## **REPUBLIC OF RWANDA**



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A Healthy People. A Healthy Nation

MATERNAL, NEONATAL AND CHILD HEALTH NATIONAL STRATEGY

**JULY 2013- JUNE 2018** 

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#### **EXECUTIVE SUMMARY**

The health of mothers, newborn and children under five remains worrying in developing countries. The highest rates of maternal, neonatal and child mortality are still in Sub-Saharan Africa, where on average 510 mothers per 100,000 live births die versus 16 per 100,000 live births in developed countries; 109 children out of 1000 live births die before the age of five whereas in the developed countries, only 7 children out of 1000 live births die before the age of 5 and where 34 newborns out of 1000 live births die before 28 days of life, whereas only 4 newborns out of 1000 live births dies before 28 days of life in developed countries.

Rwanda has seen impressive achievements for maternal and child health and at a lesser extent neonatal health. The maternal mortality ratio decreased from 750 per 100,000 live births in 2005 to 476 in 2010; the under-five mortality from 152 per 1,000 live births in 2005 to 76 in 2010 and neonatal mortality decreased from 37 per 1,000 live births in 2005 to 27 in 2010. This progress can be attributed to a combination of factors, which have contributed to strengthen the Rwanda health system and to make quality services accessible to the population. Key factors include the introduction of a community health insurance scheme that contributed to the removal of barriers to access health services, while at the same time transforming health-seeking behavior; the provision of quality health services boosted by performance-based financing (PBF) schemes; strong leadership, commitment and vision leading to innovative reforms and evidence-based strategies and policies based on realities on the ground. The use of community health workers has been identified as one strategy to address the shortage of health workers, particularly in low-income countries and the Ministry of Health considers the community health program as a top priority that reinforce the 6 building blocks of the World Health Organization (WHO).

Despite the progress made, maternal, neonatal and under 5 mortality are still high. Data from maternal death audit (MDA) in 2013 showed that around 43% of maternal deaths occur during the post-partum period, 21% during child birth and 36% during pregnancy. Over 66% of Under 5 deaths occur within the first year of life, as estimated by an infant mortality of 50 per 1,000 live births (3). Within the first month, 27 neonates out of 1,000 live births die each year. This represents about 54% of the infant mortality and 35% of the under-5 mortality.

This MNCH strategysets its targets in line with HSSP III to reduce maternal mortality to 220/100,000 live births and Under 5 mortality to 42/1000 Live births by 2018 (HSSP III).

This MNCH strategy also provides a framework for addressing maternal, neonatal and child health challenges currently facing Rwanda. It is an overarching strategy for scale up of the national response to reduce the current levels of maternal, neonatal and child mortality and morbidity in line with the MDG health related targets and HSSP III targets. The life cycle approach and continuum of care concept, starting with care from the home environment to health facility, guided the development of this roadmap. It aims also to maintain and expand the coverage of cost effective and high impact interventions for maternal, neonatal and child survival in order to achieve national and international targets.

The introduction of Maternal Death Surveillance and Response, Confidential survey for maternal death, stillbirth and birth asphyxia audit and the scale up of verbal autopsy country wide are among others new innovative interventions which will help to reduce maternal, newborn and child avoidable deaths. Also the use of technologies like Rapid SMS will support the monitoring of MNCH interventions implementation.

The implementation of those interventions will require funding which will need to be mobilized and effectively used in the spirit of efficiency and impact of interventions focusing on availability and accessibility of quality maternal, newborn and child health care services. Therefore, all interventions have been costed as well as required funds to continue ensuring integration of maternal and child health services into the entire health system strengthening. The costing provided an estimate of around 295,661,199 \$ for the implementation of interventions as well as health system strengthening required to accelerate the reduction of maternal, neonatal and child morbidity and mortality between 2013-2018.

The Ministry of Health will coordinate the implementation of these interventions and will ensure high performance and financial accountability to achieve the anticipated outcomes. This will depend on one hand on strategic partnerships including key Governments ministries, local authorities, civil society, development partners, private sector and community and on the other hand on reliable sources of funding.

