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FOREWORD BY THE HONOURABLE MINISTER OF HEALTH

As leaders the world over begin to embrace the Sustainable Development Goals (SDGs) and the Global Strategy for Women’s, Children’s and Adolescent’s Health, the Government of Rwanda has moved forward to incorporate guidance from these critical resources. While we recall our success of meeting most MDG targets for health, we look forward, building on and learning from those achievements. In this strategic plan, we thus begin to look beyond survival, and also focus on how to ensure that mothers and their newborn and children thrive.

The Rwanda MNCH Strategic Plan 2018-2024 is therefore closely aligned with the objectives of the RMNCAH Policy 2017-2030, the Health Sector Strategic Plan IV and principles of other current national policies and strategies. Of equal importance is the stakeholder input at all levels: government ministries, international partners, clinicians, Non-government Organizations (NGOs), and community health workers. Consultation with this wide range of partners was one step in ensuring that this strategic plan – and its subsequent implementation – is indeed people-centered.

Alongside key informant input, the development of this strategic plan included a review of salient global, regional, and local resources to identify best practices, current literature, and examples of successful programs, gaps, and challenges. Documents like the East African Community Regional Reproductive Maternal Newborn Child and Adolescent Health Strategic Plan (2016-2021); the State of the World’s Midwifery 2014; and the Rwanda Vision 2020 were referenced. Many issues and challenges identified during the development of this strategic plan were consistent with priorities already outlined in the Rwanda RMNACH policy objectives and are therefore central to this strategic plan.

It is ambitious, but it is achievable. Together we will and we must make it happen. And in doing so, I am confident that the highest attainable standards of health and well-being will soon be a reality for all women, newborns, and children of Rwanda.

Dr. Diane GASHUMBA
Minister of Health
ACKNOWLEDGMENTS

The Ministry of Health (MoH) would like to express its deep appreciation to everyone who participated in the development of the 2018-2024 MNCH National Strategic Plan. This document is a labor of passion among each one of us to ensure that all Rwandan citizens, women, girls, men and boys will benefit from improvement in health and contribute to the progress of Rwanda as a middle-income country.

The development of this strategy was through a wide consultative approach. All stakeholders and actors at the national, district and health center levels are particularly commended and enjoined to remain partners in the implementation of the MNCH Strategic Plan in the coming 5 years.

The ministries and other government agencies—Ministry of Finance and Economic Planning (MINECOFIN), Ministry of Education (MINEDUC), Rwandan Parliamentarians’ Network on Population and Development (RPRPD), Rwanda Biomedical center (RBC), National Women’s Council, National Youth Council—are all accorded special recognition for their active engagement and for providing valuable input.

Development partners, such as the United States Agency for International Development (USAID), the United Nations Population Fund, World Health Organization as well as international and local MNCH-implementing partners, deserve special appreciation for their contribution and to the process of elaboration of this strategic plan.

The MoH would like to specifically recognize USAID in particular for its financial and technical assistance to lay out coherently the MNCH Strategic Plan, through the Maternal and Child Survival Project (MCSP).
### ACRONYMS

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<td>Availability, Accessibility, Acceptability and Quality</td>
</tr>
<tr>
<td>ANC</td>
<td>Antenatal care</td>
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<tr>
<td>ARI</td>
<td>Acute respiratory infection</td>
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<td>ASM</td>
<td>Animatrice de Santé Maternelle</td>
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<td>ASRH</td>
<td>Adolescent Sexual Reproductive Health</td>
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<td>ASRH&amp;R</td>
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<td>CHP</td>
<td>Community Health Program</td>
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<tr>
<td>CHW</td>
<td>Community health worker</td>
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<tr>
<td>CPD</td>
<td>Continuing Professional Development</td>
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<td>CSE</td>
<td>Comprehensive Sexuality Education</td>
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<td>Government of Rwanda</td>
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<td>Global Strategy on Women’s, Children’s and Adolescents’ Health</td>
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<td>Integrated Community Case Management (childhood illness)</td>
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<td>ICM</td>
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<td>International Pediatric Association</td>
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<td>Intermediate Result</td>
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<td>Maternal Mortality Rate</td>
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<td>Ministry of Health</td>
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<td>MTR</td>
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<td>Non-governmental organization</td>
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<td>NMR</td>
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<td>PAC</td>
<td>Post-abortion care</td>
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<td>PMNCH</td>
<td>Partnership for Maternal, Newborn and Child Health</td>
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<td>PNC</td>
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<td>RBC</td>
<td>Rwanda Biomedical Center</td>
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EXECUTIVE SUMMARY

Further to the remarkable progress that the Government of Rwanda has made towards the Millennium Development Goals, a reformed multi-sectoral response is required to align forward thinking national strategies with the Sustainable Development Goals (SDGs) focusing on People, Planet, Peace, Prosperity, and Partnerships. Indeed, the Global Strategy for Women’s, Children’s and Adolescent’s Health (Global Strategy) outlines a shift from a focus on reducing mortality rates, to ensuring that women, newborns, children, and adolescents not only survive, but also thrive and realize their full potential. This strategic plan also recommends that interventions rest on comprehensive quality health care across the life course.

This Rwanda Maternal Newborn Child Health (MNCH) Strategic Plan 2018-2024 is consistent with the Global Strategy and existing national policies and strategies, and proposes that health care services should be people-centred, integrated, and sustainable. The emphasis therefore is to ensure that health care is delivered to all persons with quality, equity, and dignity. This will be accomplished through addressing the social determinants of health for women, newborns, and children; ensuring a workforce and health services that are of the highest quality; prioritizing critical health issues; and finally, government accountability for results.

The strategic plan addresses findings from a desk review, key informant interviews, and a stakeholder prioritization exercise in setting forth strategic objectives that directly align with policy objectives in the RMNCAH Policy 2017-2030. It provides a framework for addressing maternal, neonatal, and child health challenges currently facing Rwanda, and aims to develop and restructure new and existing interventions to improve and increase their impact on maternal, neonatal, and child survival to achieve national and international targets.
The implementation of this strategic plan will require additional investment to achieve broad reaching sustainable impact with a particular focus on multi sectoral initiatives in community where 80% of the disease burden is located. The strategic plan puts forward a resourcing plan and provides an estimate of approximately RWF 33,062,652,418 /USD 38,003,048.75 for the implementation of the interventions required to achieve the desired targets.

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 be accomplished through strategic and collaborative partnerships with key Government Ministries, local authorities, civil society, development partners, private sector, and community but also through reliable sources of funding.
At the close of the Millennium Development Goal (MDG) era in 2015, the Government of Rwanda (GoR) fully committed to implement the United Nations (UN) Sustainable Development Goals (SDGs) while building on the investments made in achieving the MDGs.

Implementing the global SDG agenda requires a shift from a focus on reducing mortality to ensuring that women, newborns, children and adolescents not only survive, but also thrive and realize their full potential. As the Government aligns with this new agenda, sustained, quality integrated effective interventions for health promotion, prevention and treatment, implemented at every level of the health care system will be necessary for success.

To achieve this, updated policies and strategies are needed. While the GoR completes the Rwanda Vision 2050, fourth Health Sector Strategic Plan (HSSP IV) and other strategic documents, the Ministry of Health (MOH) has coordinated the development of the Reproductive Maternal Newborn Child and Adolescent Health (RMNCAH) Policy 2017-2030.

The MOH has further chosen to define two national strategic plans to guide the implementation of the RMNCAH Policy. These are the Family Planning and Adolescent Sexual and Reproductive Health Strategic Plan 2018-2024 and, presented here the Maternal, Newborn and Child Health Strategic Plan 2018-2024.
The development and strategic planning process for the MNCH Strategic Plan commenced with a literature and desk review covering a wide range of relevant literature pertaining to MNCH globally, regionally, and nationally. An extensive review was undertaken of national, regional, and global guidelines and programmes to identify both potential gaps in Rwanda’s current strategic plan and examples of good practices from inside and outside Rwanda. More detail regarding the strategic considerations identified in the desk review can be found in Annex 1: Desk and Literature Review, Maternal Newborn and Child Health Strategic Plan, Rwanda 2018 – 2024.

A prioritization mapping exercise with key stakeholders was convened to identify and prioritise interventions based on stakeholders’ experience and knowledge of the health system. Thematic areas were regrouped based on findings.

- Human resources
- Education and training
- Measurement and evaluation
- Quality of care
- Organization of services
- Demand creation at community level
- Commodities, equipment, and infrastructure

Each small group of stakeholders mapped interventions according to impact and feasibility to identify high priority interventions across these areas. Human Resources and Education and training in particular were identified as the highest priority areas, which are in keeping with findings from the literature, desk review, and key informant interviews.

This exercise identified a clear desire to improve the education and training of health care providers, with a particular focus on pre-service training. The need for compliance with international standards was also considered a high priority. Deployment of health care workers based on population need and measures to improve retention of health care workers were identified as high impact, high feasibility interventions. Further details regarding the primary and secondary priorities identified in the workshops, and a list of all the interventions identified can be found in Annex II PRIORITIZATION MAPPING WORKSHOP: RESULTS.

As further preparation for the development of this MNCH strategic plan the Ministry of Health (MOH) coordinated interviews with key informants from among government ministries; international development partners, and in-country MNCH stakeholders. The purpose was twofold: to develop a deeper contextual understanding of the health system and strategic plans previously implemented from the perspective of key stakeholders; and, to obtain stakeholder input on issues and priorities to address in the new strategic plan. A total of 33 stakeholders were interviewed over a period of about 4 weeks.

Responses were categorized into emerging themes, which overlapped with those identified during the aforementioned stakeholder prioritization mapping exercise. The full report (Annex III) presents a summary of the information obtained via interview and briefly addresses recommended and potential solutions to the challenges identified.

The Maternal Newborn and Child Health (MNCH) Strategic Plan incorporates the findings from these activities and delivers a comprehensive strategic framework to embed the principles of the RMNCAH policy 2017-2030, most notably the need for leadership and political will, assurance of high-quality services, coherence, an integrated approach, inter-sectoral collaboration and sustainability. The MNCH Strategic Plan is also congruent with
Information gathered through the various consultation mechanisms underpin the strategic objectives presented in this report and shaped the strategic framework put forward. The following situation analysis highlights this information to contextualise the proposed strategies and interventions.
This situational analysis incorporates and summarises recent information obtained from the National RMNCAH Policy (2017-2030), the findings of a desk review (April 2017), and a prioritisation mapping exercise held with focus groups made up of relevant stakeholders (April 2017). A more comprehensive overview of the Rwanda health context can be referenced in the RMNCAH Policy.

### 3.1 COUNTRY CONTEXT

#### 3.1.1 POPULATION AND SERVICE ENVIRONMENT

The fourth Rwanda Population and Housing Census in 2012 (RPHC4) showed the total population to be 10,515,973; 52 percent female and 48 percent male. Population estimates for 2017 give a total population of 12.1 million (UNDESA, 2017) indicating that Rwanda has one of the highest population densities in sub-Saharan Africa. The population is largely rural with 83% of the country’s residents living in rural areas (RPHC4).

![Figure 1: Population Growth in Rwanda](image)
The location and conditions in which people live are important social determinants of health. According to the census, about 940,593 people have recently migrated internally in 5 years preceding the census with 39% and 35% of them living in the Eastern Province and Kigali city respectively. The Northern Province had the least recent immigrants at 4%. The majority (49%) of households are in clustered rural settlements “Imidugudu”, 34% in dispersed areas, 14% squatter housing and only 2% are planned urban housing nationally. Such distribution of settlements varies significantly between rural and urban areas.

About 57% of households rely on kerosene lamps (about 40%), candles (about 10%) or firewood (about 8%) as main sources of energy for lighting. Use of electricity for lighting has increased tremendously from about 1% in 1978 to about 18% in 2012. About 95% of households rely either on firewood (about 82%) or charcoal (about 13%) as main sources of energy for cooking.

The census findings highlight diverse policy issues covering social, demographic and economic dimensions. Rwanda faces competing challenges of population density, settlement, urbanisation and agriculture development. While trends in utilities like access to electricity is impressive, some gaps remain. Rwandans are living longer due to improving health and the population is expected to continue growing relatively fast before it slows down. The population more than doubled from 4.8 million people in 1978 to 10.5 million in 2012 and is projected to have grown to 11.3 million in 2015 and to reach 16.3 million by 2032. This will put pressure on services, economic opportunities and land and thus needs to be considered in health policy and the sustainability measures for subsequent interventions.

3.1.2 HEALTH SYSTEM AND ITS ORGANIZATION

The MOH is the lead and has overall stewardship on health issues. There are 15 other government ministries that implement activities that directly or indirectly impact the health of Rwandans. Development partners, faith-based organizations (FBOs); non-governmental organizations (NGOs); professional associations and regulatory bodies (e.g., the medical Council) also support the health sector1. The Rwanda Biomedical Center (RBC) is the implementing arm of the MoH.

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

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1 Rwanda HSSP III 2012-2018

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Figure 1: Population Growth in Rwanda
National level: 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.

Health services are provided by different types of providers, e.g., public, faith-based, private-for-profit and NGO. The health sector is composed of administrative structures and implementing agencies at all levels. For separation of functions, implementer agencies are autonomous or semi-autonomous.

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 inter-sectoral collaboration).

Sector level: At sector level, health centres, dispensaries, health posts and community health workers are under the administrative responsibility of the Umurenge executive committee. The subcommittee on health supervises the activities of the health facilities at this level.

Cells: health posts provide health promotion, preventive and basic curative services

At village level, there are community health workers and community groups and committees who are supervised administratively by those in charge of social services and technically by those in charge of health centres. CHWs receive compensation for their work through formally established local cooperatives.

Non-government Sector

The role of the private sector is not only in service provision, but also in the production, promotion, and social marketing of varied medical products widely used for disease prevention (e.g., condoms and insecticide-treated bednets) and treatment (e.g., oral rehydration solution). Faith-based institutions also play a significant role in pre-service education of providers.

3.1.3 NUTRITION

Considerable progress has been made in reducing malnutrition in children and women of reproductive age. This has largely been achieved through the 1,000 Days campaign to eradicate malnutrition launched in 2013 and actions under the multisectoral National Food and Nutrition Policy 2014. Nonetheless, a few issues need continued attention. Anaemia prevalence in females of reproductive age (15 to 49 years), for example, is 19 percent and overall, 37% of children ages 6-59 months have some level of anemia. This is significant since children with iron deficiency are more likely to have delayed psychomotor development as well as impaired language and motor skills. They are particularly vulnerable to iron deficiency during the first 2 years of life, after which much of the damage may be irreversible. At birth, delayed cord clamping increases haemoglobin and haematocrit and improves iron status up to 6 months of age.

Rwanda is among the countries adhering to the globally recommended breastfeeding practices. The Rwanda DHS 2015 (RDHS) reports that 99% of children are breastfed for at least some time. Eighty-one percent of children are breastfed within one hour of birth, an increase from 71% five years earlier, and 96% percent are breastfed within one day of birth. Reports on exclusive breastfeeding are also impressive: nearly 9 of 10 infants under 6 months receive only breast milk. Overall, the median duration of breastfeeding is about 28 months, but only about 18% of children between 6 months and 2 years are fed in accordance with the World Health Organization (WHO) Infant and Young Child Feeding (IYCF) practices. Strategies for improving complementary feeding and micronutrient intake remain critical priorities during the first thousand days.

2 Comprehensive evaluation of the community health programme in Rwanda, 2016 Final Report

3 Guideline: Delayed cord clamping for improved maternal and infant health and nutrition outcomes. WHO 2014
Stunting (or chronic malnutrition) in children under 5 remains a major challenge, with a prevalence currently high at 38 percent. Stunting starts before birth and is largely caused by poor maternal nutrition, poor feeding practices, poor food quality, and infections such as malaria and HIV. Interestingly, high levels of stunting are seen across all wealth quintiles, suggesting that possibly other factors (e.g., socio-cultural) may be involved. The current rate of reduction in stunting at approximately 1% per year will not result in meeting the targets set out in the Rwanda Vision 2020.

According to the Rwanda National Food and Nutrition Strategic Plan, chronic malnutrition may occur when pregnant women do not have adequate nutritional food intake during pregnancy. Stunting is also closely linked to poor gestational growth and low birth weight, but the risks continue after birth, particularly during the age of 6-24 months. The foods, feeding, and care required for normal growth and development during pregnancy and the first two years of life are therefore critical. Optimal nutrition and correction of nutritional deficiencies during the early years are especially significant, as beyond 2 years of age, reversal of the damage, such as delayed mental and motor development, is often not possible. Stunting is preventable but not curable.

Several stakeholders noted that food has become more expensive in recent years and food security is therefore more challenging in some communities. Linkages with activities to improve nutrition and household food security, in addition to increasing community awareness about prevention of stunting must therefore be integral to MNCH activities.

Figure 2: Services, interventions and practices that help prevent stunting during the 1st 1,000 Days

4 Adapted from National Food and Nutrition Strategic Plan 2013-2018
3.1.4 EDUCATION

The vision of the Ministry of Education (MINEDUC) is to provide the citizens of Rwanda with equal opportunities to a high quality education through world-class learning facilities and renowned learning institutions.

Overall, about 19 percent of women and 13 percent of men in Rwanda have never attended school. This is an improvement from the RDHS of 5 years earlier, when 22 percent of women and 16 percent of men reported no education at all.

According to the Ministry of Education (MINEDUC), enrolment in secondary school had been decreasing since 2012, but is now on the rise. Net enrolment rate of secondary education is currently still low with only 32.9% of pupils of secondary school age attending school. This may have important implications for achieving adequate numbers of persons qualified for tertiary education programs (e.g., preservice medical, midwifery and nursing schools). It is important to note however, that the level of tertiary school enrolment is increasing with approximately 50% of female students in the field of health and welfare.

The Rwandan National School Health Policy fully recognizes the impact of poor health on school attendance, learning, retention, and completion rates. The key infections affecting school children are worm infestation, respiratory infections, malaria, tuberculosis (TB), measles, rubella, and HIV. Amongst adolescents in both in and out of school, HIV, STIs, and adolescent pregnancy are of concern. No comprehensive data are available on the number of teenage pregnancies in schoolgirls, although one study in 2012 identified 522 pregnant girls in schools (most of them in Karongi, Gatsibo, and Gasabo districts). Many of these pregnancies were a result of gender-based violence perpetrated by older men (sugar daddies), fellow students, teachers, and motorcyclists (cited in School Health Policy, 2014). Although the National School Health Policy recommends that pregnant adolescents be able to return to school to complete their studies, this is not yet the case for all pregnant schoolgirls. These are among the reasons why information and access to comprehensive RMNCAH services must go beyond the borders of the health sector.

In April 2016 a Comprehensive Sexuality Education (CSE) curriculum was launched and Deans of Studies from 1,508 secondary schools in 30 districts underwent a three-day training programme on the curriculum and learner-centred teaching methodologies. The aim of the CSE curriculum is to reduce adolescent pregnancies and STIs and ensure that adolescents are equipped with knowledge about human rights and the competencies they need to make safe and responsible SRH choices. Similar approaches are needed to help ensure that health education and promotion, including disease prevention, starts as early in life as possible.

Health information alone cannot account for differences in health status. For many health outcomes, there are positive health consequences related to level of education, a key social determinant. In some cases, the impact of education is even more striking for those who study beyond secondary school. As such, Rwanda is making progress to achieve Education For All (EFA) and has embarked on reforms to improve every aspect of the quality of education. This is in line with the EDPRS II aim of developing a knowledge-based and technology-led economy.
3.1.5 WATER, SANITATION AND HYGIENE (WASH)

Worldwide, about 3 in 10 people, or 2.1 billion, lack access to clean and safe water at home and more than twice that number of people (4.5 billion) lack safely managed sanitation (WHO 2017). In Rwanda, about 73% of the households collect their water from improved water sources, the most common being protected springs/wells (32%) and public taps outside the compound (27%). Only 10% of households have running water and overall about 27% of households use sources of water that have not been improved. Only 4% of households have a hand washing facility with soap and water.

The percentage of households using improved water sources is higher in urban areas (about 92%) than in rural areas (about 69%). Access to improved water sources has increased from 51% of all households in 1978 to about 73% in 2015. Fifty-four percent of households have access to an improved, unshared toilet facility (57 percent in rural areas and 42 percent in urban areas). Only 1 percent of households have toilets that flush to a piped sewer system, while 4 percent use a ventilated improved pit (VIP) latrine. However, almost half of households (48 percent) use unshared pit latrines with a slab. These household characteristics toilets are considerably more common in rural households than urban households (52 percent and 30 percent, respectively).

About 96% of households have toilet facilities, with unshared pit latrines being the most commonly used across the country (about 82% of those with such facilities). Unshared latrines are the most commonly used in both urban and rural areas (56% and 88% respectively).

