No.	Basic items
98.	Ultrasound
99.	BP cuff
100	Stethoscope
101	Fetal stethoscope
102	Kidney basins
103	Sponge bowls
104	Clinical oral thermometer
105	Rectal thermometer for newborn
106	Low reading thermometer (32 or 35 degree C)
107	Scissors
108	Needles and Syringes (10-20cc)
109	Syringes (1ml, 2ml, 5ml, 10ml)
110	Needles (23-25 gauge)
111	Suture needles/suture materials
112	Branulla or other catheter for IV line (16-18)
113	IV Infusion stand(s)
114	Urinary catheters
115	IV cannulae
116	IV fluid (neonatal giving) set/umbilical catheter
117	Uristix (dip stick for protein in urine)
118	Adult ventilator bag and mask
119	Mouth gag
120	Wheelchair
121	Stretcher with trolley
122	Examination table
123	Labor/delivery table with stirrups
124	Labor/delivery table without stirrups
125	Adult weighing scale
126	Baby weighing scale
127	Partographs (modified form)
128	Neonatal resuscitating table
129	Plain thumb forceps
130	Dressing forceps
131	Surgeon’s handbrush w/ nylon bristles

No.	Basic items
132	Watch or clock with second hand that can be easily seen
133	Incubator
134	Measuring tape
135	Radiant warmer
136	Nasogastric tubes or other tubing for oxygen administration
137	Blood sugar testing sticks
138	Icterometer
139	Fluorescent tubes for phototherapy to treat jaundice
140	Pulse oximeter
141	Apnoea monitor
142	Paladay / small cup for breast milk expression
143	Instrument trolley
144	Instrument tray
145	Beds
146	Linens
147	Towels or cloth for newborn
148	Blankets for cold weather
149	Water filter (or other means to make potable water available to patients and staff)
	Delivery set / pack (s/s=stainless steel)
150	Kocher's artery forceps 18 cm CVD
151	Rampley dressing forceps, 250 mm s/s (sponge holding)
152	Dissecting forceps standard pattern 145 mm s/s
153	Pean artery forceps straight, 140 mm s/s
154	Cord-cutting scissors curved 135 mm s/s
155	Cord ties
156	Clampcut
157	Braun-stadler episiotomy scissors, angular, 145 mm s/s
158	Straight stitch scissors 135
159	Gloves
160	Long gloves
161	Plastic sheeting
162	Gauze swabs
163	Cloth

No.	Basic items
164	How many complete delivery sets are there in total?
	Episiotomy / Perineal / Vaginal / Cervical repair pack
165	Sponge forceps
166	Artery forceps large/small
167	Needle holder
168	Sutures
169	Stitch scissors
170	Dissecting forceps, toothed
171	Vaginal speculum, large (Sims)
172	Vaginal speculum (Hamilton Bailey)
173	Vacuum extractor with different size cups
174	Obstetric forceps, outlet
175	Obstetric forceps, mid-cavity
176	Obstetric forceps, breech
	Uterine evacuation (s/s=stainless steel)
177	Vaginal speculum (Sims)
178	Sponge (ring) forceps or uterine packing forceps
179	Dissecting forceps, serrated jaws 250 mm s/s
180	Forceps towel approx. 100 mm s/s
181	Ovum forceps, green haigh 240 mm s/s
182	Uterine forceps VulselTeales 3x4 teeth curved s/s
183	Uterine forceps Vulsellum Downs 241 mm s/s
184	Uterine dilators, sizes 13-27 (French)
185	Sharp uterine curettes, size 0 or 00
186	Blunt uterine curettes, size 0 or 00
187	Malleable metal uterine sound
	Manual vacuum aspiration
188	Vacuum aspirators/syringes
189	Silicone lubricant (for lubricating O-ring)
190	Other oil (for lubricating O-ring)
191	Flexible cannulae, 4 – 6 mm