#### I. OVERARCHING GOALS

For more than a decade, the government of Rwanda has put consistent and considerable effort into programs addressing maternal and neonatal morbidity and mortality, with the result that the maternal mortality ratio, and to a somewhat lesser extent, the neonatal mortality rate, and under 5 mortality rate have steadily decreased. The 2008-2012 Roadmap to Accelerate Reduction of Maternal and Neonatal Morbidity and Mortality included evidence-based practices and programs that have been shown to be highly effective in contributing to the improvement of maternal and neonatal health (MNH), including three pillars of maternal health: emergency obstetric and neonatal care (EmONC), deliveries by skilled birth attendants (SBAs), and family planning (FP). With development of this Maternal, Neonatal and Child Health strategy, Rwanda solidifies its commitment to increase and/or sustain its efforts to achieve the United Nations Millennium Development Goals (MDGs) and beyond this to other international and national targets for maternal, neonatal and child health.

This strategy aims to ensure that Rwanda will continue making substantial progress in morbidity and mortality reduction for mothers, newborns and children, therefore successfully sustaining its achievements toward MDG4 and MDG 5.

MDG 4 would decrease mortality of children under five by two-thirds, between 1990 and 2015. Rwanda's MDG 4 target is a mortality rate of 52 per thousand live births for children under five. This target is likely to be achieved as reported by UNICEF in its 2013 report on level and trends of child mortality which revealed that the under five mortality was at 55/1000 live births in 2012. However neonatal mortality and perinatal mortality are reducing at slower rate as shown by the IDHS 2008: 28/1000 and DHS 2010: 27/1000 live births and contribute 35% of all under five mortality. This strategy will prioritize and delineate efforts in a focused manner to improve neonatal outcomes.

MDG 5 is to reduce the maternal mortality rate by three-quarters, from 1990 to 2015. Rwanda'sMDG 5 target is 268 per 100,000 live births. Rwanda is on track with a MMR of 320/ 100.000 live births is likely to achieve MDG5, but must strengthen its program in MNCH.

To develop thisMNCH strategy, the Ministry of Health followed a process that included a jointassessment with all stakeholders of the previous roadmap to accelerate the maternal and newborn morbidity and mortality and child survival strategic plan, this has been done through meetings with key informants, site visits, focus groups and several workshops to gather inputs, and stakeholders working groups to develop certain segments of the strategy.

International frameworks (WHO), existing policies and strategies (HSSP III), previous Demographic Health Surveys (DHS) and other studies data were reviewed, analyzed and shared with stakeholders through several workshops, discussed within the MCH TWG and used to inform the new MNCH strategy development.

The strategic framework has been developed with all Stakeholders and identified interventions were costed and an M&E plan developed for a continuous assessment of the Strategic Plan.

## II. SITUATION ANALYSIS

### A. Context

## A.1. International context

The global MMR in 2013 was 210 maternal deaths per 100 000 live births, down from 380 maternal deaths per 100 000 live births in 1990. The MMR in developing regions (230) was 14 times higher than in developed regions. Sub-Saharan Africa has the highest regional MMR (510).

Since 1990 the global under-five mortality rate has dropped 47 percent—from 90 (89, 92) deaths per 1,000 live births in 1990 to 48 (46, 51) in 2012. All regions, except for Sub- Saharan Africa and Oceania, have reduced their under-five mortality rate by 50 percent or more. The highest rates of child mortality are still in Sub-Saharan Africa, with an under-five mortality rate of 98 deaths per 1,000 live births—more than 15 times the average for developed regions.

The proportion of under-five deaths that occur within the first month of life (the neo- natal period) has increased 19 percent since 1990, from 37 percent to 44 percent, because declines in the neonatal mortality rate are slower than those in the mortality rate for older children. Sub-Saharan Africa, with the highest risk of death in the first month of life, is among the regions showing the least progress in reducing the neonatal mortality rate.