At the facility level, key informants cited the need for renovation of and/or upgrading facilities to ensure and adequate number of sinks with running water; hygienic and functional toilet facilities (for staff and patients); and ensuring staff understand and implement basic hygiene and infection prevention practices. Improving WASH in health facilities would potentially lead to higher quality of care, fewer healthcare-related infections; greater update of health services and improvements in staff morale5.

3.1.6 SEXUAL AND GENDER-BASED VIOLENCE

Domestic violence has physical, emotional, and mental health impacts for most victims, especially women and their children, although men are not exempt. The 2014/15 RDHS found high levels of sexual and gender-based violence (SGBV) in Rwanda: 35 percent of females and 39 percent of males aged 15 to 49 years had experienced violence since the age of 15 years. Sexual violence however, is higher among women: 22% of women (aged 15-49) and 5 percent of men report having experienced sexual violence at least once in their lifetime.

The data show that experience of physical violence varies by background characteristics. Older women (40-49) are more likely to have experienced physical violence (43 percent) than younger women (24 percent among 15-19). The reason for this is not clear, although one reason may be that they have had a longer time of exposure. Similarly, women with five or more children are more likely to have experienced physical violence (46 percent) than women with no children (23 percent). Married women are more likely to have experienced physical violence than those who have never been married, implying that in Rwanda violence perpetrated by spouses is more prevalent than violence perpetrated by other individuals. (2014/15 RDHS). The RDHS also summarizes findings in the areas of emotional violence: controlling behaviors, manifesting in the form of extreme possessiveness, jealousy or anger, threats, monitoring whereabouts, and attempts to isolate partners from their loved ones.

The high rates of SGBV were the motivating factor for the creation of Isange (Welcome) One Stop Centres in July 2009 of which there is one in every District. The program is aimed at providing psychosocial, medical, police and legal services to adult and child survivors of gender based violence and child abuse occurring in the family or in the community at large. This is a good example of multisectoral collaboration and coordination between the Ministry of Gender and Family Promotion (MIGEPROF), the MoH, and the Ministry of Justice (MINJUST).

5 WHO and UNICEF: Water, sanitation and hygiene in health care facilities, status in low and middle income countries and way forward, 2015
There is still much work to be done. Many acts of gender-based violence, particularly domestic violence, are not clearly understood. Spousal rape, although defined as a crime in the Law on Prevention and Punishment of Gender-based Violence, is still not seen as such by many Rwandans. Sexual intercourse, for example, is often viewed as the husband’s conjugal right alone. Other forms of domestic violence such as beatings and physical injury of spouses, denial of property rights, verbal insults, psychological harassment, etc. are often perceived as “normal” in the family. Interventions to address GBV must therefore address transforming social norms.

Another challenge is increasing the number of women who seek help and ensuring a safe environment to do so. Overall, only about 48% of women who have ever experienced physical or sexual violence sought help to stop the violence. Another 28% of women never sought help, but told someone about the issue. The Rwanda Women’s Network (RWN), a national NGO dedicated to empowering and improving the socio-economic welfare of women, offers legal, medical, and referral services to vulnerable women and child victims/survivors of SGBV. RWN approaches such as the creation of safe spaces for women must be considered as part of grassroots responses to SGBV.

Support to victims must also include accountability. Gender-based violence is acknowledged as a vastly under-reported crime. In addition to ignorance of the law, of what constitutes GBV, and of one’s own rights, victims may fear coming forward, either from embarrassment or a sense that it is a “family matter” or because of the impact prosecution may have.

3.1.7 MALARIA, HIV AND TB

Rwanda is one of the few countries in the region to meet the MDGs targets for maternal health, but also those related to HIV and TB. Considerable progress has been made in HIV prevention and treatment: in 2016, the HIV incidence rate was 0.27 and the prevalence rate 0.7. Between July 2015 and June 2016, the number of health facilities offering voluntary HIV testing and counselling increased to 99 percent and 96 percent of these facilities provided a complete package of HIV services including, elimination of mother to child transmission (EMTCT) of HIV and antiretroviral (ART) services (RBC, 2016).

Despite this progress, several population groups remain at risk. Of particular concern to MNCH is prevention of unintended pregnancy among HIV-positive women, due to the low utilization of modern contraceptive methods (including condoms) and challenges in monitoring FP use among women living with HIV (RBC, 2016).

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6 Ibid

7 National Strategic Plan for Fighting Against Gender-based Violence 2011-16: MIGEPROF
Tuberculosis (TB) incidence in Rwanda is the lowest in the East African region at 6.6 per 100,000. Although TB more adversely affects men, especially ages 25 to 34 years, than women (4.3 per 100,000 vs. with 2.3 per 100,000), it nonetheless presents a considerable challenge for MNCH due to co-infection with HIV, multidrug resistance and household transmission\(^8\).

One-stop services for all TB-positive persons living with or without HIV have contributed to the reduction of new TB cases among people living with HIV (PLHIV). To help improve TB case finding and reporting among PLHIV, integrated HIV/TB training activities are also in place for health care providers and health facility managers. In addition, TB was integrated into the IMCI guidelines in 2014 to intensify detection of TB among under-five children.

Malaria was identified as the third largest cause of maternal death in 2015/16, whilst it had not been in the top three causes of death in previous years (MDRS Report, 2015/16). The number of reported cases increased from 179 per 1,000 in 2014/15 to 308 cases per 1,000 in 2015/16. This increase has been attributed to several possible reasons, including lack of protection against mosquito bites and the possibility that if bed nets are available, they may not have been used properly.

Malaria is one of the key factors affecting MNCH in Rwanda. Pregnant women and children under 5 are the most vulnerable groups affected by malaria, as it is associated with maternal anaemia, premature delivery, low birthweight, and death. The WHO recommends the following interventions for the prevention and treatment of malaria infection during pregnancy:

- Use of long-lasting insecticidal nets (LLINs);
- Intermittent preventive treatment in pregnancy (IPTp) as part of antenatal care;
- Prompt diagnosis and effective treatment of malaria infections.

In December 2015, eight Rwandan ministries contributed to the Malaria Contingency Plan and several measures and strategies have been put in place to combat the malaria burden including a Malaria Operational Plan, approved by the U.S. Global Malaria Coordinator, which reflects collaborative discussions with the national malaria control programs and partners in country.

\(^8\) From RMNCAH Policy 2017-2030
3.1.8 REPRODUCTIVE HEALTH

The National Composite Index for Family Planning (NCIFP) is a report of survey findings that measures family planning policy and program effort, allowing for comparison across 90 developing countries. Globally, Rwanda’s program performs very well, far outpacing other sub-Saharan countries. In the Africa region, Rwanda ranks second of 6 East and Central African countries for modern contraceptive prevalence rate (mCPR) among women in union.

Rwanda and Kenya are ahead of the other 4 countries for the lowest unmet need for FP. Conversely, Rwanda is one of the lowest in the region for mCPR among unmarried sexually active women. This highlights the need for efforts focused on increased access to modern contraception for all couples of reproductive age, particularly adolescents and other unmarried women.

According to the 2014/15 RDHS, considerable progress has been made in increasing knowledge of at least one method of contraception in Rwanda especially of the condom (98% of females and 100% of males knew of this method). However, uptake of use of any method of contraception, or contraceptive prevalence (53% in 2014/15) has stagnated since 2010 (52%), thereby falling short of the 2015 target of 62 percent for 2014-15 set in the Health Sector Strategic Plan (HSSP III, 2012-18). Figure 6 shows the trends in unmet need, met need with modern methods and the percentage of demand satisfied with modern methods, 2000 to 2014/15.

The promotion of contraception as part of an integrated postnatal care service prior to discharge from a health facility would reduce unmet need and reap future benefits as part of integrated care -RMNCAH Policy 2018-30

Total demand for family planning did not change between 2010 and 2014-15 (72 percent). However, over that period, the percentage of total demand satisfied by modern methods increased from 62 percent to 66 percent. In terms of demand satisfied, there are notable differences in association with demographic factors. As expected, percentages of demand satisfied are higher among urban women (77 percent), those living in wealthier households (78 percent), those with more education (80 percent), and those residing in North province (80 percent).

The most recent RDHS (2014/15) also reports that minimal variability exists in unmet need by age except for the youngest and oldest women, who have the lowest percentages of unmet need. Up through age 34, most unmet need for family planning involves birth spacing. At age 35 and thereafter, most unmet need is associated with limiting childbearing. Total unmet need for family planning is higher in rural areas (19 percent) than in urban areas (17 percent). The data show that unmet need decreases with increasing education and wealth.

9 Weinberger, M., Ross J, The National Composite Index for Family Planning (NCIFP); Avenir Health 2016

10 RDHS 2014/2015
Post-partum family planning (PPFP), the initiation of a modern FP method within the clinical postpartum period of six weeks; and extending that use for at least two years after a birth can help ensure a healthy inter-pregnancy interval. Such interventions can lead to reductions in the maternal and infant and neonatal mortality rates, which are all adversely affected by high fertility and frequent, closely spaced births.

Because postpartum women have several contacts with the health system – from pregnancy through the 12 months following birth – this presents several opportunities for integrated PPFP services. The RDHS shows that initially there is very low use of modern PPFP, followed by a sharp increase from about three months to seven months. Even at 7 months, use of modern PPFP is low relative to overall FP use in Rwanda. This is of particular importance because if a woman becomes pregnant in the first year following a birth, birth spacing will fall short of the recommendation of at least two years.

**FIGURE 7 Modern Contraceptive Use in Rwanda**

**Figure 7: Modern Contraceptive Use in Rwanda**

A 2014 study of post-abortion care (PAC) costs in Rwanda revealed that the average annual PAC cost per client, across five types of abortion complications, was US$ 93. The total cost of PAC nationally was estimated to be US$ 1.7 million per year, 49 percent of which was expended on direct non-medical costs. Post-abortion care comprises a significant share of total reproductive health expenditure in Rwanda and investing more resources in providing contraceptives to prevent unintended pregnancies would likely reduce health systems costs (Vlassoff et al, 2014). Because the cost of preventing an unintended pregnancy through use of modern contraception is far lower than the cost of providing care for an unintended pregnancy, for each additional dollar spent on contraceptive services above the current level, the cost of pregnancy-related care would drop substantially. Access to family planning services is a critical component of post-abortion care and is therefore integral to the National Family Planning/Adolescent Sexual Reproductive Health (FP/ASRH) Strategic Plan.

On a global level, fully meeting the needs for both modern contraception and maternal and newborn care would cost $53.5 billion annually—RWF 7200 per person—in developing regions. Investing in both contraceptive and maternal and newborn services together results in a net savings of $6.9 billion compared with investing in maternal and newborn health care alone.

But the benefits go beyond economics. Family planning use is directly linked to averting both maternal and newborn deaths. Use of modern contraception could prevent as many as 1 in every 3 maternal deaths by helping women to delay childbearing; facilitate healthy timing and spacing of pregnancy; avoid unintended pregnancies (and therefore abortions); and to stop childbearing when they have their desired family size. Spacing pregnancies at least 2 years apart ultimately helps significantly reduce newborn and child deaths.

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11 National FP/ASRH Strategic Plan 2018-2024

12 Guttmacher Institute 2017

3.1.9 MATERNAL HEALTH

Reductions in maternal mortality were dramatic during the MDG era. Rwanda was one of the few countries to meet MDG Goal 5A: reduce the maternal mortality ratio by three quarters between 1990 and 2015. This target for Rwanda was 268 per 100,000 live births. As of 2015, the maternal mortality rate was 210 per 100,000 live births according to RDHS.

This success was underpinned by the implementation of recommendations in Rwanda’s ‘2008 – 2012 Roadmap to Accelerate the Reduction of Maternal and Neonatal Morbidity and Mortality’. The document highlighted evidence based practices and programs which have been shown to be highly effective in contributing to the improvement of maternal and neonatal health (MNH), including the three pillars of maternal health: emergency obstetric and neonatal care (EmONC), deliveries by skilled birth attendants (SBAs), and family planning (FP).

Rwanda’s achievements in each of these interrelated areas are directly linked to the declines in maternal and newborn morbidity and mortality. Deliveries attended by a skilled provider have steadily increased over the last decade, with currently 91% of women giving birth in a health facility and the same percentage assisted by a skilled provider. This is a substantial improvement from 2010, when only 69% of women were assisted by a skilled provider during birth (RDHA 2014/15). The human resources required for sustaining this increase, while ensuring quality of care is a main challenge. A focus on training additional skilled, competent providers –especially midwives- is an issue that must be addressed.

The role of community health workers (CHWs) in identifying pregnant women in the community and accompanying them to a health facility for ante/postnatal care and delivery, the RapidSMS system which has facilitated the transfer of pregnant women in labour to the appropriate health care facility, and increased numbers of ambulances country-wide have also had a positive impact on outcomes.

Access to antenatal care (ANC) is high in Rwanda with 99% of pregnant women receiving at least one antenatal contact, and 56% of women had their first antenatal contact before the fourth month of pregnancy. However, only about 44% had at least 4 antenatal visits14. Cultural factors remain a concern, as most women do not access ANC until the (mid to late) second trimester, making the recommended 4 visits particularly challenging to meet. Stakeholders indicated that this is often the case even among more educated urban dwellers. With the advent of the 2016 WHO recommendations on ANC, proposing an increase from 4 to 8 contacts, new approaches will be needed to encourage early ANC attendance and improve ANC quality of care. Solutions proposed through key informant discussions include the introduction of antenatal outreach clinics at the health sectors, and a phased approach of reaching the 8 contacts via a gradual increase. Determining women’s current experience of ANC and what they deem important are first steps in ensuring that services are family-centered and appropriate for the community served.

In Rwanda, there are nearly 15,000 villages. Each village selects 3 Community Health Workers (CHWs): One CHW, the Animateur de Santé Maternelle (ASM), is responsible for maternal and newborn health. The other two comprise a binôme –a pair of male and female CHWs who carry out a number of broader health activities. The ASMs carry out specific activities targeting women and their newborn from pregnancy until the infant reaches the age of 2 months. This includes antenatal contacts. The ASMs first identify pregnant women in their locale and refer or accompany them for antenatal care at health center.

They then have at least two other contacts after the pregnancy is confirmed: between five and six months of pregnancy and again between eight and nine months of pregnancy, for a total of 3 visits. During the home visits, ASMs assist the mother with birth preparedness and identify danger signs (with appropriate referral). They also provide a range health education and advice targeted at issues like malaria and nutrition. For instance, they screen mothers for malnutrition and ensure they have treated bed nets.

The Three Delays Model15 has been a useful framework for examining approaches to address access to care, care seeking behaviors and quality of MNCH services. The delays are:

- Delay in recognition of danger signs and decision to seek care

15 Thaddeus S, Maine D (1994) Too far to walk: maternal mortality in context. Social Science and Medicine 38 1091-1110
• Delay in reaching appropriate source of care
• Delay in obtaining adequate and appropriate treatment

The labor, delivery, and the immediate post-partum periods are when most maternal deaths occur. A review of maternal death audits in Rwanda identified patient or community-related factors as in 30.3% of deaths. However, health system failure was identified as the main factor responsible for the majority of deaths (61%). These factors are all part of the third delay and include:

• Poor case management;
• Delay in referring patient to higher level of care;
• Lack of skilled staff;
• Insufficient diagnostic means;
• Delay in recognizing complications; and
• Inadequate monitoring of labor and/or use of partograph
• Poor monitoring/follow up in immediate post-partum period

The majority of women and their unborn infants are healthy at the onset of labor. Delays in accessing skilled care when complications arise can significantly affect outcomes for both mother and baby. Urgent attention to these factors, in particular during intrapartum and immediate postpartum care, is therefore vital in addressing maternal morbidity and mortality.

Possible interventions include building capacity in emergency triage and referral to ensure timely care and interventions; adding EmONS to preservice curricula and ensuring basic competency for all midwives, nurses and physicians in managing complications; mandatory use of the partograph as a labor management tool; and ensuring adequate skilled staffing for labor, delivery and postnatal units.

Clinical causes of maternal death are hypertensive disease in pregnancy, including pre-eclampsia/eclampsia (11%) and unsafe abortion (4%) (Rwanda Annual Health Statistics 2014). For all women, post-partum hemorrhage was the leading direct cause of death (22.7%), followed by obstructed labor (12.3%). Indirect causes accounted for 25.7 percent of maternal deaths, with malaria as the leading cause (7.5%).

An important issue that can be addressed at the community level is identification of potential obstetric fistula and support to fistula cases. Every year between 50,000 to 100,000 women globally are affected. The development of obstetric fistula is directly linked to obstructed labor, one of the major causes of maternal mortality. Although in some situations, fistula can happen from trauma (such as sexual violence); damage during an instrumental delivery; or infection, the vast majority of cases (76 to 97%) result from prolonged or obstructed labor. In Rwanda from 2003 to the end of 2016, more than 5,000 women received obstetric fistula repair, although a significant number of women still require treatment with many hidden obstetric fistula cases in the community (MoH, 2016). Most often these girls or women are isolated because they suffer constant (urinary and/or fecal) incontinence, and experience shame, social stigma and often segregation from their families and communities.

While there is currently no available data on the prevalence or incidence of obstetric fistula, on-going fistula repair programs were available primarily at two referral sites [Ruhengeri and Rwanda Military Hospitals (RMH)] and the University Teaching Hospital of Kigali. Since June 2012, the MOH, in collaboration with implementing partners, as part of reinforcing health facility capacity to provide care and treatment to mothers with fistula, set up a target of establishing a 3 level fistula repair model including:

1. Two level-3 facilities with advanced fistula surgeons mandated with offering fistula


20 The precise prevalence rate for obstetric fistula is not yet known.
receptor repair services and training other medical personnel in fistula care management;

2. Three level-2 facilities with capacity to provide simple fistula repair on a routine basis and to refer complex cases to level-3 facilities; and

3. Three level-1 facilities with equipment to support fistula prevention and/or act as outreach sites for community fistula repair projects

Prevention is the key to ending fistulae. Some key preventive measures include: timely referral and access to skilled care (avoiding prolonged labor); educating the community on causes; promotion of healthy timing and spacing of pregnancies; access to family planning; and postponing early marriage and childbearing.

For care during the days and weeks after birth, the postnatal period, global guidance reflects the critical nature of this phase for the survival of mothers and their newborn. Most neonatal deaths take place in the first week of life and nearly half of maternal deaths during that same period. However, the most recent RDHS indicates that only about 43% of women had a postnatal check-up in the first 2 days after delivery. Though the percentage has increased significantly (up from 18% in 2010), still more than half of postnatal women (55%) did not receive postnatal care. The survey also indicates that the higher the birth order, the less likely women were to have a postnatal check-up. The situation is even more dire for newborns, with only a reported21 19% receiving postnatal care in the first 2 days after births.

The WHO recommends postnatal care in the first 24 hours for all mothers and babies, regardless of where the birth occurs. A full clinical exam is advised around 1 hour after birth, when the baby has had his/her first breastfeed. The baby should be checked again before discharge. For home births, the first postnatal contact should be as early as possible within 24 hours of birth and, if possible, an extra contact for home births at 24–48 hours is desirable. After the first day, three additional visits are recommended: day 3 (48–72 hours), between days 7–14 and 6 weeks after birth. These visits/contacts can be made at home or in a health facility, depending on the context and the provider. Additional contacts may be needed to address issues or concerns.22 This is consistent with the Rwanda National Postnatal Care Guideline for Mother and Newborn (2015).

Home visits by the ASM may carry out these guidelines. In the postnatal period, ASMs visit the mother and normal weight baby at home at least 2 times: on day 1 (after health facility discharge); between days 7-14. When the baby is low birth weight, this increases to 3 visits. During these visits, they support breastfeeding and care for LBW babies (e.g., skin-to-skin contact and adequate feeding); screen for normal weight gain and nutrition. As needed they refer/accompany the mother to the health center for postnatal visits or further attention to specific concerns or danger signs.

The Postnatal Care Pre-Discharge Checklist was developed to assist providers in ensuring essential actions for every mother and baby before discharge from the facility. It outlines the key assessment areas and recommended interventions for each. To improve uptake services before and after birth, a few stakeholders suggested that increased social mobilisation for antenatal and post-natal care and greater male involvement along with the addition of features like early detection of pregnancy may be effective. It was also recommended however, that the current content, delivery and duration of this care be reviewed to consider possible barriers or facilitators for care-seeking.

In 2015, out of 362,600 births in Rwanda, 1,100 women died during pregnancy or complications related to childbirth and 6,300 babies died in their first month of life, with an additional 5,900 stillborn23. The key informant interviews highlighted the Maternal Death Audit (MDA) as an effective methodology to ensure that a robust understanding of the reasons for maternal deaths and potential prevention measures are identified. Reviews of maternal deaths in Rwanda began in 2008, with audits of neonatal death audits beginning the following year. In 2014, a national MDSR committee was formed, along with the publication of the National Technical Guideline for MDSR as part of the transition from MDA to Maternal Death Surveillance and Response (MDSR). Rwanda added stillbirth audits to the system in 2013.