No.	Basic items
192	Flexible cannulae, 7-12 mm
	Dressing Instrument Set (s/s=stainless steel)
	Gally pot s/s
	Dissecting forceps Lane's 1x2 teeth 140 mm
	Needle holder, Mayo hegar's 180 mm s/s
	Scissors, sharp point straight 120 mm s/s
	Scissors, Metzenbalem flat s/s curved 180 mm
	Sponge forceps holding Rampley or Frostier s/s
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	MCH Diagnostic Kit (s/s=stainless steel)
107	SIMS or other type vaginal speculum
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112	Scissors, straight, sharp 145 mm s/s
	Neonatal Resuscitation Pack
116	Mucus extractor
117	Infant face masks (sizes 0, 1, 2)
118	Ventilatory bag
119	Suction catheter 10, 12 Ch
120	Infant laryngoscope with spare bulb & batteries
121	Endotracheal tubes 3.5, 3.0
122	Disposable uncuffed tracheal tubes (sizes 2.0 to 3.5)
123	Suction apparatus: Foot – or electrically-operated
124	Mucus trap for suction

EQUIPMENT AND SUPPLIES Operation

No.	Basic items
1.	Operating table
2.	Light- adjustable, shadowless
3.	Surgical drapes
4.	Syringes 5ml
5.	Syringes 10ml
6.	Syringes 20ml
7.	Needles 21, 22, 23
	Obstetric laparotomy / Cesarean delivery pack
8.	Stainless steel instrument tray with cover
9.	Towel clips
10.	Sponge forceps, 22.5 cm
11.	Straight artery forceps, 16 cm
12.	Uterine haemostasis forceps, 20 cm
13.	Needle holder
14.	Surgical knife handle/No 3
15.	Surgical knife handle/No 4
16.	Surgical knife blades
17.	Triangular point suture needles/7.3 cm/size 6
18.	Round-bodied needles/No 12/size 6
19.	Abdominal retractor/size 3
20.	Abdominal retractors/double-ended (Richardson)
21.	Curved operating scissors/blunt pointed (Mayo) 17cm
22.	Straight operating scissors/blunt pointed (Mayo) 17cm
23.	Scissors, straight, 23 cm
24.	Suction nozzle
25.	Suction tube, 22.5 cm, 23 French gauge
26.	Intestinal clamps, curved (Dry), 22.5 cm
27.	Intestinal clamps, straight, 22.5 cm
28.	Dressing (non-toothed tissue) forceps/15 cm
29.	Dressing (non-toothed tissue) forceps/25 cm

No.	Basic items
30.	Sutures (different sizes and types)
	Anesthesia equipment
31.	Anesthetic face masks
32.	Oropharyngeal airways
33.	Laryngoscopes (with spare bulbs and batteries)
34.	Endotracheal tubes with cuffs (8 mm)
35.	Endotracheal tubes with cuffs (10 mm)
36.	Intubating forceps (Magill)
37.	Endotracheal tube connectors: 15 mm plastic (connect directly to breathing valve; three for each tube size)
38.	Spinal needles (18-gauge to 25-gauge)
39.	Suction apparatus: Foot-operated
40.	Suction apparatus: Electric
41.	Anesthesia apparatus (draw-over system)
42.	Oxygen cylinders with manometer and flowmeter (low flow) tubes and connectors
	Craniotomy equipment (s/s=stainless steel)
43.	Decapitation hook Jardine's s/s
44.	Craniotomy forceps Brawn's s/s

Annex 6: Essential Maternal and Neonatal Health (MNH) Services

(Based on the Essential Package of Health Services, UNICEF revised version 2009)

Focused Antenatal Care (WHO)

Four visits with:

- Identification of pre-existing health conditions
- Early detection of complications arising during pregnancy
- Health promotion and disease prevention
- Birth preparedness
- Complication readiness planning

Neonatal and Postnatal Care (WHO Essential Newborn Care 1996)

Clean delivery and clean cord care
Thermal protection
Initiation of breathing; resuscitation
Early and exclusive breastfeeding
Prevention and management of opthalmianeonatorum
Immunization – BCG, oral polio, HepB
Management of newborn illness
Care of the preterm and/or low birth weight newborn

Postpartum Care

Identification of postpartum disorders
Health promotion and disease prevention
Postpartum contraceptive counseling

Skilled birth attendance

Post-abortion care

Medical treatment of complications of abortion
Post-abortion contraceptive counseling

Comprehensive birth spacing and limiting services

STI screening and syndromic management

Medical treatment for victims of SBGV

Medical treatment and referral of common gynecological problems