## A.2. Rwandan Context

### A.2.a Geographic, demographic and socio-economic situation

Rwanda is a landlocked country in central and East Africa, with an estimated population of 10 515,973 million living within an area of 26,338 square kilometers. With 415inhabitants per square kilometer, it has the highest density of population in the region. The population growth rate is currently 2.6% and it is estimated that Rwanda will attain a population of 16 million by 2020 if the population growth rate remains unchanged. The Total Fertility Rate was 4.6 in 2012. The population of Rwanda is young with one in two persons being under 19 years old and people age 65 and above account only for 3%.

25.1% of Rwandan populations are women in reproductive age and 11,7% are under five years children, while 2.9% are less than one year old.

Delivery of quality MNCH services and improvement in the health status of women and children not only rest with immediate environmental and health systems, but also with socioeconomic factors including the performance of macroeconomic factors which have a bearing on health access, improvement in education levels, women's empowerment and optimization of public financing mechanisms(HSSP III, 2013-2018)

The budget allocated by the Government to health increased from 9.1% in 2008 to 11.5 % in 2011.

### A.2.b. Health context

### **Organization of the Health System**

The Rwanda Health System is a pyramidal structure made of 5 levels: National, District, Sector, Cell and village. This pyramid structure is composed offivereferral hospitals at the apex followed by 42 district hospitals and 486 health centers. The health centers, in turn, use community health workers and other community based associations for community outreach activities.



**<u>National level</u>**: The health sector is led by MoH that supports, coordinates and regulates all interventions with a primary objective of improving the health of the population.

**District level:** at this level, agencies are District hospitals, pharmacies, community health insurance and HIV/AIDS committees. These agencies are under the supervision of the Executive Secretary of the District as head of all technical departments. The Districts also have an administrative unit in charge of health and child rights in matters of public health and administration services (Planning, Hygiene inspection, supervision of management of agencies and intersectoral collaboration).

**Sector level:** technical agencies are the health sector and community health insurance branches. These agencies are under technical supervision of those in charge of sector administration for social services and the Director of Health and child rights of Districts, and for clinical services by the District hospital.

<u>At village level</u>, there are community health workers who are supervised administratively by those in charge of social services and technically by those in charge of health centres.

**Health financing:** Government spending on health has been increasing since 2005 (from 8.2 percent in 2005 to 9.1 percent in 2007; MOH), but has not reached targets of the New Partnership for African Development (12 percent) and Abuja Declaration (15 percent) for the national budget allocation for the health sector. In addition, the health sector is still very dependent on external financing. In 2006, the National Health Accounts showed that 52.5 percent of total health expenditures came from external

assistance. However, Central government revenues rose to 22% from 17% in FY 2010/11 while internally generate revenues decreased to 5% from 7% in FY 2010/11. The contribution of international NGOs also decreased from 8% in FY 2010/11 to 6% in FY 2011/12 (HRT 2013).

# **B.** MNCH services status

A brief review of the current situation in the Rwandan health sector helps to put the current MNCH situation into context.

An assessment was conducted to document the status of implementation of Rwanda's recently completed roadmap on Accelerating the Reduction of Maternal and Neonatal Morbidity and Mortality (2008-2012) and the child survival strategic plan (2008-2012) and the progress made in reducing maternal, neonatal and child mortality and morbidity.

Much progress has been made in Rwanda's health indicators. The infant mortality rate fell from 86 per 1,000 live births in 2005 to 50 per 1,000 live births in 2010, and the under-5 mortality rate declined from 152 to 76 per 1,000 during the same period (Rwanda Demographic Health Survey [RDHS] 2010). Meanwhile, Rwanda has the second lowest under five mortality rate after Tanzania in the EAC region. (UN interagency group for child mortality estimation (IGME 2013).