21 RDHS 2014-15: Mothers age 15-49 who had given birth in the 2 years preceding the survey where asked about postnatal check for themselves and their newborn and the timing and place of that check

22 WHO Recommendations on Postnatal Care for the Mother and Newborn 2013

23 Healthy Newborn Network 2016
An assessment of MDSR is in now progress to measure the scope and institutionalisation of MDSR implementation and to describe gaps.

Key informants also emphasized that serious consideration should be given to ‘Near Miss’ Audits which involve an assessment of near fatal health complications in pregnancy, labor, or post birth. The purpose of these measures is to strengthen capacity in identifying the responses that need to be put in place to reduce future preventable maternal deaths (RMNCH Policy 2017 – 2022).

### 3.1.10 NEWBORN HEALTH

The current (2014/2015) neonatal mortality rate is 20 deaths per 1000 live births. The main causes of neonatal death are complications of pre-term birth, intrapartum related complications including birth asphyxia, and neonatal infections (sepsis, meningitis pneumonia, diarrrhoea). About 90% of these deaths occur within the first seven days of life, contributing substantially to the under one and under five mortality rates. The majorities of the deaths in the first week occur in health facilities within the first 24 hours.

Save the Children’s Birth Day Risk Index24 compares first-day death rates for 186 countries and concludes that in much of the world, children are at greatest risk on the day they are born. That first day therefore is an opportunity to save newborn lives and help ensure their ability to thrive. In fact, ensuring that mothers and newborns have access to a few low-cost, lifesaving interventions in a functioning health system could prevent most newborn and maternal deaths. Universal coverage of just four products: resuscitation devices; chlorhexidine to prevent umbilical cord infections; injectable antibiotics for newborn sepsis and pneumonia; and corticosteroids for women in preterm labor to prevent breathing complications in premature newborns would immediately and effectively address the causes of preventable newborn death25. Early and exclusive breastfeeding and the availability of Kangaroo Mother Care and related support and follow-up will avert even more deaths. Rwanda will identify which interventions are lacking and would be most strategic to include in the plan.

Low birth weight and prematurity (and related complications) are the underlying causes for most newborn morbidity and mortality. Currently, prematurity is the leading cause of death among children under 5 globally, and a leading cause of disability and ill health later in life 26. According to the most recent RDHS, the majority of newborns in Rwanda (92%) had a birth weight reported. Among these infants, only 6% were classified as having a low birth weight (i.e., less than 2.5 kg). The pre-term birth rate (babies born before 37 weeks gestation) is 10% in Rwanda, for a total of about 35,000 pre-term babies born each year. Of these, about 2000 infants are born before 28 weeks. There are about 2600 child deaths per year directly related to premature birth and the 1000 preterm babies who survive with moderate or severe neurodevelopmental impairment.

Infant mortality and morbidity from preterm birth can be reduced through interventions before or during pregnancy, and after birth. Interventions for all women of childbearing age can focus on primary prevention and reduction of the risk of preterm birth (e.g. adolescent pregnancy, smoking cessation, malaria or anemia) or aim at minimizing the risk in women with known risk factors (e.g. pro-gestational agents, cervical cerclage). However, the most beneficial set of maternal interventions are those that are aimed at improving outcomes for preterm infants when preterm birth is inevitable (e.g. antenatal corticosteroids, magnesium sulfate and antibiotic prophylaxis), all of which are included in Rwanda’s clinical standards for preterm birth at the hospital level. Special care of the preterm newborn to prevent and treat complications of prematurity is also critical to newborn survival27.

Neonatal Death Audits have been implemented to determine the cause of death, and a system of Neonatal and Child Death Surveillance and Response (NCDSR) is being introduced to establish the measures that need to be put in place to prevent future neonatal deaths. (RMNCH Policy 2017 – 2022).

Prevention of mortality (including stillbirths) and improving outcomes for newborns will involve multisectoral efforts at all levels. Community recognition and appropriate action, including use of the RapidSMS system in the

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24 Surviving the First Day, State of the World’s Mothers 2013, Save the Children


26 Every Preemie Scale Rwanda; www.EveryPreemie.org; USAID 2015

27 WHO recommendations on interventions to improve preterm birth outcomes 2015
presence of newborn danger signs; upgrading and equipping neonatal health units in district and referral hospitals; ensuring availability of Kangaroo Mother Care (KMC) and educational preparation of midwives and neonatal nurses to ensure competency in the provision of essential and sick newborn care. This not only highlights the critical need for a skilled workforce but also the need to organize services to facilitate integrated care for maternal, newborn and child health.

3.1.11 CHILD HEALTH

Rwanda has made impressive achievements in reducing infant mortality and under-five mortality rates: infant mortality declined from 50 deaths to 32 deaths per 1,000 live births between 2010 and 2014/15 and under-5 mortality decreased from 76 deaths to 50 deaths per 1,000 live births over the same period (RDHS, 2014/15). Child mortality is higher in rural areas and lower among households in the highest wealth quintile. Some challenges that remain are: only 54% of children <5 with symptoms of acute respiratory illness (including 14% from community health workers), 49% with fever (including 13% from community health worker), and 44% with diarrhoea (including 10% from community health worker) had received care from a health facility or provider. Improving health seeking behaviour among children with common childhood illnesses and reducing barriers to access care will have an impact on reducing child mortality.

Improvements in child survival rates can largely be attributed to the combination of efficient preventive programs and high coverage of curative services such as the following:

**Preventive programs**

- Vaccination: high vaccination coverage (93% of children aged twelve to 23 months are fully immunised and 87% of infants under 12 months). Rwanda has one of highest child vaccination coverage rates in the East African region.
- Nutrition: early and exclusive breastfeeding has greatly contributed to the improved nutritional status of infants. Other nutritional interventions for children have included the pilot use of “sprinklers” sachets containing 15 micronutrients in 19 districts. This now needs to be scaled-up so all undernourished children can benefit. The Presidential Decree for national fortification of children and adults alike.
- Malaria prevention, including bednets
- Health Promotion and BCC initiatives such as radio dramas and “edutainment” interventions; Community Based Environmental and Health Promotion Program (CBEHPP), and MCH interpersonal communication initiatives are important components of prevention.

Figure 8: Trends in childhood mortality rates in Rwanda 2006-2015
Curative services (Diagnostic and treatment)

Community level: Between 2008 and 2011, Rwanda introduced integrated community case management (iCCM) of childhood illness nationwide. Community health workers (CHWs) in each of Rwanda’s almost 15,000 villages were trained in iCCM and equipped for empirical diagnosis and treatment of pneumonia, diarrhea, and malaria; for malnutrition surveillance; and for comprehensive reporting and referral services. The number of children receiving community-based treatment for diarrhea and pneumonia increased significantly starting in the 1-year period after iCCM implementation.

- Health centre level: the implementation of Integrated Management of Childhood Illnesses (IMCI) in all health facilities. A strong Integrated Management of Child and Neonatal Illness (IMCNI) programme has been implemented together with the IMCI Computerised Adaptation Training Tool (ICATT).

- Hospital level: The introduction of the Emergency Triage Assessment and Treatment (ETAT) programme has also improved knowledge and skills in managing pediatric and neonatal emergency care.

The MoH recognizes the outstanding challenges (and therefore priorities) in addressing child health including poor nutritional status, inadequate health care seeking behaviour and treatment for childhood illnesses, indoor air pollution, and malaria. Collaborative and integrated efforts with food and nutrition, community programs, maternal health, early childhood development, and school health will be required to make continued progress in overall infant and child health.

3.1.12 ADOLESCENT SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS

A comprehensive Adolescent Sexual and Reproductive Health and Rights (ASRH&R) Policy and accompanying ASRH&R Strategic Plan was developed to cover the period 2011 to 2015. However, strategic actions were not fully implemented due to a variety of reasons identified in the RMNCAH policy.

Traditional Rwandan society created strong gender norms and ideals for both men and women. These gender norms especially affect the sexual and reproductive health of adolescents, since this group is for the first time in their lives confronted with sexuality and many physical, biological, emotional, and social changes. The last assessment for adolescent sexual and reproductive health and rights (ASRH&R) (MOH 2011) identified challenges in the implementation and monitoring of ASRH&R policies and strategies, which included limited coordination of activities; few youth-friendly ASRH services and products in health facilities and youth centres, and few programs targeting out-of-school adolescents, young adults, and high risk groups.

The 2016 Reproductive Health Law specifies: “every person having attained the majority age has the right to decide for oneself in relation to human reproductive health issues.” Therefore, further measures are necessary to devise an adolescent-specific ASRH policy. This work is currently in progress along with the development of a FP/ASRH strategic plan 2018-2024.

3.2 CHALLENGES

3.2.1 HUMAN RESOURCES FOR HEALTH AND QUALITY OF CARE

The 2015 Health Sector Policy identifies the need to increase the quantity, quality, and management of human resources for health. This is directly aligned with SDG target 3C: “Substantially increase health financing and the recruitment, development, training and retention of the health workforce...”

SDG target 3-C

Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

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The urgent need to address HRH priorities was also repeatedly identified during the April 2017 stakeholder workshop and key informant interviews. Informants often cited a lack of skilled providers, particularly midwives, as a main factor affecting the provision of basic maternity care in facilities. They stressed that there are insufficient, qualified staff overall and an inadequate skills mix to provide quality services in all health facilities. Informants further suggested that attempts to build capacity of all MNCH providers have often been thwarted by attrition and lack of a positive practice environment.

As the geographic distribution of health providers favours urban areas, a high number of rural health facilities remain under-staffed, most notably midwives and neonatal nurses. This coupled with inadequate deployment of existing staff and high turnover of health workers due to a lack of clear retention policy is compounding the HRH problem (HSSP III, Mid-term Review, 2015). Stakeholders often cited a lack of skilled providers, particularly midwives, as a main factor affecting the provision of basic maternity care in facilities. They further note that attempts to build capacity of all MNCH providers have often been thwarted by attrition and lack of a positive practice environment.

The human resources for health (HRH) workforce has seen almost a doubling of the number of doctors and nurses (doctor: population ratio 1: 16,001, and nurse: population ratio 1: 1,291), both surpassing the EDPRS target. Only the ratio for midwives has not yet reached the target and stands at a ratio of 1: 66,749 population (Rwanda Health Sector Strategic Plan 2012–2018). These targets, however, were based on 2006 WHO estimates, which recommended an average threshold of 2.3 skilled health workers per 1,000 population for skilled birth attendants.

In 2016, an updated, needs-based SDG index of minimum density of doctors, nurses, and midwives was developed, which considered a broader range of MNCH/FP services needed to achieve universal health coverage and the SDGs. The new estimated density of 4.45 physicians, nurses, and midwives per 1,000 population has now been identified as a guideline to assist countries in planning as they take into consideration the context-specific HRH needs. Comparing the current density of nurses, midwives and doctors to this new recommendation, as outlined in table xxx, Rwanda stands at less than 1 per 1000 population.

<table>
<thead>
<tr>
<th>Cadre</th>
<th>Current density</th>
<th>Equivalent per 1000</th>
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</thead>
<tbody>
<tr>
<td>Doctors</td>
<td>1: 16,000</td>
<td>1: 0.0625</td>
</tr>
<tr>
<td>Midwives</td>
<td>1: 66,749</td>
<td>1: 0.0150</td>
</tr>
<tr>
<td>Nurses</td>
<td>1: 1291</td>
<td>1: 0.7746</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>0.8521/1000</strong></td>
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</tbody>
</table>
The Global HRH strategy acknowledges that “...planning targets for countries should rather be set based on national level policy dialogue, taking into account the context-specific needs of the health system, service delivery profile, and labor market conditions. They should reflect a more diverse skills mix, going beyond the cadres of doctors, nurses and midwives to harness the potential contribution of all health workers for a more responsive and cost-effective composition of health-care teams”.

However, efforts to improve the health workforce must go beyond the discourse of availability. To realize the goal of universal and equitable health coverage, a focus on the quality of the workforce is also critical. The World Health Organisation Quality of Care framework puts forward that competent, confident, evidence-based and up-to-date practice must be the minimum requirement for all providers. Accessibility (equitable access to health workers) and acceptability (characteristics and ability of the workforce to treat everyone with dignity) round out the key principles of an MNCH workforce fit for purpose.

Figure 9: Effective Coverage as applied to SRMNH services and the midwifery workforce

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29 Global strategy on human resources for health: Workforce 2030. WHO 2016

30 WHO, ‘What do we mean by availability, accessibility, acceptability and quality (AAAQ) of the health workforce?’ http://www.who.int/workforcealliance/media/qa/04/en/

31 A Universal Truth: No Health Without a Workforce. Third global forum on human resources for health report Global Health Workforce Alliance, WHO 2013

32 The State of the World’s Midwifery 2014, UNFPA, ICM, and WHO
Using the midwifery workforce, Figure xxx illustrates the concept of effective coverage: how the domains of availability, accessibility, acceptability and quality (AAAQ) influences whether women obtain health services in relation to their needs. Using the Rwanda country brief in the State of the World’s Midwifery 2014 report may help inform policy discussions on how the composition, skill mix, deployment and enabling environment of the midwifery workforce impacts on the delivery of SRMNH services for all women and newborn who need them.33

In discussions about the competence and quality of the workforce, many key informants raised concerns about the quality and adequacy of preservice education for physicians, nurses and midwives. While most agreed that the curricula outlines are probably adequate, they opined that clinical practice and mentorship were not. As a result, graduates posted to jobs are expected to function without having demonstrating clinical competence in some basic areas.

In-service training is often seen as the fix but informants advised that this is not a cost-effective long-term solution, is often frustrated by attrition, and does not address the inadequacies in pre-service. Recommendations include:

- Pre-service educators are experienced and qualified to teach
- Review of pre-service programs in collaboration with professional councils and current HRH program being implemented with international faculty
- Explore whether there are regional and global standards on pre-service
- Review and update role of professional councils in education and licensing to practice
- Establish a required minimum time for hands-on practice (both in simulated settings and with actual patients) during pre-service program
- Entry-to-practice requirements must include demonstration of clinical competency

- Formalising and requiring a internship period before entry to practice
- Enhancing existing mentorship efforts including increasing the number of mentors (lack of time is a factor and often mentors end up working during their time off)
- Review of Rwanda Hospital Accreditation Standards

Addressing these and related pre-service training issues is aligned with one of 5 global milestones for 2020 in the Global HRH strategy: All countries have established accreditation mechanisms for health training institutions. This will involve strengthening the capacity and quality of pre-service educational institutions and their faculty. Pre-service faculty need to be adequate in not only quantity, but also in competencies to teach using updated curricula and training methodologies and to lead research activities independently. It is also critical that quality standards are aligned across both public and private training programs.34

Professional councils (regulatory bodies) also have a central role in helping to ensure pre-service education correspond with the scope of practice. In addition, collaboration between professional councils and government is important to adopt and enforce regulations that protect the public by ensuring that all health professionals are competent, adequately experienced and adhere to the agreed-upon standards and relevant scopes of practice.

The Rwanda Hospital Accreditation Standards (2014) describes a “competent and capable workforce” as one of its five risk domains on which it focuses for quality and safety improvement. The standards are organized to provide a means for evaluating progress in reducing risk and improving quality. Although used for accrediting hospitals, the standards are an excellent base from which to plan quality improvement for facility staff and services.

According to the MOH Human Resources Department, developing strategies for retention is their top priority. Regular salary increments and exploring incentives were among the primary stakeholder recommendations to help ensure staff retention. Suggested incentives included low-interest loans for mortgages and vehicles; provision of housing for those post-

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34 Global strategy on human resources for health: Workforce 2030. WHO 2016
ed to rural areas; additional salary and allowances for deployment to hardship areas; and support for professional development. They further suggested that incentives should not be cadre-specific (e.g., just for doctors). Performance-based financing was not mentioned as a possible approach to incentivize staff. An evaluation of one such effort in Rwanda, the pay for performance or P4P Scheme found the greatest effect on those services that had the highest payment rates and need the least effort from the service provider.35

4.2.2 ACCESS TO HEALTH CARE, HEALTH-SEEKING BEHAVIOR AND SOCIAL BEHAVIOR CHANGE

According to the WHO, universal health coverage means that all people have access to the health services they need without the risk of financial hardship when paying for them. Achieving this will require the following within an efficient, well-run health system that meets priority health needs through people-centered integrated care (WHO 2015):

- **Affordability** – a system for financing health services so people do not suffer financial hardship when using them.
- **Availability of essential medicines and technologies**
- A sufficient capacity of well-trained, motivated health workers to provide the services to meet patients’ needs based on the best available evidence.
- Actions to address social determinants of health such as education, living conditions and household income which affect people’s health and their access to services.

Access to health care is a key priority for the government of Rwanda toward improving the country’s overall health status. The Mutuelles de Santé community-based health insurance scheme was developed to meet the needs of Rwandans outside of the formal sector, where access to and utilization of healthcare services had been historically very low. As outlined in Rwanda’s Economic Development and Poverty Reduction Strategy (EDPRS 2), access to health care has also improved dramatically, with more than 90 per cent of the population now covered by medical health insurance.

The geographic distribution of health facilities is planned according to comparative needs of rural and urban communities, with the target of ensuring that all people living in Rwanda have access to a health facility within 5 km distance from their home36. As of 2007, more than 60% of the population lived within a 5 km radius of a health facility and 85% within 10 km.37

The effect of the July 2015 introduction of payment of services outlined in the Addendum to the Ministerial Instruction No 28/58 establishing tariffs for some health care services (ANC, delivery, and long-term contraceptive services) will need to be monitored closely to ensure that women and adolescent girls who cannot afford to pay are not further disadvantaged.

Decisions about making care accessible should not be based on workforce-to-population ratios or geographic access alone, but also be aligned with the social determinants of health (SDH) and the needs of mothers, newborns, and children in that particular locale. Addressing SDH helps to reduce health inequities by addressing the wider socioeconomic and structural factors that influence how people become sick, what risk factors they are exposed to, and how they access and use health services.38

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35 Basinga et al, 2011 Effect on maternal and child health services in Rwanda of payment to primary health-care providers for performance: an impact evaluation

36 Rwanda Health Sector Policy 2015


38 WHO: Health in the post-2015 development agenda: need for a social determinants of health approach: Joint statement of the UN Platform on Social Determinants of Health
The social determinants of health are the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels. The social determinants of health are mostly responsible for health inequities - the unfair and avoidable differences in health status seen within and between countries.

Health equity and social determinants are acknowledged as a critical component of the post-2015 sustainable development global agenda and of the push towards progressive achievement of universal health coverage (UHC). If health inequities are to be reduced, both SDH and UHC need to be addressed in an integrated and systematic manner. Source: WHO 2016

Culture and health seeking behaviours also play a major part in access. The Rwandan DHS identified poor health-seeking behaviours as a major barrier to the appropriate treatment of childhood illnesses. For example, even though boys and girls were equally likely to have symptoms of Acute Respiratory Infection (ARI) boys were more likely to have been taken to a health facility or provider for advice or treatment than girls (59% versus 49%). Residence, mother’s level of education and socio-economic status were associated with whether ARI treatment was sought.

Due to cultural norms, a pregnancy is typically not discussed before it is physically visible to others. This practice limits the opportunities that women have to obtain medical advice and support during the early months of pregnancy and undermines the potential impact of the antenatal care package on improving maternal and newborn health outcomes.

A variety of informants suggested that families might lack accurate information regarding what to feed their children and also lack awareness about health practices that could positively impact on their child’s health. The MOH/MCH Unit developed a Child Survival Strategic Plan 2012–2017, focusing on a broad range of activities including strengthening promotion of best family practices (nutrition, personal, and household hygiene). Shortly after, the National Food and Nutrition Strategic Plan 2013–2018 was launched with a focus on the national resolve to reduce stunting and improve food security.

Social and Behavior Change Communication (SBCC) can contribute to reductions of child and maternal mortality by removing barriers and maximizing incentives for families to adopt positive behaviors.\(^{39}\) It is known to play a pivotal role in the prevention of malnutrition and disease transmission, vector control, improving hygiene and sanitation, and creating demand for service provision, resulting in a healthier population.\(^{40}\)

SBCC is a research-based, consultative process that uses communication to promote and facilitate behavior change and support the social change required for improving health outcomes.

Until recently, health communication activities to promote behaviour change were implemented separately by the different health departments with limited inter-sectoral coordination of messaging. Programs with more resources, like HIV, were active in terms of sensitization campaigns both at national and at local levels but behaviour change communication messages were disseminated through various mass media channels with little interpersonal messaging.

Intensifying SBCC efforts to increase community knowledge and skills on MNCH interventions and promoting health seeking behavior

\(^{39}\) National Social and Behavior Change Communication Sub-Strategy for Maternal, Newborn and Child Health, Rwanda Ministry of Health 2012

\(^{40}\) ibid
is an MOH priority. Efforts should strategically address MNCH and all the issues affecting the Rwandan population, not solely on programs with specific funding. Approaches for SBCC must be also grounded in the contextual and social determinants of health. In this way, priorities are determined and programs are designed by and customized for the communities they intend to benefit.

The GoR has already produced strategies and approaches such as the National Community Mobilization Framework and the National Social and Behavior Change Communication Sub-Strategy for Maternal, Newborn and Child Health. These guiding documents lay the foundation for addressing health seeking, health promotion and SBCC. Collaborative efforts within the MOH and Rwanda Biomedical Centre (RBC) and among other government and stakeholder bodies will help ensure the success of these efforts. Integrated policy approaches are also necessary to address the complexity of health inequities, including food and income security and the goal of establishing universal access to health care.

3.2.3 INFRASTRUCTURE AND EQUIPMENT

Once families seek care, it needs to be accessible to them through a competent workforce as well as infrastructure and appropriate technology such as medical equipment. Stakeholder informants, at both the community and facility levels, cited availability of adequate and functioning medical supplies and equipment as vital for the provision of quality MNCH services. An infrastructure that includes an adequate number of clean and functional sinks (and safe water); toilets for both staff and patients; and the ability to implement infection prevention standards was also emphasized. Alignment with the Rwanda Hospital Accreditation Standards will help ensure these standards are met and sustained.

3.2.4 SUSTAINABILITY

Sustainability of MNCH services is a major challenge in the region. For Rwanda, fifty-nine percent of health expenditure per capita in 2016 was financed from domestic sources, 6.7 percent from private sources, and a third from external sources. (HSSP III, 2012).

Globally, however, the donor landscape has been changing, resulting in decreasing contributions and fewer resources to continue or extend existing programs. An example is the grant for Plaisir condoms, which ends in December 2017, raising questions about how to sustain a supply of affordable and acceptable condoms. Alternative future funding sources including from the private sector will need to be secured.

In response to the uncertain funding climate, this strategic plan highlights and explores the requirement to adapt existing interventions to ensure that they are contextually specific, multi sectoral and are exercising the best of use current resources, staff, and equipment. The incorporation of feedback from key stakeholders and medical professionals is imperative to service improvements and staff retention. In light of this, information and recommendations gathered via the various consultation methods have been embedded in the strategic plan wherever possible.

The cost of implementing this strategic plan (Annex V) therefore does not lie with the Ministry of Health alone. A multisectoral approach means that some of the efforts and required resources will be the responsibility of other Ministries and partners.

In addition to adequate financing, the RMNCAH Policy mandates multi-sectoral strategies, programming and interventions for sustainability. Some level of multi-sectoral collaboration is cited in most policy and strategy documents as a necessary factor for success. What may not be as apparent is how best to operationalize this principle and ensure that MNCH programs are sustainable and embedded in the broader context of national development. Details of how RMNCAH collaborates and intersects with sectors such as education, agriculture, transportation, and even within other health entities is therefore an issue that must be continually be addressed in the planning for execution of this strategic plan.

Lastly, the MNCH strategic plan must be disseminated at the community level and beyond. Ideally, input from citizens should inform such documents and their reviews. Relevant materials may be simplified when needed, but discussions about the strategic plan and what it means at each level should be familiar to everyone affected by it – not just health or Ministry professionals. Indeed, several providers and even managers were not privy to the
details of the existing strategic plan and did not know how to access it. Health centre and community staff had even less knowledge. Though many had participated in evaluations or reviews, they bemoaned the fact that results seemed only to go “to the top” and were unfortunately not shared with participants. Ownership of strategies, approaches and related interventions is a hallmark of sustainability.

3.2.5 POLICY CONTEXT

The government of Rwanda is committed to address issues of sexual and reproductive health and rights and is a signatory to several International Declarations including: the 2011 UN Commission on Information and Accountability for Women’s and Children’s Health; the 2012 Family Planning 2020 (FP2020); and the 2015 UN Sustainable Development Goals (SDGs).

This commitment is also expressed through being a signatory to regional declarations such as the 2012 Resolution adopted by the 126th Inter-Parliamentary Union Assembly on Access to Health as a Basic Right and the Role of Parliaments in Addressing Key Challenges to Securing the Health of Women and Children, and the East African Regional RMNCAH Policy 2015-2030; and Africa 2063: The Africa we want (2015).

3.2.6 ECONOMIC BENEFITS

The RMNCAH policy approach builds on the UN 2015 Global Strategy for Women’s, Children’s and Adolescents’ Health (GSWCAH), which defines globally agreed integrated effective interventions for RMNCAH. Integrated packages are cost-effective and have greater impact than vertical approaches. For instance, a simultaneous investment in both modern FP and maternal newborn health services would save more lives, and would cost less, than investing in maternal and newborn health services alone.

3.2.7 HUMAN RIGHTS APPROACH

Promoting and safeguarding MNCH should not only be regarded as an investment, but also as a basic human right. The right of all Rwandans to good health is enshrined in Article 41 of the 2003 Constitution of the Republic of Rwanda (Government of the Republic of Rwanda, 2003). The realization of this right is probably best demonstrated through attempts to achieve universal and equitable health coverage.
4.1 VISION
To achieve the highest attainable standard of health across the life course for all women, children, and adolescents in Rwanda.

The strategic plan will transform the future and ensure that women go through pregnancy and childbirth safely and every newborn, mother, child, and adolescent, not only survives, but thrives to reach their full potential.

4.2 MISSION
To ensure that all women, newborns, male, and female children and adolescents in Rwanda have universal access to quality integrated RMNCAH services in an equitable, efficient and sustainable manner.

4.3 OVERARCHING GOAL
To eliminate preventable maternal, stillborn, neonatal, and child deaths and promote the well-being of women, newborns, children, and adolescents using a rights-based, multi-sectoral approach and universal access to evidence-informed integrated RMNCAH essential interventions provided through a continuum of care.

4.4 THE STRATEGIC FRAMEWORK
The MNCH SP includes four main strategic objectives and intermediate results that need to be accomplished to reach these objectives. A fifth objective focuses on the governance and accountability required for the success of the overall Strategic Plan. The next section outlines expected outputs and activities. This is then followed by the intervention priorities derived from the stakeholder interviews and desk review. The five strategic objectives are the following:

1. Universal access to quality MNCH services for all citizens.
2. Health services organized and equipped to maximize access to quality MNCH care for all citizens.
3. Enhanced community health literacy, skills and practices through social, behavioral and community engagement efforts to improve equitable MNCH outcomes for all.
4. Available, accessible, acceptable, and high-quality MNCH workforce developed and enforced at all levels of service delivery.
5. Governance and accountability systems of integrated MNCH interventions reviewed, updated and enforced at each level.
1.1 Vision
To achieve the highest attainable standard of health across the life course for all women, children, and adolescents in Rwanda
The strategy will transform the future and ensure that women go through pregnancy and childbirth safely and every newborn, mother, child, and adolescent, not only survives, but thrives to reach their full potential.

1.2 Mission
To ensure that all women, newborns, male, and female children and adolescents in Rwanda have universal access to quality integrated RMNCAH services in an equitable, efficient and sustainable manner.

1.3 Overarching Goal
To eliminate preventable maternal, stillborn, neonatal, and child deaths and promote the well-being of women, newborns, children, and adolescents using a rights-based, multi-sectoral approach and universal access to evidence-informed integrated RMNCAH essential interventions provided through a continuum of care.
**Strategic Objective 1**
Universal access to quality MNCH services for all citizens

**INTERMEDIATE RESULTS**

**IR1.1**: A harmonized, integrated package of care targeting MNCH priorities at all levels of the health care system established and executed

**IR 1.1.1**: Operational plan for implementation of package of care developed

**IR 1.1.2**: Package of care reviewed by MOH stakeholders, revised accordingly and approved

**IR 1.1.3**: Integrated package of care drafted

**IR 1.1.4**: Priorities agreed and incorporated

**IR 1.1.5**: Existing package(s) of services reviewed and updated by multi-sectoral team(s)

**IR1.2**: Training implemented at each level of care for health providers to operationalize the package of care system established and executed

**IR 1.2.1**: Health provider training sessions organized and scheduled

**IR 1.2.2**: Training modules tested and revised accordingly

**IR 1.2.3**: Training modules developed for each cadre in collaboration with in-service training providers

**IR 1.2.4**: Existing training materials updated to reflect national integrated package

**IR1.3**: Quality of care standards based on the WHO Quality of Care Framework, the WHO MNH standards and in compliance with the Rwanda Hospital Accreditation Standards developed and executed at all 4 levels of the health system

**IR 1.3.1**: Quality of care standards and implementation plan finalized

**IR 1.3.2**: Quality of Care teams established and functional at referral, district and HC levels

**IR 1.3.3**: Multi-sector collaboration on developing requirements, roles and responsibilities of quality teams to implement standards

**IR 1.3.4**: Feedback on draft standards sought from multi-sector stakeholders and incorporated

**IR 1.3.5**: Multi-sectoral team (including consumer or beneficiary representatives) draft MNCH quality of care standards
5.1 STRATEGIC OBJECTIVE 1

Universal Access to Quality MNCH Services for all citizens

This objective is aimed at the specific clinical services or package of quality care that women, newborn and children want and need. As outlined in the RMNCAH Policy, the package should be “harmonized, integrated, sustainable and youth-friendly”. It should also ensure the components of prevention, promotion, treatment, commodities and innovative technologies at all levels of the health care system. The issue of access also must be framed around the needs of different socio-demographic groups as a step toward health equity. Implementation priorities must also consider research to assess the cost-effectiveness of interventions specific to the Rwanda context. Existing work on an MNCH package of care must not be discarded but updated to reflect the most current priorities and harmonized with existing approaches and strategies. Integral to this or any service delivery component is a quality of care system. Quality monitoring and improvement is recommended through the establishment of quality teams at each facility or group of facilities and also at the community level. Because “universal access” involves more than a package of care being available or a monitoring system in place, the success in meeting this objective overlaps with all the others: workforce; organization of services; community engagement and equitable outcomes; and of course governance and accountability. MNCH clinical priorities for this objective are derived primarily from stakeholder consultations, which correspond to key priorities and issues outlined in national documents such as the HSSP IV. Several of these clinical priorities will overlap with those of other objectives.

Intermediate Results

IR1.1: A harmonized, integrated package of care targeting MNCH priorities at all levels of the health care system established and executed

- IR 1.1.1: Operational plan for implementation of package of care developed
- IR 1.1.2: Package of care reviewed by MOH stakeholders, revised accordingly and approved
- IR 1.1.3: Integrated package of care drafted
- IR 1.1.4: Priorities agreed and incorporated
- IR 1.1.5: Existing package(s) of services reviewed and updated by multisectoral team(s)

IR 1.2: Training implemented at each level of care for health providers to operationalize the package of care

- IR1.2.1: Health provider training sessions organized and scheduled
- IR1.2.2: Training modules tested and revised accordingly
- IR1.2.3: Training modules developed for each cadre in collaboration with in-service training providers
IR1.2.4: Existing training materials updated to reflect national integrated package

IR1.3: Quality of care standards based on the WHO Quality of Care Framework, the WHO MNH standards and in compliance with the Rwanda Hospital Accreditation Standards developed and executed at all 4 levels of the health system

- IR 1.3.1: Quality of care standards and implementation plan finalized
- IR 1.3.2: Quality of Care teams established and functional at referral, district and HC levels
- IR 1.3.3: Multi-sector collaboration on developing requirements, roles and responsibilities of quality teams to implement standards
- IR 1.3.4: Feedback on draft standards sought from multi-sector stakeholders and incorporated
- IR 1.3.5: Multi-sectoral team (including consumer or beneficiary representatives) draft MNCH quality of care standards

SO 1 Key Outputs and Activities

1. Liaison meetings with appropriate sectors (e.g., research; transport; school health, etc.) to:
   a. Establish research and implementation priorities for each clinical area identified and agree on package of interventions
   b. Establish harmonized operational plan to carry out the interventions and ensure integration at the service delivery level
   c. Agree on the role and contribution of each sector for each priority
   d. Avoid duplication of efforts
2. Promote sharing, documentation and eventually application of best and innovative MNCH practices and technologies
3. Co-convene activities with similar content (such as existing in-service or CPD activities)
4. Assess existing QOC standards and practice

a. Review existing national documents as a basis for developing QOC standards
b. Contextualize/adapt WHO standards as appropriate

5. Develop a national QOC plan

Key Implementation priorities

- Integrate budgeting and financial management for carrying out this objective
- Promote operations research on access and utilization of services
- Streamline training to take place on the job when possible
  - Use approaches such as low-dose, high frequency to impart skills and maintain skills
  - Organize research to assess the cost-effectiveness of service delivery interventions

Priority MNCH clinical areas to address in package of care (overlaps with SO2)

Maternal health
- Antenatal corticosteroids for management of pre-term birth
- Prevention and management of prolonged and obstructed labor
- Prevention and management of fistula
- Postnatal care according to national guidelines both at health facility and community level
- PPH prevention, management and treatment both at health facility and community and level
- Malaria prevention during pregnancy: ensure lab and medication supplies to test and treat
- Identification and referral of pregnant women, recognition of danger signs during pregnancy by CHWs

Newborn health
- Essential newborn care
- Management of birth asphyxia
• Kangaroo Mother Care for small babies
• Care of preterm/LBW infant, especially at HC and District level
• Management of newborn sepsis / infections
• Care of the sick newborn and inpatient care of small babies
• Follow-up after neonatal inpatient care
• Postnatal care at health facility and community level

**Child health**
• Prevention and management of common childhood illnesses at health facility and community level
• Improve health care seeking for common childhood illnesses
• Immunization
• Maternal and child nutrition: maternal pre and during pregnancy and postpartum; child nutrition especially between 6-24 months
• Stunting: prevention--coordinate with the National Food and Nutrition Secretariat on implementation priorities
  • Promotion and implementation of services, interventions and practices that prevent stunting during the 1st 1000 days of life (Figure 2)
  • Micronutrient supplementation
  • Timely identification and treatment of under-nutrition
• Community management of acute malnutrition in curative services
• General
  • Infection prevention; basic aseptic technique for deliveries, safe surgery (e.g., cesarean birth)
• Integration of early childhood development at all levels of MNCH services
MNCH package of care priority areas by level of service provision

<table>
<thead>
<tr>
<th>Area of care</th>
<th>Referral</th>
<th>District</th>
<th>HC</th>
<th>Community</th>
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</thead>
<tbody>
<tr>
<td><strong>Maternal</strong></td>
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<tr>
<td>Pre-pregnancy nutrition</td>
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<tr>
<td>Antenatal care (8 contacts)</td>
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<td>Antenatal corticosteroids</td>
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<td>X</td>
<td></td>
<td>Timely referral</td>
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<td>Malaria during pregnancy</td>
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<td>Timely referral</td>
</tr>
<tr>
<td>Prolonged/obstructed labor</td>
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<td></td>
<td>Prevention</td>
</tr>
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<td>Obstetric fistula</td>
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<td></td>
<td>Refer Prevention</td>
</tr>
<tr>
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</tr>
<tr>
<td>PPH</td>
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<td>X</td>
<td></td>
<td>Refer if needed</td>
</tr>
<tr>
<td>Breastfeeding and nutrition</td>
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<td><strong>Newborn</strong></td>
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<tr>
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<td>Kangaroo Mother Care</td>
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<td></td>
<td>Stabilize/refer</td>
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<td>Timely referral</td>
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<td>Care of sick newborn</td>
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<td>Timely referral</td>
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<tr>
<td><strong>Child</strong></td>
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<td>X</td>
<td>Refer if needed</td>
<td>ICCM</td>
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<td><strong>General</strong></td>
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<td>Infection prevention</td>
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<td>X</td>
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<tr>
<td>Aseptic technique</td>
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</tbody>
</table>
Strategic Objective 2
Health services organized and equipped to maximize access to quality MNCH care for all citizens

INTERMEDIATE RESULTS

IR 2.1: All women, newborns, and children seeking care appropriately assessed (triaged) and receive timely, appropriate services

IR 2.1.1: Whole-site training for triage skills (including non-clinical staff)
IR 2.1.2: On-going mentorship and peer support for triage training and orientation

IR 2.2: WHO Water and sanitation for health facility improvement tool adapted and in use

IR 2.2.1: All staff oriented and trained on WASH and related infection prevention principles and WHO adapted tool
IR 2.2.2: Adequate and functioning hand-washing facilities with soap and clean water in place for staff
IR 2.2.3: Functional and clean toilets and hand-washing facilities for staff and clients in place and maintained
IR 2.2.4: Guidelines for safe disposal of healthcare waste in place and enforced

IR 2.3: Updated relevant protocols, guidelines, and SOPs reviewed with all providers and managers at all levels at least twice yearly

IR 2.3.1: Guidelines to monitor compliance to protocols established and enforced
IR 2.3.2: Mechanism established and implemented to disseminate and discuss updated protocols, guidelines, and SOPs to all facilities annually and confirm knowledge of these resources
IR 2.3.3: Protocols, guidelines, and SOPs reviewed and updated at least biannually

IR 2.4: Health equipment maintained as appropriate and system in place for repairs and replacement

IR 2.5: Services organized to facilitate integrated and continuity of care for outpatient services

IR 2.5.1: Staff rotation policy aligned with skill mix and expertise needed (see SO 2/IR 4) for basic MNCH services
IR 2.5.2: Commodities and equipment needed for all basic services made accessible to MNCH outpatient staff at all times
IR 2.5.3: Guidelines established for integrating services and staff trained and oriented as appropriate
5.2 STRATEGIC OBJECTIVE 2

Health services organized and equipped to help maximize access to quality MNCH care for all citizens

This objective is directly related to SO 1. Quality health services must be centered around the client. The services must therefore be organized and integrated to deliver the MNCH package of care in a client-centered and cost effective way. This also means that supplies and commodities need to be there when needed; facilities such as toilets and sinks need to be sanitary and in working order; and equipment functional. Adequate, competent staff also need to be in place and available to work. Quality teams at each service delivery point will assume responsibility for monitoring these and other aspects of quality. There will not necessarily need to be a standard formula for organizing MNCH services at all service points, so customizing services to the population needs may result in variations in how the services are set up and delivered. Stakeholders highlighted the importance of triage skills along with integration of services as integral to quality. They suggested that addressing these two issues would reduce waiting time for patients as well as allow providers adequate time to attend to what is very often a large caseload and multiple tasks.