The 2010 RDHS shows a significant reduction in the maternal mortality ratio from 750 per 100,000 live births in 2005 to 476 per 100,000 in 2010 and Rwanda is on track to achieve MDG5 by 2015. Neonatal mortality for the same period has decreased from 37 per 1,000 live births in 2005 to 27 per 1,000 in 2010 (RDHS). This contributes to 35% of under five mortality. The 2013 WHO report revealed that Rwanda has the lowest maternal and newborn mortality in the EAC region. However much more progress, at an accelerated pace, is required to reduce neonatal mortality, if Rwanda is to reach the MDG 4 by 2015.

Pregnant women attending ANC are counseled and tested according to the national protocol and the percentage of pregnant women tested for HIV is 98% while their partners' testing is at 84%. The transmission of HIV from mother to child has declined from 10,8% in 2004 to 1,9% in 2012 and HIV new infections reduced by 50%. During 2012-2013, the new plan to eliminate mother to child transmission has been developed. (MoH report annual report 2012-2013).

There has also been remarkable progress in the decline of malaria prevalence in Rwanda, which has decreased by half since 2007-2008; from 2.6 to 1.4 percent among children aged 6 to 59 months and from 1.4 to 0.7 percent among women aged 15 to 49 (RDHS 2010). Despite this decrease, early 2013 have seen some increases in malaria cases that bear careful observation.

**Geographical and financial access** to health services has improved with the construction and rehabilitation of new district hospitals and health centers, but given the predominant rural population about 23 percent of patients still need to walk for more than an hour or more than five kilometers to reach the nearest health facility (HMIS 2009). This is a challenge despite considerable effort made in availing MNCH services such as EmONC, FANC etc.

In terms of financial accessibility, on average, 78 percent of households have health insurance, an increase from 68 percent in 2007-2008. At the individual level, 67 percent of women and 71 percent of men are insured. Most of those individuals are covered by Mutual Health Insurance (RDHS 2010).

**Human resources for health:**Although the number of health care professionals has greatly increased, there are still shortages of qualified human resources, especially in rural areas. The number of doctors increased from 363 in 2008 to 641 doctors in 2012, of which 132 were specialists. Nursing staff also increased from 6,154 in 2009 to 8,134 nurses in 2012 (Human Resources for Health Country Profile, African Health Workforce Observatory, March 2009). ; Health Facilities Database, HMIS Unit, 2009-2011, and MOH Annual Report 2011-2012). Midwives increased from 156 in 2010 to 271 in 2012. Changes in midwifery education programs, the start of post-graduate obstetrician/gynecologist , pediatricians training, and a new program on human resources for health are noteworthy efforts that should eventually help to alleviate human resources for health shortages for MNCH care.

EmONC. Essential newborn care, hospital-based neonatal care,PAC, IMCI, ETAT and other training programs are being conducted in Rwanda. There is a need to ensure that these MNCH capacity building programs, are included as part of the pre-service education of physicians, midwives, and nurses.

#### C. MNCH key issues

#### C.1. Maternal health

The main causes of maternal deaths in Rwanda, according to maternal deaths audits are postpartumhemorrhage, septicemia and eclampsia. Note that as opposed to international evidence, in Rwanda obstructed labor (and ruptured uterus) is not as a main cause of maternal deaths.

Timing of maternal deaths provides a snapshot of where to focus interventions to have the greatest impact. According to Maternal death audit 2013, most deaths occur during the post-partum period (45%), followed by those during pregnancy (34%) and childbirth (21%).

#### C.2. Neonatal and perinatal health

The main causes of neonatal deaths in Rwanda are prematurity (41 %), asphyxia (33 %) and neonatal sepsis (10%). In 2012, most (94%) neonatal deaths occurred in the early neonatal period and of these, 68% occurred at the time of birth (HMIS analysis 2012).

**Stillbirths:**the HMIS data indicate that macerated and fresh stillbirths are almost equal in terms of proportion of total stillbirths. Stillbirths accounted for 43 percent of perinatal deaths in 2008, 27.3 percent in 2009, and 30.4 percent in 2010.

These facts underline the continued importance of early identification of problems during ANC, labor and delivery, and the immediate postnatal period, along with appropriate management or referral for complications

#### C.3. Child health

The main causes of under5 mortality in health facilities are proportionally acute respiratory infections (29%) including particularly pneumonia, malaria (18%) and diarrhea (12%) as shown in the figure below, with malnutrition being a major underlying factor (>44%) in child mortality. A child who is severely underweight is 8.4 times more likely to die from infectious disease than a well-nourished child.

**Figure 2:**Causes of mortality among children under five in Rwanda health facilities (Ministry of Health, HMIS 2012)



Keys interventions that have proved to reduce child mortality and morbidity in addition to neonatal interventions are:IMCI, ETAT, immunization and vitamin supplementation, HIV and AIDS interventions and nutritional interventions including Infant and Young Child Feeding (exclusive breastfeeding and appropriate weaning practices) etc.

# C.4. Family Planning

The maternal mortality rate, infant mortality rate, and NMR are adversely affected by high fertility and frequent, closely spaced births.

Family planning has greatly improved in Rwanda. The contraceptive prevalence rate increased from 10 percent of married women using a modern FP method in 2005 to 27 percent in 2007-2008 and 45 percent in 2010.

The total fertility rate fell from 6.1 per woman in her lifetime in 2005 (RDHS 2005) to 4.6 per woman in 2010 (RDHS 2010). However, there is a significant unmet need for FP in Rwanda. About 19 percent of married women have an unmet need for FP (an improvement since 2005, when the figure was 38 percent). The total demand for FP among married women is 72percent, and 74 percent of that demand is satisfied. The demand for limiting is slightly higher than the demand for spacing (39 and 34 percent, respectively) (RDHS 2010).

To increase met need, Rwanda has used an approach that takes advantage of opportunities to provide FP information and methods:

-Community-based provision (CBP) of FP leverages the existing network of CHWs providing services at the community level to provide information and methods in the community.

-Integration of FP into prevention of mother-to-child transmission (PMTCT) of HIV/AIDS, antenatal care, post-abortion care, and other health services has created greater access to services through a one-stop-shop approach.

#### C.5. Nutrition

The National Nutrition Plan's main priority is to eliminate all forms of malnutrition through implementation of the joint action plan initiated for 2012 and strengthening of the multi-sectoral approach. This plan has been translated in the National Nutrition Strategic Plan and the District Plan to Eliminate Malnutrition. Underweight status contributes to poor maternal health and birth outcomes. Overall, 7 percent of Rwandan women of reproductive age (15-49 years) are considered to be undernourished, with a body mass index of less than 18.5. However, the proportion of undernourished women fell from 10 percent in 2005 to 7 percent in 2010. Women in rural areas are affected more than those in urban areas (RDHS 2010). Maternal under nutrition is often reflected in the proportion of children with low birth weight (below 2.5 kilograms).

Pregnant women are particularly vulnerable to anemia due to increased requirements for iron and folic acid. According to RDHS (2010), 17 percent of women aged 15-49 years were found to be anemic, but the overall prevalence of anemia has decreased by 8 percent since RDHS 2005.

## C.6. Other Relevant Results and Issues

### C.6.a. HIV / AIDS

Rwanda has made extensive gains in the prevention of HIV using five integrated components: voluntary counseling and testing, PMTCT, male circumcision, BCC, and HIV treatment. According to RDHS results, HIV prevalence remains unchanged between the 2005 RDHS and the 2010 RDHS: 3 percent for each survey. HIV prevalence among women and men was 4 and 2 percent, respectively, for the five-year period. The decentralization of PMTCT services has resulted in an extension of the coverage of PMTCT services. From July 2010 to June 2011, the number of pregnant women attending ANC clinics was about 324,628.Almost all were counseled and tested for HIV and received their results, out of which 6,594 (2.05 percent) tested positive for HIV.

### C.6.b. Malaria

Risks associated with malaria in pregnancy are greatest in the first and second pregnancies, the second and third trimesters of each pregnancy, and all pregnancies for women who are HIV-positive.<sup>123</sup> In high-transmission settings, malaria is expected to be a significant indirect contributor to maternal death. Malaria in pregnancy is thought to affect neonatal mortality risk via low birth weight and anemia in the newborn.