Intermediate Results

IR 2.1: All women, newborns, and children seeking care appropriately assessed (triaged) and receive timely, appropriate services

• IR 2.1.1: Whole-site training for triage skills (including non-clinical staff)
• IR 2.1.2: On-going mentorship and peer support for triage training and orientation

IR 2.2: WHO Water and sanitation for health facility improvement tool adapted and in use

• IR 2.2.1: all staff oriented and trained on WASH and related infection prevention principles and WHO adapted tool
• IR 2.2.2: adequate and functioning hand-washing facilities with soap and clean water in place for staff and patients
• IR 2.2.3: functional and clean toilets and hand-washing facilities for staff and clients in place and maintained
• IR 2.2.4: guidelines for safe disposal of healthcare waste in place and enforced

IR 2.3: Updated relevant protocols, guidelines, and SOPs reviewed with all providers and managers at all levels at least twice yearly

• IR 2.3.1: Guidelines to monitor compliance to protocols established and enforced
• IR 2.3.2: Mechanism established and implemented to disseminate and discuss updated protocols, guidelines, and SOPs to all facilities annually and confirm knowledge of these resources
• IR 2.3.3: Protocols, guidelines, and SOPs reviewed and updated at least biannually

IR 2.4: Health equipment maintained as appropriate and system in place for repairs and replacement

• IR 2.4.1: All staff and technicians oriented to use and care of all equipment as appropriate (e.g., all staff know how to utilize, care for and access repair services for all equipment)
• IR 2.4.2: System developed to monitor functionality of equipment, report malfunctions and repair, or replace equipment as needed
• IR 2.4.3: Replacement stock of essential equipment such as bag/mask, CPAP, and delivery kits available at each service delivery point

IR 2.5: Services organized to facilitate integrated and continuity of care for outpatient services

• IR 2.5.1: staff rotation policy aligned with skill mix and expertise needed (see SO 2/IR 4) for basic MNCH services


43 See Rwanda Hospital Accreditation Standards 2014
- IR 2.5.2: commodities and equipment needed for all basic services made accessible to MNCH outpatient staff at all times
- IR 2.5.3: guidelines established for integrating services and staff trained and oriented as appropriate

**SO 2 Key Outputs and Activities**

1. Quality Improvement teams established and functioning at all facilities at all levels
2. Activities in compliance with standards and guidelines outlined in Rwanda Hospital Accreditation Standards 2014
3. On-going in-service training and engagement of relevant staff on data collection and reporting
4. All professional staff trained in triage for MNCH with on-going peer support/mentorship
5. All non-clinical staff trained in their roles related to basic triage (e.g., receptionists, guards)
6. Budget to establish cost of integration of services developed

**Key Implementation Priorities**

- Institute simplified data collection tools/reporting mechanisms (RapidSMS)
- Leadership skills for facility managers must be addressed
- Appropriate use, care and maintenance of equipment critical; many reporting non-functional equipment in place at facilities
  - Consider training staff for this purpose
  - Sharing local engineering or maintenance personnel with other institutions or facilities as appropriate
- Organization of services
  - Multiple outpatient services by the same provider (vs. client returning multiple times for additional services)
  - Referral linkage systems (bottom-up and top-down)
  - Rotation of staff –overlaps with priorities for SO2
- Supply chain—avoiding stock-outs of essential commodities such as:
  - Diagnostic supplies (tests for malaria, HIV, pregnancy, etc.)
  - Uterotonic
  - Insecticide-treated bed nets
  - Family planning commodities (contraceptive supplies and methods)
- Establish a Reproductive Health Commodity Security (RHCS) framework and strategy to ensure a reliable supply of contraceptives
- EmONC needs assessment to establish a baseline of how the present EmONC network functions and determine areas needing improvement

**Priority MNCH clinical areas to address**

- EmONC (comprehensive and basic) at all levels as appropriate
  - Community level recognition of danger signs and timely actions and referral
  - Appropriate triage of patients when they present with complications
- Infection prevention; basic aseptic technique for deliveries, safe surgery (e.g., cesarean birth),
  - Prevention of nosocomial infections
- Prevention and treatment of infectious disease –especially in pregnant women, infants and children:
  - Malaria
  - HIV
  - TB
  - Prevention of waterborne disease, especially in children under five

1. Establish and enforce continuing competency mechanism/requirements for all providers
2. Liaise with HR department at MOH to advocate for and implement law on salary increments
3. Liaise with professional associations; pre-service programs and facility management to discuss and establish guidelines for mentorship at all levels.

**Key Implementation Priorities**

- Address lack of clinical practice (including case load and competition) and preceptors for all pre-service students
- Establish a required and enforceable mechanism on mentorship for new graduates and preceptors
- Establish minimal competencies prior to completion of pre-service (not based on numbers, but competencies)
- Consider certifying of pre-service education programs by global bodies
- Establish facility-specific staff rotation policies to help ensure continuity of care; capacity-building of personnel; and ensure appropriate skill mix for each clinical area
- A positive practice environment is essential for motivating staff

Priority MNCH clinical areas to address in pre-service and in-service (to include HII or other intervention relevant to responsibility or scope of practice)

- High Impact Interventions to be incorporated into all pre-service programs for physicians and midwives in particular
- Minimal competencies for graduation:
  - Infection prevention; basic aseptic techniques
  - BEmONC and EmONC, as appropriate for role,
  - Essential care of the newborn
  - Case management for preterm, newborn and common childhood illnesses
  - Maternal, newborn and child nutrition
  - Focused antenatal care and counseling for early pregnancy according to Rwanda’s adaptation of new WHO ANC recommendations
  - Basic triage (initial assessment of patients and prioritization of care and treatment—especially for obstetric and neonatal complications)
3 Strategic Objective 3
Enhanced community health literacy, skills and practices through social, behavioral and community engagement efforts to improve equitable MNCH outcomes for all

INTERMEDIATE RESULTS

IR 3.1: Multi-sectoral health promotion and disease prevention model developed and executed based on existing national SBCC strategies

IR 3.2: Community and facility human resource allocation and services aligned with population needs and density

IR 3.3: Package of MNCH services in the health insurance scheme expanded to the population not covered

IR 3.1.1: Test the draft model periodically to ensure it reflects behavior change theory and social determinants

IR 3.1.2: Conduct formative research to inform a health promotion and disease prevention model

IR 3.1.3: Liaisons formed with SBCC, and other communications and health promotion sectors to inform the model and adapt as needed for each community (based on existing national policy and framework for Community Mobilization)

IR 3.1.4: Establish multi-sectoral taskforce on social determinants of health to identify and address health disparities and barriers to accessing quality care and used to inform the model

IR 3.2.1: Community (consumers/clients, CSOs, CHWs, etc.) systematically engaged in planning, prioritizing, organizing, integration and monitoring/evaluation of services

IR 3.2.2: Clinicians and facility managers systematically engaged in planning for HR distribution and prioritizing, organizing, integration and monitoring/evaluation of services

IR 3.2.3: MOH liaise with community and clinicians to address possible approaches to human resource allocation

IR 3.3.1: Plan to reach uncovered population in place, budget sources identified and implementation scheduled

IR 3.3.2: Data gathered on uncovered population including costs to provide coverage
5.3 STRATEGIC OBJECTIVE 3

Enhanced community health literacy, skills and practices through social, behavioral and community engagement efforts to improve equitable MNCH outcomes

Health literacy has been defined as the cognitive and social skills, which determine the motivation and ability of individuals to gain access to and understand and use information in ways that promote and maintain good health. It means more than being able to read pamphlets and successfully access healthcare services. By improving people’s access to health information and their capacity to use it effectively, health literacy is critical to empowerment.

This objective looks at some of the ways to address health equity: community literacy, skills, and practice through social and behavioral engagement. Because Rwanda already has well-established SBCC and community mobilization strategies, it will be important to reference these and align with related programs in building activities for this SO.

Intermediate Results

IR 3.1: Multi-sectoral health promotion and disease prevention model developed and executed based on existing national SBCC strategies

- IR 3.1.1: Test the draft model periodically to ensure it reflects behavior change theory and social determinants
- IR 3.1.2: Conduct formative research to inform a health promotion and disease prevention model
- IR 3.1.3: Liaisons formed with SBCC, and other communications and health promotion sectors to inform the model and adapt as needed for each community (based on existing national policy and framework for Community Mobilization)
- IR 3.1.4: Establish multi-sectoral taskforce on social determinants of health to identify and address health disparities and barriers to accessing quality care and used to inform the model

IR 3.2: Community and facility human resource allocation and services aligned with population needs and density

- IR 3.2.1: Community (consumers/clients, CSOs, CHWs, etc.) systematically engaged in planning, prioritizing, organizing, integration and monitoring/evaluation of services
- IR 3.2.2: Clinicians and facility managers systematically engaged in planning for HR distribution and prioritizing, organizing, integration and monitoring/evaluation of services
- IR 3.2.3: MOH liaise with community and clinicians to address possible approaches to human resource allocation

IR 3.3: Package of MNCH services in the health insurance scheme expanded to the population not covered

- IR 3.3.1: Plan to reach uncovered population in place, budget sources identified and implementation scheduled
- IR 3.3.2: Data gathered on uncovered population including costs to provide coverage

SO 3 Key Outputs and Activities

1. Review National Community Mobilization Framework and National SBCC strategies to inform activities
2. Collaborate with WHO to develop analytical capacity on social determinants of health for MNCH outcomes

Key Implementation Priorities

1. Expand evidence base on health inequities specific to Rwanda
2. Development of a social determinants of health framework contextualized to Rwanda (there are several existing frameworks that can be adapted)
3. Summarize MNCH Strategic Plan for different audiences
4. Review package of MNCH services to be included in the health care scheme
Priority areas to address:

1. Complementary feeding among 6 – 24 months
2. Health seeking behavior for common childhood illnesses
3. Hand washing and sanitation
4

Strategic Objective 4
Available, accessible, acceptable, and high quality MNCH workforce developed and enforced at all levels of service delivery

INTERMEDIATE RESULTS

IR 4.1: Revised regulatory and practice standards revised and adopted
IR 4.2: Standardized evidence-based pre-service programs in place based on global standards and high impact interventions (HII)
IR 4.3: Continuing competency mechanisms in place and enforced for all providers
IR 4.4: Policy for staff rotation established (aligned with data and in-service and continuing professional development (CPD) investment) and implemented
IR 4.5: Various mechanisms for staff retention in place and initiated
IR 4.6: Mentorship mechanism established and enforced for all new grads

IR 4.1.1: Multi-sectoral committees established to address gaps and agree on regulatory revisions
IR 4.1.2: Professional regulatory frameworks (medical; nursing; midwifery) reviewed against regional and global standards (gap analysis)

IR 4.2.1: Pre-service curriculum (didactic and clinical) aligned with regulatory requirements and priority HII
IR 4.2.2: Curricula reviewed against global standards for education (gap analysis)
IR 4.2.3: High impact interventions for MNCH prioritized in curricula
IR 4.2.4: Established minimum education requirements for all teachers, clinical preceptors, mentors, and managers

IR 4.3.1: System in place to vet continuing competency providers and courses
IR 4.3.2: Updated registration system in place to track all providers
IR 4.3.3: Continuing competency course topics prioritized for MNCH (e.g., EmONC, youth friendly services, HBB)

IR 4.4.1: Policy on staff rotation reviewed and revised in alignment with plan for in-service training and service delivery data (such as skills mix appropriate for case load)

IR 4.5.1: At least one new retention mechanism based on provider input added and implemented each year
IR 4.5.2: Liaise with HR department at MOH to advocate for and implement law on salary increments
IR 4.5.3: Retention contracts for nurses and midwives initiated
IR 4.5.4: Providers at all levels systematically engaged in discussions and planning with MOH HR department regarding incentives and mechanisms for reducing attrition
IR 4.5.5: Guidance developed and implemented to facilitate provider ideas and input regarding retention

IR 4.6.1: Relevant personnel (mentors) oriented and/or trained to facilitate learning of new graduates
IR 4.6.2: Requirements for clinical mentors and preceptors developed
IR 4.6.3: Guidelines for mentorship developed in collaboration with Professional Associations, educational institutions (pre-service programs); and health care facilities
IR 4.6.4: Minimum pre-service practicum established and aligned with guidelines for mentorship upon completion of pre-service
5.4 STRATEGIC OBJECTIVE 4

Available, accessible, acceptable, and high quality MNCH workforce developed and enforced at all levels of service delivery

As the title of the 2013 WHO report on human resources for health asserts, there is no health without a workforce. Gearing up the Rwanda workforce to meet the challenges of universal coverage will not be simple. The challenges not only include achieving adequate numbers of personnel, but also ensuring that each one is a competent, confident provider. These are multifaceted efforts and they involve at the very least, the regulatory authorities (professional Councils; the pre-service education institutions; national and international partners providing in-service education; faith-based and other private institutions; volunteers and community health providers; and of course consumers or beneficiaries. This strategic objective aims to address some of the major human resource concerns raised by key informants and stakeholders. Rwanda is already successful in many aspects of HRH, such as the doubling of doctors and nurses in recent years and the implementation of the HRH program, launched in 2012 to help build the healthcare education infrastructure and workforce. Adding a focus on a few specific areas of workforce capacity-building with this strategic plan will help move the country toward the goal of ensuring quality care to all. Although the country has made great strides in this area, it is worth exploring existing tools, resources, and successful interventions in this area from regional and national partners.

Again because there is likely to be some overlap of activities (particularly training, orientation, mentorship and/or other learning activities, harmonizing efforts is a key area to address in the implementation plan.

Intermediate Results

IR 4.1: Revised regulatory and practice standards revised and adopted

- IR 4.1.1: Multisectoral committees established to address gaps and agree on regulatory revisions
- IR 4.1.2: Professional regulatory frameworks (medical; nursing; midwifery) reviewed against regional and global standards (gap analysis)

IR 4.2: Standardized evidence-based pre-service programs in place based on global standards and high impact interventions (HII)

- IR 4.2.1: Pre-service curriculum (didactic and clinical) aligned with regulatory requirements and priority HII
- IR 4.2.2: Curricula reviewed against global standards for education (gap analysis)
- IR 4.2.3: High impact interventions for MNCH prioritized in curricula
- IR 4.2.3: Established minimum education requirements for all teachers, clinical preceptors, mentors, and managers

IR 4.3: Continuing competency mechanisms in place and enforced for all providers

- IR 4.3.1: System in place to vet continuing competency providers and courses
- IR 4.3.2: Updated registration system in place to track all providers
- IR 4.3.3: Continuing competency course topics prioritized for MNCH (e.g., EmONC, youth friendly services, essential newborn care)

IR 4.4: Policy for staff rotation established (aligned with data and in-service and continuing professional development (CPD) investment) and implemented

- IR 4.4.1: Policy on staff rotation reviewed and revised in alignment with plan for in-service training and service delivery data (such as skills mix appropriate for case load)

IR 4.5: Various mechanisms for staff retention in place and initiated

- IR 4.5.1: At least one new retention mechanism based on provider input added and implemented each year

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45 Continuing professional development or CPD is one way of assessing, determining or evaluating continuing competency; other methods include re-examination, peer review, self assessment, client/case review, supervised practice experience, practice evaluation, computer simulated and virtual reality testing, targeted continuing education with outcomes measurement, employer skills testing and practice evaluations.
• IR 4.5.2: Liaise with HR department at MOH to advocate for and implement law on salary increments
• IR 4.5.3: Retention contracts for nurses and midwives initiated
• IR 4.5.4: Providers at all levels systematically engaged in discussions and planning with MOH HR department regarding incentives and mechanisms for reducing attrition
• IR 4.5.5: Guidance developed and implemented to facilitate provider ideas and input regarding retention

IR 4.6: Mentorship mechanism established and enforced for all new grads
• IR 4.6.1: Relevant personnel (mentors) oriented and/or trained to facilitate learning of new graduates
• IR 4.6.2: Requirements for clinical mentors and preceptors developed
• IR 4.6.3: Guidelines for mentorship developed in collaboration with Professional Associations, educational institutions (pre-service programs); and health care facilities
• IR 4.6.4: Minimum pre-service practicum established and aligned with guidelines for mentorship upon completion of pre-service

SO 4 Key Outputs and Activities
1. Functions and staffing skills of medical, midwifery and nursing and associations reviewed
   a. Ensure the associations are providing the regulatory services needed to protect the public and ensure competency
2. Institute global mechanisms for gap analysis in education and regulation
   a. Explore examples from global health care professional associations (e.g., International Council of Nurses (ICN), International Confederation of Midwives - ICM and International Federation of Gynecologists and Obstetricians - FIGO)
3. Obtain and review global resources on regulatory processes and contextualize for Rwanda
4. Consider approaches such as Home-Based Life Saving Skills46 for CHWs and other community providers
5. Establish and enforce continuing competency mechanism/requirements for all providers
6. Liaise with professional associations; pre-service programs and facility management to discuss and establish guidelines for mentorship at all levels.

Key Implementation Priorities
• Liaise with the MOH HR department to review and harmonize strategies and priorities
• Address lack of clinical practice (including case load and competition) and preceptors for all pre-service students
• Establish a required and enforceable mechanism on mentorship for new graduates and preceptors
• Establish minimal competencies prior to completion of pre-service (not based on numbers, but competencies)
• Consider certifying of pre-service education programs by global bodies
• Establish facility-specific staff rotation policies to help ensure continuity of care; capacity-building of personnel; and ensure appropriate skill mix for each clinical area
• Outline key areas for a supportive, positive practice environment for motivating staff and working with MOH and other partners to implement them

Priority MNCH clinical areas to address in pre-service and in-service (to include HII or other intervention relevant to responsibility or scope of practice)

46 Home Based Life Saving Skills (HBLSS) is a community-based program to reduce maternal and neonatal mortality. It increases access to basic life saving care within the home and community. It decreases delays in reaching referral facilities where life-threatening problems can be managed. This is done through supporting birth preparedness and encouraging the involvement of decision makers in making timely decisions.

http://www.midwife.org/Home-Based-Life-Saving-Skills-HBLSS
• High Impact Interventions to be incorporated into all pre-service programs for physicians and midwives in particular

• Minimal MNCH competencies for graduation (includes but not limited to):
  • Infection prevention; basic aseptic techniques
  • BEmONC and EmONC, as appropriate for role
  • Intrapartum management, including partograph
  • Postnatal care of mother and newborn
  • Basic triage
  • Essential care of the newborn
  • Care of the sick and small newborn
  • Kangaroo mother care
  • Managing complications in pregnancy and childbirth
  • Case management for common childhood illnesses
  • Maternal, newborn and child nutrition
  • Antenatal care (8 contacts)—including counseling and care in early pregnancy
  • Family planning counseling and provision
  • Adolescent sexual and reproductive health
  • Ethics
Strategic Objective 5

Enhanced governance and accountability systems of integrated MNCH interventions reviewed, updated and enforced at each level

**INTERMEDIATE RESULTS**

**IR 5.1:** Existing governance and accountability systems reviewed and updated

**IR 5.1.1:** Multisectoral team(s) reviews existing governance and accountability systems and identifies gaps

**IR 5.1.2:** Governance and accountability systems aligned with updated policies and strategies

**IR 5.1.3:** Accountability strategy and implementation plan developed and operational

**IR 5.1.4:** Monitoring & evaluation of governance and accountability systems developed, implemented and integrated into HMIS
5.5 STRATEGIC OBJECTIVE 5

Enhanced governance and accountability systems of integrated MNCH interventions reviewed, updated and enforced at each level

The RMNCAH Policy mandates that all reporting on the MNCH Strategic Plan should be in accordance with agreed key accountability principles to ensure that:

- The purpose, function and deliverables are clearly defined, transparent and inclusive of all stakeholders;
- The process is socially accountable and involves civic engagement through citizens and CSOs;
- Human rights are respected (including the rights of adolescent girls to receive access to quality SRH services) and a commitment to equity be aligned with SDG accountability processes;
- The highest levels of political authority are engaged to ensure that the findings are used to shape subsequent investments, budgets, policies and programmes;
- Accountability mechanisms are independent and have established procedures to enable open and transparent engagement with key stakeholders;
- Provide regular and open reporting of data that are accessible, usable and verifiable by CSOs, communities and researchers. Monitoring should focus on outputs/outcomes, and include qualitative issues and adherence to rights.
- National reviews should cover the central and decentralised levels where services are delivered and be linked to relevant national and sub-national planning and budget cycles. This will be facilitated through strengthening capacity for participatory monitoring and accountability at the local, sub-national and national levels.
- Institutions carrying out the accountability process should collect data from various sources. Health systems data as well as independent data on access, quality and equity of health services should be reviewed.

- The accountability mechanism should be appropriately resourced; and
- The accountability mechanism should be regularly reviewed.

All reporting on this strategic plan must align with these principles and any existing government process for regular review, monitoring or evaluation.

Intermediate Results

IR 5.1: Existing governance and accountability systems reviewed and updated

- IR 5.1.1: Multisectoral team(s) reviews existing governance and accountability systems and identifies gaps
- IR 5.1.2: Governance and accountability systems aligned with updated policies and strategies
- IR 5.1.3: Accountability strategy and implementation plan developed and operational
- IR 5.1.4: Monitoring & evaluation of governance and accountability systems developed, implemented and integrated into HMIS

SO 5 Key Outputs and Activities

1. Priority areas for operations research identified and research conducted
2. Review evidence-based best practices and updated global and regional strategies for each priority area to help inform planning
3. Governance and technical support and services provided as needed for implementation of MNCH strategic plan

Implementation priorities

- Mechanism in place to help ensure multi-sectoral engagement in planning and implementation of MNCH activities and programs as appropriate
- Ensure access to HMIS data by partners and stakeholders
- MNCHSP activities cross-referenced to the existing policies, programmes and budgets of relevant sector ministries and development partners
• Supportive mechanisms in place to support coordination of activities, particularly those which involve other sectors

• Ensuring consideration of MNCHSP into planning for upcoming fiscal years’ budgets

• Technical and communication support for MNCHSP dissemination activities including organizational (MOH and other sector Ministries) and logistics coordination

• Track national health expenditures, including those for maternal and newborn health, and mobilize additional domestic resources
Several key informants (primarily at the district and health sector, but also in national level positions) expressed that they were not familiar with the components of existing strategic plans or were not able to immediately recall them. Additionally, they viewed the knowledge and monitoring of the plans as issues concerned with higher-level stakeholders. The Ministry of Health is therefore committed to ensuring that key messages of the RMNCAH Policy 2017-2030 and associated strategic plans (MNCH and FP/ASRH) are disseminated widely and across the continuum to communities as well as providers, managers, local leaders, consumers and community structures. An illustrative list of possible recipients includes:

- Teachers and schools (primary, secondary; institutes of higher education)
- Mayors, Community leaders and CHWs
- Inshuti z’Umuryango (Friends of the Family) and Umuganda
- Youth groups and Peer educators
- Faith-based and private sector facilities and organizations

The goal however is not just distribution, but also to help promote implementation, quality care, and accountability at all levels. As such, the key messages of the plan will be simplified into a shorter format for easier dissemination and discussion. To accompany and support strategic plan key messages, a variety of media will be used to disseminate information to the population about key MNCH health priorities, such as nutrition and early childhood development; healthy timing and spacing of pregnancy; importance and timing of ANC and PNC visits; child care (including immunizations); gender-based violence; and information on where and when to access MNCH services.