In Rwanda, due to the substantial decline of malaria prevalence, high sulfadoxinepyrimethamineresistance, and high coverage with long-life insecticide-treated nets, the added value of IPTp-sulfadoxine-pyrimethaminehas declined. Therefore, since 2009, the use of IPTp as a strategy to decrease malaria is no longer implemented. Rwanda is considering introducing an alternate strategy to intermittent preventative treatment for pregnant women, which is the intermittent screening and treatment of malaria in pregnant women. This approach involves a rapid diagnostic test for malaria diagnosis at scheduled ANC visits and treatment of pregnant women with an effective anti-malarial, if they test positive.

# III. MISSION, GOALS, GUIDINGPRINCIPLS AND KEY STRATEGIC OBJECTIVES

## A. Mission

To improve women, newborn and child health by providing an environment where unwanted pregnancies are avoided, women go through pregnancy and childbirth safely, their newborns are born alive and healthy and where children grow and develop their full potential, thereby fulfilling their role in the socio-economic development of Rwanda.

## **B.** Goals

To maintain and expand the coverage of evidence based cost effective high impact interventions for maternal, newborn and child survival through effective strategies delivery across the continuum of care in order to reduce:

- Maternal mortality from 476 deaths per 100,000 live births in 2010 to 230 in 2018
- Neonatal mortality from 27/1000 in 2010 to 10 in 2018
- Under 5 mortality from 76/1000 in 2010 to 42 in 2018

# C. Guiding Principles

This roadmap will be guided by the HSSP III that is fully committed to the following guiding principles:

- *Equity*. All women, newborns and children without distinction of race, religion, political belief, geographical situation, economic status, or physical condition have a right to equal and universal access to needed health interventions.
- *Continuum of care.* All women and children should have the highest attainable standard of health, through the best possible care throughout the cycle of adolescence, pregnancy, childbirth, postnatal, newborn period and into childhood.
- Assurance of high-quality services. All interventions for making pregnancy safer and those related to newborn and child health are made available with the highest standard of quality and safety, and services are delivered according to evidence-based best practices.
- An integrated approach. Comprehensive services are made available to all women, newborns and children; integrating nutrition, immunization, child survival, prevention and care of malaria, sexually transmitted and HIV infections, and family planning services at all levels: community, health centres and hospitals.

- *Ownership, partnership, and responsibilities.* The government leads implementation of the roadmap, with the support of partners and the international community.
- *Sustainability*. Financial and technical self-reliance is a long-term target and is included in the health sector financing plan.
- *Policies and strategic approaches based on evidence and best practices.* The choice of policies, approaches, and practices is informed by research findings, surveillance, M&E, needs assessments, economic analysis, and sharing of lessons learned and other available evidence-based norms and standards
- *Leadership and political will*. The Government willbe at the forefront of promoting a sense of stewardship, accountability and transparency on the part of the Government as well as stakeholders for enhanced sustainability in MNCH efforts. Demonstration of political will from the highest level will help gather support and ensure successful efforts in advocating for maternal, newborn and child survival as a priority in government's agenda.

# **D.** Strategic Objectives

Evidence-based and innovative interventions developed and implemented during the last few years by the MOH, with support of its development partners, greatly contributed to the improvements in MNCH from 2008-2012. To maintain momentum in supporting further decreases in the maternal mortality rate, NMR and Under 5 mortality rate, it will be important to increase demand and respond to that demand with supply in the form of accessible high-quality services provided by sufficient numbers of skilled and competent providers who are working in an environment that supports their performance.

This MNCH strategic plan has four strategic objectives which are:

- -Increase access to equitable and high quality MNCH services
- Increase community mobilization for participation in and use of MNCH services
- Ensure availability of sustainable MNCH programming and funding mechanisms and

- Strengthen MNCH program evaluation for scale up of lessons learnt at National and international level