In addition to posting on the MoH and associated ministry websites, the MNCH strategic plan, where appropriate, may also be available through links on the webpages of local, national, regional and global partners. Selected social media outlets may also be considered for dissemination and linked to the MoH website.

Key principles of the dissemination plan:

**Transparency**

The MoH aims to be open about all aspects of the plan and therefore:

- The full strategic plan will be made available to the public once it is validated
- Follow-up information, such as the midterm review of the plan, will be made available to the same group of recipients as the original plan.
- Recipients will be informed when time approaches to undertake the development of a new plan so as to foster engagement and input.
### Accessibility

Users must be able to find the information easily and have their questions answered.

- All information will be accessible from the MoH website project website and otherwise made available to all Rwandan citizens and stakeholders
- When appropriate, the reports will refer to and/or have links to other associated or related policies or strategic plans, such as the Nutrition policy
- The MoH will consider dissemination through selected social media outlets
- Access to relevant HMIS information by implementing partners

### Comprehensibility

Key information from the plan must be understandable to the public without the need for expert knowledge.

- The plan will be made available in a shortened format that outlines key information in non-technical terms
- Key messages will be translated to Kinyarwanda to ensure they are accessible and understood by all Rwandese citizens
- The MoH in collaboration with local government and its partners and stakeholders, will facilitate understanding of the key messages/components of the plan through arranged discussion sessions/meetings for community members

### Sample Dissemination Plan Outline:

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Dissemination materials</th>
<th>Means of Dissemination</th>
<th>Timeline</th>
</tr>
</thead>
</table>
| • Providers: referral and district  
  • Professional associations | • Short and long version of plan  
  • Supporting materials and documents | • Website  
  • Professional association meetings and conferences  
  • Professional newsletters and publications | Q1 2018 |
| • Peer educators  
  • Youth groups  
  • Universities (public health, medical, nursing, midwifery) | | • Website  
  • Social media (MoH FB page)  
  • Youth meetings  
  • SMS groups | |
| • Community leaders  
  • Community groups  
  • CSOs  
  • Consumers/community members | | • Brochures  
  • Umuganda  
  • Newsletters  
  • Community meetings  
  • Newspapers | |
| • CHWs  
  • HC staff | | | |
The main assumptions underpinning this strategic plan are the following:

- Political stability
- Continued strong political will and leadership for MNCH
- Adequate public, private, and civil society sector commitment and support, including financial assistance
- An expanding and willing health workforce
- Ability to meet the costs associated with undertaking the plan

Conversely, a number of potential risks could affect the success of this strategic plan:

- Change in the economic or political situation
- Inadequate financial resources
- Objectives are not met within the time-frame of the strategic plan
- Inadequate human resources

The Government of Rwanda has been a leader in the region and sub-region in many health indices, most notably in the area of MNCH. The substantial progress over the last decades, fuelled by consistently strong political leadership is a solid backdrop for future success.
The aim of the monitoring and evaluation (M&E) logframe (ANNEX IV) is to systematically support and assess progress of MNCH Strategic Plan implementation. Specifically, monitoring and evaluation will serve to do the following:

- Track implementation progress and achievements and demonstrate results
- Assess performance against the agreed strategic objectives
- Facilitate documentation of implementation challenges and lessons learned
- Coordinate collection, processing, and analysis of data
- Verify whether activities and interventions have been implemented as planned, to ensure accountability and address problems in a timely manner
- Provide feedback to the MOH and stakeholders to adjust the plan if needed and/or to inform future plans

Through M&E, program results at all levels (impact, outcome, output, process and input) will be measured and help inform decision-making at the program level. Thus, the M&E plan will support both government and their stakeholders to track progress and achievements.

Data sources and management

Different data sources will be used to monitor progress of the MNCH SP. For instance, facility-based data is collected by all public and private facilities through the following systems relevant to the MNCH SP:

- Rwanda Health Management Information System (R-HMIS) – is the primary source of routine data on health services including referral services, district hospitals and health centers
- SISCom (Community Health Information System) – this supplies data on the contributions of CHWs to the health system
- Human Resource information System (iHRIS) currently has active records of well over 16,000 health professionals
- Logistics Management Information System (e-LMIS) – provides data on the supply and use of medicines and commodities
- Geographical Information System (GIS) – provides a means of analysing coverage of general or specific services in relation to need and how these services are related to communities, each other and the larger health infrastructure

Most of the routine data collection for the health sector is currently done via the R-HMIS, a web-based software set up in servers hosted at Rwanda’s National Data Center. This state-of-the-art facility provides excellent environmental and data security conditions for continuous data entry and use.
**Key Indicators**

Monitoring of the MNCH Strategic Plan will be consistent with relevant targets and indicators of the RMNCAH Policy 2017-2030, which are aligned with health-related SDGs and the Global Strategy on Women’s Children’s and Adolescents’ Health. The GoR has domesticated the SDG targets to be achieved by 2030. The following table outlines the key health and multisectoral issues that will be addressed in the MNCH Strategic Plan.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Latest data</th>
<th>Data Source</th>
<th>SDG target if applicable</th>
<th>Difference</th>
<th>Annual reduction to achieve SDG</th>
<th>2024 Target</th>
<th>2035 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mortality</strong></td>
<td></td>
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<tr>
<td>Institutional Maternal Mortality Ratio</td>
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<tr>
<td>Under 5 mortality rate</td>
<td>50</td>
<td>RDHS 2014/15</td>
<td>25</td>
<td>25</td>
<td>2.6 for 2015-2020; 1.5 for 2020-2024; 1 for 2024-2030</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Neonatal mortality rate</td>
<td>20</td>
<td>MoH</td>
<td>12</td>
<td>8</td>
<td>0.53</td>
<td>15.2</td>
<td>10</td>
</tr>
<tr>
<td>Infant mortality rate</td>
<td>32</td>
<td></td>
<td>16.25</td>
<td>15.75</td>
<td>1.05</td>
<td>22.5</td>
<td>13</td>
</tr>
<tr>
<td>Still birth rate</td>
<td>19</td>
<td>MoH</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Perinatal mortality rate (stillbirth &amp; neonatal deaths)</td>
<td>29</td>
<td>RDHS 2014/15</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Direct obstetric case fatality rate (PPH &amp; Sepsis)</td>
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<tr>
<td>Intrapartum and very early neonatal death rate</td>
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<tr>
<td>Mortality rate in newborn units</td>
<td></td>
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<tr>
<td>Indicator</td>
<td>Latest data</td>
<td>Data</td>
<td>SDG target if applicable</td>
<td>2024 Target</td>
<td>Comments</td>
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<tr>
<td>Maternal</td>
<td></td>
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<tr>
<td>Antenatal care attendance 1 visit</td>
<td>99%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Antenatal care attendance 4 visits</td>
<td>44%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
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<tr>
<td>Antenatal care contacts 8 visits/contacts</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
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<tr>
<td>Skilled birth attendance– institutional delivery</td>
<td>91%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Post-natal care (1 visit) mother</td>
<td>99%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-natal care (4 or more visits)</td>
<td>43%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Anaemia prevalence in women (15 to 49 years)</td>
<td>19%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Nutritional status of women 15 -49 using BMI</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td>BMI= Body Mass Index</td>
<td></td>
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<tr>
<td>Malaria prevalence among women aged 15-49 years</td>
<td>0.6%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
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<tr>
<td>Newborn</td>
<td></td>
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<tr>
<td>Early breastfeeding initiation</td>
<td>99%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
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<tr>
<td>Percentage of health centers providing essential newborn care</td>
<td>N/A</td>
<td></td>
<td></td>
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<tr>
<td>Post-natal care (1 visit) newborn within first 2 days of birth</td>
<td>19%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Indicator</td>
<td>Latest data</td>
<td>Data</td>
<td>SDG target if applicable</td>
<td>2024 Target</td>
<td>Comments</td>
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<tr>
<td>Proportion of newborn not breathing who received neonatal resuscitation as per protocol</td>
<td></td>
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<tr>
<td><strong>Child</strong></td>
<td></td>
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<tr>
<td>Percent of children under 5 years whose births were registered with a civil authority</td>
<td>56%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Exclusive breastfeeding children &lt;age 6mos.</td>
<td>87%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Children 12 to 23 months fully immunized (all basic vaccines)</td>
<td>93%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevalence of stunting in children under 5</td>
<td>38%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Child wasting under 5</td>
<td>2%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
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<tr>
<td>Child underweight under 5</td>
<td>5%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Percentage of children aged 36-59 months developmentally on track</td>
<td>63.1%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
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<tr>
<td>Childhood illness treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- ORS treatment for children with diarrhoea</td>
<td>43%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Care seeking for ARI</td>
<td>54%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Care seeking for children with fever</td>
<td>49%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITN coverage among children (under 5 years)</td>
<td>68%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Indicator</td>
<td>Latest data</td>
<td>Data</td>
<td>SDG target if applicable</td>
<td>2024 Target</td>
<td>Comments</td>
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<tr>
<td>Malaria prevalence children 6 to 59 months</td>
<td>2%</td>
<td>RHDS 2014/15</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Laws &amp; regulations that guarantee women 15-49 access to SRH care, info and education</td>
<td></td>
<td>Reproductive Health Law</td>
<td></td>
<td></td>
<td>RH Law applicable from age 18</td>
<td></td>
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<tr>
<td>Household ownership of ITN</td>
<td>81%</td>
<td>RDHS 2014/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Malaria incidence 308 per 1,000 population</td>
<td>308</td>
<td>MoH 2015</td>
<td></td>
<td></td>
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<tr>
<td>Out-of-pocket health expenditure as % of total health expenditure</td>
<td>28%</td>
<td>WHO</td>
<td></td>
<td></td>
<td>Data: WHO Global Health Expenditure database, 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teenage pregnancy and motherhood rate (15-19 years)</td>
<td>7%</td>
<td>RDHS 2014/15</td>
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</tbody>
</table>
There are several outcome measures of success of this strategic plan. The M&E logframe includes indicators for each strategic objective or results. As an example, antenatal care attendance is an important indicator for maternal health.

This issue is particularly significant at this time when the MOH is considering the recent WHO revised recommendations on antenatal care, which highlight a doubling of recommended number of visits or contacts from four to eight. Indicators will need to reflect for example, whether only ANC contacts or visits with skilled attendants are measured or whether all ANC contacts are considered –such as those provided by the ASMs in the community.

**CONCLUSION**

This MNCH Strategic Plan 2017-22 is one small part of a grander, multi-sector, multi-faceted scheme to ensure the health and well being of all Rwandans. One of the first countries worldwide to articulate a Vision 2050, the GoR is deeply committed to ensuring a high quality of life for all its citizens. And not only with regards to health: the pillars of Rwanda Vision 2050 also emphasize universal access to food security, education, finance and other aims closely aligned with the SDG targets.

Though characterized by strong leadership, the Rwandan government holds true to an important principle: a people-centered approach. The national agenda for growth, progress and advancement, including the MNCH goals in this strategic plan, therefore belongs to you. Whether you are a mother or a midwife - a farmer or philanthropist: each one has a part to play. And we likewise all have a responsibility to our current and future women, newborns and children of this great country.
RESOURCING PLAN (COSTS)

9.1 COSTING METHODOLOGY AND ASSUMPTIONS

The Rwanda Maternal Newborn and Child Health (MNCH) Strategic Plan cost estimation was achieved through a participatory, iterative process using input-based costing approach.

9.1.1 SCOPE OF COSTING

The costing was facilitated by an excel framework specifically developed for the purpose, used concurrently with the UN One Health Tool’s program costing module. The assignment scope included estimating the cost of interventions defined in the MNCH strategic plan for the period 2018–2024.

- For the costing purposes, all planned interventions were categorized under thematic areas including; training and mentorship, communication media outreach, equipment & infrastructure, program management, monitoring and evaluation, and workshops & coordination. This allowed the process to identify resource intensive areas, which will guide future planning accordingly.

- The costing estimated expected expenditure for the implementation of each objective area as defined in the MNCH strategic plan, i.e.:
  - Universal access to quality MNCH Services for all citizens.
  - Health services organized and equipped to help maximize access to quality MNCH care.
  - Enhanced community health literacy, skills and practices through social, behavioral and community engagement efforts.
  - Available, accessible, acceptable, and high quality MNCH workforce developed and enforced; and,
  - Governance and accountability systems of integrated MNCH interventions reviewed, updated and enforced.

- Finally, the cost of implementing planned interventions at different levels of the health system (i.e. national, district, health center and community levels), was estimated. Outputs derived from the above analysis are presented under tables 1, 2 and 3; in sub-sections 2.1 through 2.3, accompanied by a detailed narrative.

The scope of the costing did not include:

- One Health tool’s health services module for scenario analysis. The interventions in the MNCH strategic plan are program-focused (e.g. training, M&E, mentorship... etc.), and hence more appropriately costed using program costing module of the One Health tool.

- The costs of health system inputs such as human resources, logistics, general infrastructure, financing systems...etc., were considered as already costed under the HSSP IV.
9.1.2 PROCESS
As mentioned above, this costing was accomplished through a consultative process. To start with:

- Entry and briefing meetings were held with stakeholders including MoH Clinical Services Directorate, RBC, USAID, MCSP program managers, and; others—to discuss the process, obtain further insights and guidance, and receive the draft of the MNCH strategic plan. The costing approach was also discussed in a wider audience of the Maternal Child Health Technical Working Group (MCH TGW) meeting held at the MSCP head office in December 2017. Convening bi-monthly, the MCH TWG brings together implementers of the MNCH program interventions, many of which participated in the development of the strategic plan itself.

- The draft strategic plan was extensively reviewed, and inputs/activities envisioned, under each strategic objective for delivering planned interventions were identified by the consultant. This was done iteratively with members of the core team. Each input was simplified into milestones with unit costs, quantities and/or frequency. Structured in an excel spreadsheet, the milestones were shared with core team members for feedback, which was incorporated. Data was also derived from program managers, the HSSP IV/MCCH costing files, standard government expenditure rates for items such per diems, accommodation, travel…etc.

- A two-day work session was organized with members of the core team who also happen to implement and/or manage MNCH programs in different organizations. They included representatives from MoH, RBC, UNCEF, UNFPA, PIH, and MSCP; as well as others familiar with implementation of similar activities. Working in groups, participants reviewed milestones, unit costs, quantities or frequency, and provided comprehensive input. Data cleaning was subsequently completed by the consultant.

- Customization of OneHealth program costing module was completed in line with milestones’ defined from the above process, and data migrated into the tool.

9.1.3 MAIN ASSUMPTIONS
The MNCH cost estimation was projected based on the current market value rates, government spending guidelines and inputs from program experts familiar with implementation of similar MNCH activities. A currency exchange rate of Rwanda Franc 870 to the United States dollar (US$) was applied. Inflation was assumed at 5.0% from 2018 and remained constant throughout the planning horizon. The two deliverables from the above process are:

- Microsoft Excel with an aggregate computation of cost estimates in different thematic areas, in line with the costing scope. It has the following worksheets:
  - Breakdown of strategic interventions into milestones, unit costs of each (named – costed MNCH milestones).
  - Aggregated cost estimate by strategic objective(s) per year (named – costs by MNCH objective); and a corresponding summary (named – summary by MNCH objective & levels)
  - Detailed and aggregated cost estimate by program area per year (named detailed MNCH program costs); and a corresponding summary (named - summary by MNCH program area)
  - An OneHealth file with aggregated cost estimates by program area per year (named – program module costing).

The entire MNCH plan is projected to cost RWF 33,062,652,418 billion for the 7 years. The current year (2018) takes up the least share of the overall projected cost, possibly because interventions for this period are already budgeted in the current operational plans. The cost is projected to increase remarkably in the coming year (mainly as a result of the planned WASH equipment and toilet infrastructure set up). Thereafter, the cost will stabilize over the remainder of the strategic plan term. Tables 1-3 below respectively, provide cost projection by program area, strategic objectives; and, level of health system.
## 9.2 DETAILS OF PROJECTED COSTS FOR THE MNCH STRATEGIC PLAN (IN RWF)

### 9.2.1 TOTAL COST FOR MNCH IN RWF

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication media outreach</td>
<td>55,224,000</td>
<td>26,271,000</td>
<td>201,676,200</td>
<td>207,000,000</td>
<td>220,010,400</td>
<td>225,000,000</td>
<td>238,344,600</td>
<td>1,173,526,200</td>
</tr>
<tr>
<td>Program Management</td>
<td>3,810,000</td>
<td>221,239,200</td>
<td>198,415,800</td>
<td>190,178,950</td>
<td>260,365,200</td>
<td>269,407,750</td>
<td>170,507,400</td>
<td>1,313,924,300</td>
</tr>
<tr>
<td>Equipment &amp; Infrastructure</td>
<td>-</td>
<td>1,944,233,680</td>
<td>1,165,946,237</td>
<td>1,218,943,793</td>
<td>1,271,941,349</td>
<td>2,314,563,905</td>
<td>1,377,936,461</td>
<td>9,293,565,425</td>
</tr>
<tr>
<td>Monitoring and Evaluation</td>
<td>98,577,600</td>
<td>163,341,780</td>
<td>152,215,360</td>
<td>46,388,240</td>
<td>118,293,120</td>
<td>50,422,000</td>
<td>128,150,880</td>
<td>757,388,980</td>
</tr>
<tr>
<td>Training and mentorship</td>
<td>1,125,375,200</td>
<td>2,913,039,150</td>
<td>3,100,606,863</td>
<td>3,104,461,650</td>
<td>3,206,430,480</td>
<td>3,365,280,750</td>
<td>3,464,879,520</td>
<td>20,280,073,613</td>
</tr>
<tr>
<td>Workshops &amp; coordination</td>
<td>8,860,000</td>
<td>25,292,400</td>
<td>49,852,000</td>
<td>69,839,500</td>
<td>28,905,600</td>
<td>30,110,000</td>
<td>31,314,400</td>
<td>244,173,900</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,291,846,800</strong></td>
<td><strong>5,293,417,210</strong></td>
<td><strong>4,868,712,459</strong></td>
<td><strong>4,836,812,133</strong></td>
<td><strong>5,105,946,149</strong></td>
<td><strong>6,254,784,405</strong></td>
<td><strong>5,411,133,261</strong></td>
<td><strong>33,062,652,418</strong></td>
</tr>
</tbody>
</table>

As stated above, cost is projected to shoot starting with the second year and thereafter taper off to reflect a more stable trend over the subsequent years. Capacity building (mainly through training and mentorship), plus equipment and infrastructure are expected to take up the biggest share of the overall projected cost. Together, these will account for nearly 90% of the total cost of implementing the MNCH strategic plan, while the remaining 4 program areas are expected to account for slightly more than 10%.
### 9.2.2 PROJECTED COSTS BY STRATEGIC OBJECTIVE (IN RWF)

Table 2. Cost for MNCH per strategic objective area in RWF

<table>
<thead>
<tr>
<th>Strategic Objectives</th>
<th>YR 2018</th>
<th>YR 2019</th>
<th>YR 2020</th>
<th>YR 2021</th>
<th>YR 2022</th>
<th>YR 2023</th>
<th>YR 2024</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Objective 1</td>
<td>3,810,000</td>
<td>561,166,200</td>
<td>574,919,400</td>
<td>467,788,950</td>
<td>648,853,200</td>
<td>674,082,750</td>
<td>591,369,400</td>
<td>3,521,989,900</td>
</tr>
<tr>
<td>S. Objective 3</td>
<td>50,464,000</td>
<td>124,481,700</td>
<td>232,036,200</td>
<td>214,323,200</td>
<td>227,652,000</td>
<td>232,960,000</td>
<td>246,623,000</td>
<td>1,328,540,100</td>
</tr>
<tr>
<td>S. Objective 4</td>
<td>390,288,000</td>
<td>959,580,300</td>
<td>974,675,600</td>
<td>1,151,033,700</td>
<td>1,053,733,200</td>
<td>1,093,262,000</td>
<td>1,132,790,800</td>
<td>6,755,363,600</td>
</tr>
<tr>
<td>S. Objective 5</td>
<td>8,860,000</td>
<td>18,606,000</td>
<td>19,492,000</td>
<td>20,378,000</td>
<td>21,264,000</td>
<td>22,150,000</td>
<td>23,036,000</td>
<td>133,786,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,291,846,800</td>
<td>5,293,417,210</td>
<td>4,868,712,459</td>
<td>4,836,812,133</td>
<td>5,105,946,149</td>
<td>6,254,784,405</td>
<td>5,411,133,261</td>
<td>33,062,652,418</td>
</tr>
</tbody>
</table>
Table 2 above shows the projected cost of implementing planned interventions by strategic objective area. As a reminder, the MNCH strategic objectives focus on:

- Universal access to quality MNCH Services for all citizens.
- Health services organized and equipped to help maximize access to quality MNCH care.
- Enhanced community health literacy, skills and practices through social, behavioral and community engagement efforts.
- Available, accessible, acceptable, and high quality MNCH workforce developed and enforced; and,
- Governance and accountability systems of integrated MNCH interventions reviewed, updated and enforced.

Implementation of the MNCH strategic objective 2 (i.e. health services organized and equipped to help maximize access to quality MNCH care) is projected to account for the biggest share of the total cost compared with others. This objective covers equipment which are a critical but equally costly component of the plan, as well as other interventions related to strengthening capacity and skills through orientation, training and mentorship. It possibly reflects the emphasis being placed on the two areas as key precursors for delivering quality services. This is followed by the cost of implementing activities under objective 3 (i.e. enhanced community health literacy, skills and practices through social, behavioral and community engagement efforts); a component focusing on the community level interventions seeking to enhance the capacity of Rwanda’s CHWs to deliver high quality services.
### 9.2.3 PROJECTED COSTS BY HEALTH SYSTEM LEVELS (IN RWF)

Table 3. Cost for MNCH by levels of health system in RWF

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>118,174,000</td>
<td>1,127,843,644</td>
<td>1,172,649,267</td>
<td>964,825,625</td>
<td>1,132,472,165</td>
<td>1,100,875,005</td>
<td>1,223,232,845</td>
<td>6,840,072,552</td>
</tr>
<tr>
<td>District</td>
<td>937,800,800</td>
<td>2,128,480,200</td>
<td>2,220,464,400</td>
<td>2,430,349,050</td>
<td>2,502,164,400</td>
<td>2,606,421,250</td>
<td>2,602,735,200</td>
<td>15,428,415,300</td>
</tr>
<tr>
<td>Health Center</td>
<td>235,872,000</td>
<td>1,872,348,366</td>
<td>1,105,008,792</td>
<td>1,054,202,458</td>
<td>1,067,029,584</td>
<td>2,126,363,150</td>
<td>1,147,195,216</td>
<td>8,608,019,566</td>
</tr>
<tr>
<td>Community</td>
<td>-</td>
<td>164,745,000</td>
<td>370,590,000</td>
<td>387,435,000</td>
<td>404,280,000</td>
<td>421,125,000</td>
<td>437,970,000</td>
<td>2,186,145,000</td>
</tr>
<tr>
<td>Total</td>
<td>1,291,846,800</td>
<td>5,293,417,210</td>
<td>4,868,712,459</td>
<td>4,836,812,133</td>
<td>5,105,946,149</td>
<td>6,254,784,405</td>
<td>5,411,133,261</td>
<td>33,062,652,418</td>
</tr>
</tbody>
</table>
As per results presented in the table 3 above, the district level is expected to take up the biggest share of the overall cost of implementing MNCH strategic plan (up to 47%). The health center level will account for the second biggest share (26%), with the national level accounting for 21%, while the community is expected to account for less than 10%.

9.3 DISCUSSION OF THE COSTING RESULTS

Estimates of implementing the MNCH strategic plan interventions indicate that it will cost more 33 billion RWF during 7 year strategic plan term. On average, it will require nearly 5 billion RWF, annually to implement planned interventions. The biggest expenditure will take place at the district level, driven by capacity building activities related to training, mentorship and even e-learning. This probably reflects the growing practice of decentralizing capacity building activities to the district hospital and health center levels through the mentorship approach; and possibly explains the increase in expenditure downstream compared with the national level. At the national level, the cost is mainly driven by procurements of equipment is still handled there. In fact, of the total 6.7 billion RFW projected to take place at this level, 4.4 billion RFW (65%) is expected to be spent on equipment. The cost of other areas such as communication media outreach, program management, monitoring and evaluation...etc., are projected to be comparatively lower. It should however be recalled that a number of activities (e.g. MCH week, HMIS activities which relate to M&E, and staffing), that drive such interventions in one way or another are implemented in an integrated manner --and hence, their other costs could be captured in other areas as well.
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SUMMARY OF KEY INTERVIEWS RESPONSES

Introduction

In preparation for the development of the National Maternal Newborn Child Health Strategic Plan 2017-2022, key informant interviews were undertaken with the Rwandan Ministry of Health, international development partners and MNCH stakeholders in-country. The purpose was to develop a deeper contextual understanding of the health system and strategic plans previously implemented from the perspective of key stakeholders.

Responses were categorized into emerging themes, which overlapped with those identified during the prioritization mapping exercise held. These themes were as follows:

- Human resources
- Education and training
- Measurement and evaluation
- Quality of care
- Organization of services
- Demand creation at community level
- Commodities, equipment and infrastructures

This report will present a summary of the information obtained via interview and briefly address potential solutions to the challenges identified.

Methodology

For the purposes of these informant interviews the strategy development team revised an existing questionnaire from previous KII’s to illicit contributions for the development of the National Maternal Newborn Child Health Strategic Plan 2017-2022. Due to time restraints there was no opportunity to test and further refine the questionnaire prior to its implementation.

The Rwanda Ministry of Health, recommended stakeholders and coordinated informant interviews, including an overnight visit to Musanze district. Consequently 21 participants were interviewed individually. A further twelve stakeholders participated in group interviews (groups of 6, 3, and 3). Interview times ranged anywhere from 5 minutes to an hour (when more than one person per interview), notes were taken throughout interviews and others were recorded and transcribed.

A list of those that participated in Key Information interviews can be found in Appendix 1.

Summary of Responses

What were the top challenges faced while implementing the MNCH 2013-18 Strategic plan?

Organisation of Services

Participants communicated that the key challenges faced when implementing the MNCH 2013-18 strategic plan related primarily to the organisation of services e.g. a lack of strategy and ineffective management of labour. The absence of a clear directive for health care workers was also highlighted as a barrier to the effective implementation of the previous strategic plan.

Commodities, equipment and infrastructure

A lack of commodities and infrastructure was a challenge also identified by a high number of participants. Specifically, poor hospital capacity and a lack of ambulances. In addition to this it was also expressed that often strategic plans...
are devised with no realistic analysis of the resources actually available to implement them. It was reported that this disconnect impacted greatly on the achievability of outcomes.

The primary challenges identified can potentially be addressed in the following ways:

• Incorporation of stakeholder feedback into strategy and service design
• Engagement of stakeholders in monitoring and review
• Improved hospital capacity via the development of infrastructure
• The provision and effective maintenance of essential equipment e.g. ambulances
• Robust costing to increase the feasibility of successful strategy implementation

Strategy Considerations

Responses to this question highlighted that interventions in the last strategy were not realistically costed or evaluated. The need for indicators to measure progress was also highlighted. (Measurement and Evaluation category). To ensure that successes are built upon and lessons from previous failures are learnt, measurement and evaluation mechanisms must be built into the new strategy.

Data

[Diagram showing the distribution of resources:]
- Human Resources, 12%
- Measurement and Evaluation, 6%
- Quality of Care, 12%
- Organisation of Services, 29%
- Commodities and infrastructure, 29%
- Education and Training, 6%
- Demand Creation at a Community Level, 6%
Which MNCH interventions do you think have been the most successful and therefore should receive further investment?

Participants identified that the following interventions had been most successful previously:

- Integration of services to promote sustainability
- Improved coordination between the services
- Improved indicators
- Capacity development to improve the quality of care
- Continuous Professional Development
- Behavior change communications activities positively impacting on health outcomes (malnutrition)

Possible interventions to build on these successes:

- The establishment of quality improvement teams within health facilities. These teams could identify and monitor progress towards indicators and champion capacity development and improved coordination within and between facilities.
  - Referral linkage and improving the number of outpatient services offered by one provider
  - Improving the competency of staff including management via training. This can be supported by revised regulatory and practice standards
  - Community social based behavior change activities

### Strategy Considerations

Perceptions of the successes of the previous strategy would greatly benefit from the collection of data to validate them. This can then inform service and fiscal planning for activities proposed and maximise potential impact.

### Data

![Bar Chart](chart.png)
Which MNCH interventions do you think have not contributed to the achievements of goals or objectives and therefore not be continued?

**Stakeholders reported the following:**

**Education and Training**

CHW training has demonstrated impact, however PPH management training has not improved outcomes. This is because of the high cost of commodities and training. Instead of training delivery, analysis should be undertaken to improve the ‘referral to hospital’ process. The aim is to minimise the % of CHWs delivering babies in the community. Then, PPH can be prevented or managed in hospitals by skilled providers.

**Measurement and Evaluation**

Stakeholder responses highlighted that EmONC training and services have received investment but there are no clear methods of tracking progress. A monitoring and evaluation system needs to be implemented to assess EMONC outcomes before the implementation of any further interventions.

**Commodities, Infrastructure and Organisation of Services**

Stock outs of lifesaving commodities which can affect EMONC service provision occur frequently. Investment in commodities and stock control processes both require attention.

Unsuccessful interventions can potentially be addressed in the following ways:

- CHW referral processes can be addressed via training in triage and the development of referral linkage systems
- Minimum and continuing competency requirements for health providers in relation to PPH will then ensure that post natal needs are met further to CHW referrals to health facilities
- Indicators needs to be developed across the MNCH sector and will therefore encompass EMONC services and outcomes
- The purchase and supply of commodities will need to be explored and addressed in the new strategy

In-service training has been an important strategy in strengthening health provider capacity; What are its benefits and challenges?
The benefits and challenges identified by key informants were as follows:

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective new processes have been implemented as a result of previous training delivered eg. Checklist is now completed before the release of patients</td>
<td>Training is good but is not accompanied by effective HR management, equipment and infrastructure. It is therefore hard to implement learning effectively</td>
</tr>
<tr>
<td>In service training is proving effective. It is sustainable and staff are willing to engage if it is incentivised e.g. per diem; break from intensities of work; working with other peers and colleagues</td>
<td>Staff attrition results in loss of knowledge base developed via training</td>
</tr>
<tr>
<td>Use of electronic tools to support in-service training have proved effective. E.g. training for EPI and IMCI with new tools like ICAT</td>
<td>In service mentorship is needed to improve quality of care provided to patients and will be most effective if underpinned by a training needs assessment</td>
</tr>
<tr>
<td>Registration of nurses and midwives has supported CPD activity and planning and. E.g. CPD diaries are disseminated along with recommendations re the minimum number of hours training.</td>
<td>Difficult to track trained health providers and monitor CPD diaries to ascertain whether practise in line with recommendations.</td>
</tr>
<tr>
<td>Pre Service training was identified as effective for introducing new interventions. E.g. it reduces training time away from the facility.</td>
<td>Whilst OJT is more financially and operationally sustainable it still requires incentivisation to motivate health workers to participate. This is because off site training provides participants with relief from duties, networking opportunities and a per diem payment.</td>
</tr>
<tr>
<td>Electronic Tools to support in-service training are proving effective and in the longer term will be more cost effective e.g. ICAT</td>
<td>There is a lack of training assessments taking place to identify skills and knowledge gaps</td>
</tr>
<tr>
<td>In-service training minimises the displacement of key personnel whilst training is taking place if it takes place at the work site</td>
<td>Pre-service training isn’t translating into improved skills – theoretical knowledge gained from training needs to applied in a practical context under supervision. Specifically, EmONC and ANC so heavy reliance on in-service, which is not good</td>
</tr>
<tr>
<td>Mentoring is emerging as a preferred approach to CPD - if retention measures are implemented it will continue to positively impact on the quality of are offered</td>
<td>CPD requirements are not tied into professional associations or regulatory bodies</td>
</tr>
<tr>
<td>On the job training or low-dose-high frequency is good because does not take provider away from duty station</td>
<td>Not a long-term strategy; need to fix pre-service</td>
</tr>
<tr>
<td>It is very much needed to fill the gaps in pre-service</td>
<td>Expensive and not good return on investment; staff leave or are rotated to a different ward</td>
</tr>
<tr>
<td>Mentoring is a good approach if there are adequate numbers of mentors</td>
<td>Create dependency on in-service to build competency</td>
</tr>
</tbody>
</table>
Strategy Considerations

The Challenges identified can be mitigated in the following ways:

- Improved HR frameworks and the development of adequate infrastructure
- The purchase and effective maintenance of vital equipment
- The development of retention contracts
- The provision of mentors and peer support post training
- The implementation of in service training needs assessments
- Increased in service training provision for community health workers and medical/midwifery staff
- The initiation of retention contracts or MNCH sector staff

What in-service strategies or topics need to be considered for the new MNCH Strategy?

Participants proposed the following strategies for consideration in the new MNCH Strategy:

1. Reorganization of services e.g. integration of ANC and immunizations
2. Integration of maternal and child health services e.g. FP, PNC and immunization
3. Capacity building of health professionals to ensure that they are knowledgeable in integrated comprehensive packages of care
4. Training provision for health care workers in rural and remote areas
5. In-service training needs assessments to identify weaknesses
6. MOH should identify working models for community engagement and health promotion at community level
7. Deployment of maternal health experts from universities to rural areas to tackle prevalent issues such as maternal death rates
8. Provision of live saving commodities to address high morbidity rates for newborns
9. Address the weaknesses in pre-service to minimize need for in-service

Strategy Considerations

The above can be addressed via attention to the following:

- Organisation of services based on community need
- Review and revision of in-service training strategies or approaches in collaboration with pre-service institutions
- Addressing health inequities
- Collaborative efforts among MOH, professional Councils and facility leaders
- Adequate budget and cost effective usage of commodities to avoid stock-outs
- Strategy to for short-term deployment of health experts to rural areas
What MNCH related evidence-based courses or components are missing in pre-service trainings? What is the plan to address this?

Participants identified the following missing components relating to pre-service training:

1. Better utilization of research results is required to inform training and subsequent services provided to patients. The involvement of clinical staff in research will likely improve the implementation of findings at service delivery level.
2. Health care workers need to leave training better equipped for delivering core areas of care e.g. IMCI can be incorporated into nursing training. This training will then require in service reinforcement.
3. Integrated service delivery needs to be addressed in pre-service training. This will encourage health workers to take ownership of service integration in their practice.
4. The adoption of integrated services at service delivery will increase the quality of care provided and ultimately save lives. E.g. FP services as part of a maternity care package will support effective spacing.

Strategy Considerations

- The above-identified missing components in pre-service training can be addressed in the following ways:
  - Pre-service curricula being reviewed against global standards for education gaps.
  - Regular review and update of curricula to reflect current issues and evidence specific to Rwanda
  - Inclusion of basic triage, integration of services and EmONC and IMCI into pre-service
  - Review of evidence and successful approaches to pre-service education
  - Better use of evidence to inform training and service delivery
  - Implementation of systems to vet continuing competency of staff and providers

What are the factors that contribute to poor health seeking behaviours for some MNCH services? (ANC4, PNC, child health)
Factors contributing to poor health seeking behaviours for MNCH services were identified as follows:

1. There is a need to address cultural perception of pregnancy in relation to access to antenatal care e.g. there is certainly a tendency to want to hide pregnancy for fear something will happen and the perceived value of ANC is low. Better understanding needs to be developed regarding the perception of ANC among women.

2. Investment is required to explore and better understand health-seeking behaviors.

3. Improved quality of care is required for child health particularly regarding preventable child deaths e.g. if a patient has paid for a health service which does not ultimately improve their child's health or prevent death they are less likely to seek medical assistance in the future.

4. Improved counselling and information services for patients and parents are required. E.g. a recent exit survey showed that no mothers could identify danger signs after leaving the IMCI services.

5. Integration of services to meet patient needs is required to minimize referrals to other departments and multiple appointments on multiple days.

Strategy Considerations
The factors identified can be addressed via consideration of the following:

- Multi sectoral health promotion and disease prevention
- Expanded evidence base regarding social determinants for RMNCH outcomes
- Re-organisation of services when possible to integrate care
- Enhancing health literacy of community

What do you think are the most cost effective models that can promote male involvement in MNCH services use?

Participants identified the following cost effective models which can help to promote male involvement in services:

- Raising awareness and increasing perceived value of male engagement. This can be achieved by training Community Health Workers to deliver Family Planning information for example.
  - Reducing waiting times e.g. if going to a Health Centre means staying for several hours, then male partners may be less inclined to attend appointments.
  - CHW’s have been trained to effectively involve men in family planning services.

Strategy Considerations
The following activities can be incorporated into the MNCH strategy to promote male involvement:

- The enhancement of community knowledge of RMNCH services and the role of men at various stages
- Community health and RMNCH health promotion activities inclusive of fathers wherever possible

If you had to select just one priority intervention for MNCH, what would it be? (Select one each for maternal, newborn and child health)

Priority interventions identified by Key informants have been categorized as follows:

Quality of Care

- Labour monitoring
- Improved counselling
- Improved written communications materials for patients
- Improved child health services
- Improved department capacity to deal with emergencies

Commodities and infrastructure

- Ultrasound equipment required
- Other medical supplies including essential drugs required
- Improved infrastructure around the work of CHW’s
- Diagnostic facilities required
- Recovery room monitoring equipment and ambu bags required
• Ambulance equipment required e.g. oxygen and IV lines
• Child Health - CPAP and incubators required

Education and Training
• Pre-service training
• Maternal Health – Maternity surveillance training
• Child Health – Mentorship
• Integrated training that reflects integrated services
• Maternal health – In service training e.g. labour and birth monitoring, resuscitation
• Assessment training
• Training for Midwives
• C Section training
• Training on MNC life-saving interventions

Measurement and Evaluation
• Death Audits
• Monitoring & Evaluation frameworks that helps track indicators

Human Resources
• More effective pre-service Human Resource Management

Demand Creation at Community Level
• Access to comprehensive SRH services for youth - must go beyond health centre environment.
• Awareness creation among communities

Organisation of Services
• Multidisciplinary approach to issues
• Intersectoral collaboration
Rwanda has made outstanding progress in MNCH in the last decade. What are the new approaches in MNCH you think should be considered in these next 5 years?

1. Ensure integration of services to promote sustainability
2. Capacity of facilities to test for pregnancy is required (early pregnancy testing—especially at CHW and HC level)
3. Improvement of village infrastructure e.g. every district has water; health care; market; business center; schools; electricity; ICT opportunity center, etc.
4. Offer ultrasound at HC level
5. Continuation of Preterm birth initiative
6. Integration with other services as an incentive for women to seek care
7. Policies and strategies have to be aligned with the global strategies Rwanda has committed to.
8. Supervision / mentoring of health providers post training to improve QOC
9. Roll out of training regarding the maintenance of equipment
10. Newborn and child health services need to be prioritized and protected in the new strategy due to the high under 5 death rate

Strategy Considerations

- Activity to support integration of services will be outlined in the strategy as will the alignment of policies with global strategies.
- Enhance services at community and HC level to incorporate early pregnancy testing
- Multi-sectoral collaboration to ensure alignment with other national and global targets
- Quality teams at each point of service or possibly small group of facilities
- Review strategy for in-service expenditures and training

Adequate human resources for health is a significant challenge in the region and worldwide. What do you view as the key HRH issues in Rwanda?

Participants identified the following Human Resources issues in Rwanda:

1. Inadequate HR “stock” - the need to train critical mass with appropriate skill mix among doctors, nurses and midwives
2. A lack of medical schools e.g. Only 1 medical school in country, with average output of 70-100 graduates/year
3. The need to train specialists among all cadres (e.g., pediatricians and pediatric nurses or PNPs; neonatologists and neonatal nurses, etc)
4. Distribution of staff geographically needs to be improved
5. Prioritize indicators (esp. district level) that address human capital
6. Shortage of staff particularly in rural areas. Those who are well qualified are working in urban areas
7. Lack of health workers and a lack of the right skills and knowledge mix. There is a need for midwives and more doctors in rural areas
8. Lack of pre-service and in-service training and qualified teachers
9. Lack of understanding regarding Rwanda’s MNCH sector optimal staffing needs
10. Lack of income generating activities impacts on the financial viability of the recruitment of necessary health workers

Strategy Considerations

Consideration of the following will support the development of solutions to the HR challenges identified:

- Established minimum education requirements for all teachers, clinical preceptor, mentors and managers
- Continuing competency mechanisms in place and enforced for all training providers at all levels
- More effective distribution of workforce
- Utilization of global mechanisms for gap analysis in education and regulation
• High Impact Interventions to be incorporated into all pre-service programs for physicians and midwives in particular
• Consideration of approaches such as Home-Based Life Saving Skills for CHWs and for community EmONC training
• The inclusion of a robust resourcing plan in the new RMNCH strategy will likely address income generating activities

In your view, what are the key reasons for attrition and what strategies would you propose to address them?

**Human Resources Management**

The key reasons for attrition identified related primarily to Human Resources Management.

It was expressed by stakeholders that attrition was predominantly due to qualified and trained staff across all cadres of the medical profession, moving on into roles in the private sector; public health; government and academic institutions. Participants explained that medical professionals rarely leave the country (except to study or gain experience) and that the perception is held among them, that they are still serving the country and its citizens, just in another capacity.

The underlying reasons for this trend were cited as a lack of suitable accommodation in rural areas and better pay offered by the private sector.

Strategies proposed to address attrition were as follows
- Retention through salary and other factors
- Opportunities for career development
- Improve hospital leadership; quality of care involves good leadership (not just providers and equipment). Staff must be engaged and involved with goal setting and monitoring
- Restructuring of hospital/health facility leadership
- Addressing workload issues—welfare of health workers very important
- Continuing capacity-building
- Offering incentives—maybe loans at low interest rates for cars, etc. (loan interest and taxes very high on cars)

- Building capacity of secondary cities (there’s 6 thus far) to entice providers
- Raising the profile of midwifery as a career option for secondary school pupils

The preparation of competent health providers (pre-service) is one of the first steps in quality care. What in your opinion are 3 priorities for strengthening pre-service education to global standards for midwives, doctors and nurses?

**Priorities were identified as follows**
- More emphasis on Essential newborn care both theory and practice
- The role of midwives and how they can be developed to influence and manage teams of nurses
- Increasing the leadership and teaching skills of midwives
- EMONC training for doctors as a high number of maternal and neonatal deaths are occurring at district hospitals
- Health centre training – training in vacuum extraction

**Community Health Worker (CHW) Challenges?**

Participants identified the following challenges faced by Community Health Workers:

**Commodities and infrastructure**

1. Lack of equipment and supplies for health demonstrations (e.g., cooking—this is very important because of nutrition problems among mother and children)
2. Need umbrellas, boots and a torch for nighttime and during rainy season
3. Lack of electricity for phones
4. Need boxes and storage spaces
5. Replacement of mobile phones in a timely manner—many phones not working or are outdated and difficult to hold a charge
6. Geographic access for mothers is limited in some areas.
7. Lack of ambulance availability at night results in the use of manual stretchers which are strenuous to use
Human Resources

1. The voluntary nature of the role means that CHW’s often have other paid full time jobs. This restricts the time they are able to dedicate to CHW duties

Community Health Worker Recommendations

- Continue incentives to avoid attrition (not too high now because of financial incentives from cooperatives)
- Demands continuing to increase: regular refresher training and training on new skills and knowledge will benefit CHW’s and the quality of the services they offer
- Quality of care is moderate. Jhpiego workshop was beneficial for the purposes of identifying gaps and to how to improve services
- The provision of equipment—staff are willing but lack basic equipment to perform tasks such as NB resuscitation
- Replace outdated and poorly functioning supplies/equipment such as mobile phones

Conclusion

The key informant interviews with a wide range of stakeholders provided important insight into the MNCH situation in Rwanda and perceived successes, challenges and priorities.

When summarizing the information, it became apparent that many of the recurring themes and concerns closely mirrored those identified in the stakeholder prioritisation. Though there was some overlap in the informants interviewed with those who participated in the prioritisation, more than half of those interviewed were not involved in the exercise.

There was also a benefit to visiting stakeholders and facilities outside of Kigali and to get the overall perspective of a wide-range of individuals: from government to clinicians, educators, regulators, and hospital (district) and health center staff, including CHWs.

Sincere thanks to the Ministry of Health Rwanda and to USAID for supporting this important activity in preparation for the MNCH strategic plan development.
### 10.3 List of Key Informants Interviews Rwanda

N=22 [31 people total comprising 3 groups: RBC (6), USAID (3), CHWs (3) & 19 individuals]

<table>
<thead>
<tr>
<th>Name</th>
<th>Org/title</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USAID (3-group interview)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maria Kabanyana</td>
<td>Senior RMNCH Specialist</td>
<td>Group interview (3)</td>
</tr>
<tr>
<td>Dr. Richard Munyaneza</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Elizabeth Uwanyirigira</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UN Agencies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathias Gakwerere</td>
<td>UNFPA</td>
<td></td>
</tr>
<tr>
<td>Atakilt Berhe</td>
<td>UNICEF</td>
<td></td>
</tr>
<tr>
<td>Mary Mugabo</td>
<td>WHO</td>
<td></td>
</tr>
<tr>
<td><strong>RBC (6-group interview)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Ferdinand Bikorimana</td>
<td>Ag. Director of health facility</td>
<td></td>
</tr>
<tr>
<td>Dr. Tatien Bucyana</td>
<td>MNC death audit advisor</td>
<td></td>
</tr>
<tr>
<td>Joel Serucaca</td>
<td>Reproductive health officer</td>
<td></td>
</tr>
<tr>
<td>Victor Ndaruhutse</td>
<td>M&amp;E Officer</td>
<td>Also individual interview</td>
</tr>
<tr>
<td>Eugene Karangwa</td>
<td>MNC death audit officer</td>
<td></td>
</tr>
<tr>
<td>Anicet Nzabonimpa</td>
<td>FP integration at MCCH/RBC</td>
<td></td>
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<tr>
<td><strong>MOH &amp; RBC</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Felix Sayinzoga</td>
<td></td>
<td>Not recorded</td>
</tr>
<tr>
<td>Victor Ndaruhutse</td>
<td>M&amp;E Officer</td>
<td></td>
</tr>
<tr>
<td>Alexis Mucumbitsi</td>
<td>Nutrition Officer</td>
<td></td>
</tr>
<tr>
<td>Dr. Innocent Turate</td>
<td>Head of IHDPC</td>
<td>Not recorded</td>
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<tr>
<td>Dr. Parfait Uwaliraye</td>
<td>DG Planning</td>
<td>Not recorded</td>
</tr>
<tr>
<td>Name</td>
<td>Org/title</td>
<td>Comments</td>
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<td>-----------------------------</td>
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<tr>
<td>Dr. Theophile</td>
<td>DG Clinical</td>
<td>Not recorded</td>
</tr>
<tr>
<td>Mary Murebwayire</td>
<td>Community</td>
<td></td>
</tr>
<tr>
<td>Barigira Ahmed</td>
<td>HR</td>
<td>Not recorded; 7 min</td>
</tr>
<tr>
<td>Mechthilde Kamukunzi</td>
<td>MOH Health Systems Analyst</td>
<td>No interview; info &amp; clarification on SP</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Julie Kimonyo, Registrar</td>
<td>Nurses &amp; Midwives Council</td>
<td></td>
</tr>
<tr>
<td>Dr. Ntwali Ndizeye (Pappy)</td>
<td>Muhima Hosp.</td>
<td>Partial recording</td>
</tr>
<tr>
<td>Oliva Bazirete</td>
<td>Midwife lecturer (UR)</td>
<td></td>
</tr>
<tr>
<td>Catherine “Cat” Kirk</td>
<td>PIH (Partners in Health)</td>
<td></td>
</tr>
<tr>
<td>Ms.</td>
<td>Rwanda Women’s Network</td>
<td>Not recorded</td>
</tr>
<tr>
<td>Ruhengeri Hospital</td>
<td></td>
<td></td>
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<tr>
<td>Dr. Akingeneye Violette</td>
<td>Director of hospital</td>
<td>Not recorded</td>
</tr>
<tr>
<td>Dr. Sebashi Francois</td>
<td>Deputy clinical director</td>
<td>Not recorded</td>
</tr>
<tr>
<td>Ruhengeri Health Center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ms. Clemence Mukasine</td>
<td>Head of Clinical Services</td>
<td>Not recorded</td>
</tr>
<tr>
<td>CHWs (3-group interview)</td>
<td></td>
<td></td>
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<tr>
<td>MCSP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jean de Dieu</td>
<td>IMCI</td>
<td></td>
</tr>
<tr>
<td>Assumpta Kayinamura</td>
<td>Newborn health</td>
<td>No formal interview</td>
</tr>
<tr>
<td>Glorioso Abayisenga</td>
<td>Maternal health</td>
<td>Info gathering only</td>
</tr>
</tbody>
</table>
### 10.4 M&E LOGICAL FRAMEWORK

- **Impact**: Long-term effect
- **Outcome**: Intermediate effect (e.g., Provider behavior, behavior change, service use)
- **Output**: Immediate effect, service delivery (as result of activities) (e.g., staff trained, clients served, condoms distributed)

<table>
<thead>
<tr>
<th>Impact</th>
<th>Indicator</th>
<th>Baseline (RDHS 2015)</th>
<th>Target (HSSP IV)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact: Ending preventable maternal and child death.</strong></td>
<td>Maternal mortality ratio</td>
<td>210 per 100,000 LB</td>
<td>126 per 100,000 LB</td>
</tr>
<tr>
<td></td>
<td>Neonatology mortality rate</td>
<td>20 per 1000 LB (RDHS 2015)</td>
<td>15.2 per 1000 LB</td>
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<tr>
<td></td>
<td>Infant mortality rate</td>
<td>32 per 1000 LB (RDHS 2015)</td>
<td>22.5 per 1000 LB</td>
</tr>
<tr>
<td></td>
<td>Under 5 mortality rate</td>
<td>50 per 1000 LB</td>
<td>35 per 1000 LB</td>
</tr>
<tr>
<td><strong>Universal Access to Quality MNCH Services for all citizens</strong></td>
<td>Percentage of births attended by skilled health professionals</td>
<td>91%</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>Antenatal coverage (4 standard visits)</td>
<td>44%</td>
<td>51%</td>
</tr>
<tr>
<td></td>
<td>% new-borns with at least one PNC visit within the first 2 days of birth</td>
<td>19%</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>% of children 12-23 months fully immunised</td>
<td>93%</td>
<td>&gt;93%</td>
</tr>
<tr>
<td></td>
<td>% exclusively breastfeeding &lt; 6 months</td>
<td>87%</td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td>Prevalence of stunting among children under 5</td>
<td>38%</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>Proportion of children with diarrheal receiving ORS</td>
<td>12%</td>
<td>&gt;10%</td>
</tr>
</tbody>
</table>
### Key Activities to Deliver Output

#### Output 1.1: A harmonized, integrated package of care targeting MNCH priorities at all levels of the health care system established and executed

<table>
<thead>
<tr>
<th>Activity</th>
<th>Baseline</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Develop an operational plan for implementation of package of care developed</td>
<td></td>
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<tr>
<td>2. Package of care reviewed by MOH stakeholders, revised accordingly and approved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Integrated package of care drafted</td>
<td></td>
<td></td>
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<tr>
<td>4. Priorities for package of care agreed and incorporated</td>
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<tr>
<td>5. Existing package(s) of services and updated by multisectoral team(s)</td>
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</tbody>
</table>

**Output Indicator:** Percentage of health facilities implementing an integrated package of care for MNCH services.

#### Output 1.2: Training implemented at each level of care for health providers to operationalize the package of care

<table>
<thead>
<tr>
<th>Activity</th>
<th>Baseline</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organize and schedule health care provider trainings</td>
<td></td>
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<tr>
<td>2. Test and revise training modules</td>
<td></td>
<td></td>
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<tr>
<td>3. Update existing training modules to reflect national integrated package</td>
<td></td>
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<tr>
<td>4. Develop training modules for each cadre in collaboration with in-service training providers</td>
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</tr>
</tbody>
</table>

**Output Indicator:** Number of health care providers trained to provide an integrated package of care for MNCH services.
<table>
<thead>
<tr>
<th>Key Activities to Deliver Output</th>
<th>Output Indicator</th>
<th>Baseline</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output 1.3:</strong> Quality of care standards based on the WHO Quality of Care Framework and in compliance with the Rwanda Hospital Accreditation Standards developed and executed at all 4 levels of health system</td>
<td>Percentage of health facilities implementing quality improvement action plans for compliance with WHO and Accreditation Standards for MNCH services.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Finalize QOC implementation plan</td>
<td></td>
<td></td>
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<tr>
<td>2. Establish and make functional Quality of Care teams at referral, district and HC levels</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Multi-sector collaboration on developing requirements, roles and responsibilities of quality teams to implement standards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Finalize Quality of care standards and implementation plan</td>
<td></td>
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<tr>
<td>5. Develop quality of care standards with a multi-sectoral team (including consumer or beneficiary representatives)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>SO2:</strong> Health services organized and equipped to help maximize access to quality MNCH care for all citizens</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Output 2.1:</strong> All women, newborns, and children seeking care appropriately assessed (triaged) and receive timely, appropriate services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Output 2.1:</strong> Revised regulatory and practice standards revised and adopted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Whole-site training for triage skills (including non-clinical staff)</td>
<td>Number of regulatory and practice standards reviewed against regional and global standards.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. On-going mentorship and peer support Establish Multisectoral committees to address gaps and agree on regulatory revisions</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Review professional regulatory frameworks (medical; nursing; midwifery) against regional and global standards (gap analysis)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Key Activities to Deliver Output</td>
<td>Output Indicator</td>
<td>Baseline</td>
<td>Target</td>
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<tr>
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<tr>
<td><strong>Output 2.2: Standardized evidence-based pre-service programs in place based on global standards and high impact interventions (HII)</strong>&lt;br&gt;1. Review curricula against global standards for education (gap analysis)&lt;br&gt;2. Prioritize high impact interventions for MNCH in curricula&lt;br&gt;3. Establish minimum education requirements for all teachers, clinical preceptors, mentors, and managers</td>
<td>Number of nursing and medical schools providing pre-service education in accordance with global standards and inclusive of high impact interventions (HII).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Output 2.3: Continuing competency mechanisms in place and enforced for all providers</strong>&lt;br&gt;1. Put in place updated registration system to track all providers&lt;br&gt;2. Prioritize continuing competency course topics for MNCH (e.g., EmONC, youth friendly services, HBB)</td>
<td>Number of nurses, midwives and doctors with recorded CPD points over the past year.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Output 2.4: Policy for staff rotation established (aligned with data and in-service and continuing professional development (CPD) investment) and implemented</strong>&lt;br&gt;1. Review and revise policy on staff rotation in alignment with plan for in-service training and service delivery data (such as skills mix appropriate for case load)</td>
<td>Number of staff reassigned in accordance with policy for staff rotation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Output 2.5: Various mechanisms for staff retention in place and initiated</strong>&lt;br&gt;1. Implement laws on salary increments&lt;br&gt;2. Initiate retention contracts for nurses and midwives&lt;br&gt;3. Systematically engage providers at all levels in discussions and planning regarding incentives</td>
<td>Rate of turnover of health care providers (disaggregated by type: midwives, nurses and doctors)&lt;br&gt;Health worker density</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

47 Continuing professional development or CPD is one way of assessing, determining or evaluating continuing competency; other methods include re-examination, peer review, self assessment, client/case review, supervised practice experience, practice evaluation, computer simulated and virtual reality testing, targeted continuing education with outcomes measurement, employer skills testing and practice evaluations.
<table>
<thead>
<tr>
<th>Output 2.6: Mentorship mechanism established and enforced for all new grads</th>
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</thead>
<tbody>
<tr>
<td>1. Orient and/or train relevant personnel (mentors) to facilitate learning of new graduates</td>
</tr>
<tr>
<td>2. Develop requirements for clinical mentors and preceptors</td>
</tr>
<tr>
<td>3. Develop guidelines for mentorship in collaboration with Professional Councils, educational institutions (pre-service programs); and health care facilities</td>
</tr>
<tr>
<td>4. Establish minimum pre-service practicum align with guidelines for mentorship upon completion of pre-service</td>
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<tr>
<td>Output Indicator</td>
</tr>
<tr>
<td>Number of MNCH mentors validated.</td>
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</tbody>
</table>

<p>| SO3: Enhanced community health literacy, skills and practices through social, behavioral and community engagement efforts to improve equitable MNCH outcomes |
| 3.1: Multi-sectoral health promotion and disease prevention model developed and executed based on existing national SBCC strategies |
| 1. Test the draft model periodically to ensure it reflects behavior change theory and social determinants |
| 2. Conduct formative research to inform a health promotion and disease prevention model |
| Output 3.2: WHO Water and sanitation for health facility improvement tool adapted and in use |
| 1. Orient and train all staff on WASH and related infection prevention principles and WHO adapted tool |
| 2. Put in place adequate and functioning hand-washing facilities with soap and clean water for staff |
| 3. Put in place and maintain functional and clean toilets and hand-washing facilities for staff and clients |
| 4. Put in place and enforce guidelines for safe disposal of healthcare waste |
| Percentage of health facilities implementing WASH in accordance with the WHO adapted tool. | | |</p>
<table>
<thead>
<tr>
<th>Key Activities to Deliver Output</th>
<th>Output Indicator</th>
<th>Baseline</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output 3.3: Updated relevant protocols, guidelines, and SOPs reviewed with all providers and managers at all levels at least twice yearly</strong></td>
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<tr>
<td>1. Establish and enforce guidelines to monitor compliance to protocols</td>
<td>Percentage of health facilities with over 85% compliance with protocols (disaggregated by area _BEmONC, ENC and IMCI)</td>
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<tr>
<td>2. Establish and implement mechanism to disseminate and discuss updated protocols, guidelines, and SOPs to all facilities annually and confirm knowledge of these resources</td>
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<tr>
<td>3. Review and update Protocols, guidelines, and SOPs at least annually</td>
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<tr>
<td><strong>Output 3.4: Health equipment maintained as appropriate and system in place for repairs and replacement</strong></td>
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<tr>
<td>1. Orient all staff and technicians to use and maintenance of all equipment as appropriate</td>
<td>Percentage of health facilities with sufficient essential equipment (disaggregated by area _maternity, neonatology and IMCI)</td>
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<tr>
<td>2. Develop system to monitor functionality of equipment, report malfunctions and repair, or replace equipment as needed</td>
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<tr>
<td>3. Make available replacement stock of essential equipment such as bag/mask, CPAP, and delivery kits at each service delivery point</td>
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<tr>
<td><strong>Output 3.5: Services organized to facilitate integrated and continuity of care for outpatient services</strong></td>
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<tr>
<td>1. Align staff rotation policy with skill mix and expertise needed (see SO /IR 4) for basic MNCH services</td>
<td>Percentage of health facilities that are adequately staffed and equipped to provide MNCH outpatient care.</td>
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<tr>
<td>2. Make accessible commodities and equipment needed for all basic services to MNCH outpatient staff at all times</td>
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<tr>
<td>3. Establish guidelines for integrating services and staff trained and oriented as appropriate</td>
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47 See Rwanda Hospital Accreditation Standards 2014
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<th>Target</th>
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</thead>
<tbody>
<tr>
<td><strong>SO4: Available, accessible, acceptable, and high quality MNCH workforce developed and enforced at all levels of service delivery</strong></td>
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<tr>
<td><strong>Output 4.1: Multi-sectoral health promotion and disease prevention model developed and executed based on existing national SBCC strategies</strong></td>
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<tr>
<td>1. Test the draft model periodically to ensure it reflects behavior change theory and social determinants</td>
<td>Number of SBCC interventions implemented in accordance with a health promotion and disease prevention model developed for MNCH.</td>
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<tr>
<td>2. Conduct formative research to inform a health promotion and disease prevention model</td>
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<tr>
<td>3. Form Liaisons with SBCC, and other communications and health promotion sectors to inform the model and adapt as needed for each community (based on existing national policy and framework for Community Mobilization)</td>
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<td>4. Establish multi-sectoral taskforce on social determinants of health to identify and address health disparities and barriers to accessing quality care and used to inform the model</td>
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<tr>
<td><strong>Output 4.2 Community and facility human resource allocation and services aligned with population needs and density</strong></td>
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<tr>
<td>1. Systematically engage community (consumers/clients, CSOs, CHWs, etc.) in planning, prioritizing, organizing, integration and monitoring/evaluation of services</td>
<td>Health care provider to population ratio (disaggregated by type of provider – doctors, nurses and midwives)</td>
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<tr>
<td>2. Engage clinicians and facility managers systematically in planning for HR distribution and prioritizing, organizing, integration and monitoring/evaluation of services</td>
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<td>3. MOH liaise with community and clinicians to address possible approaches to human resource allocation</td>
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<tr>
<td>Key Activities to Deliver Output</td>
<td>Output Indicator</td>
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<tr>
<td><strong>Output 4.3: Package of MNCH services in the health insurance scheme expanded to the population not covered</strong></td>
<td>CBMI coverage rate</td>
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<tr>
<td>1. Identify plan to reach uncovered population in place, budget sources and schedule implementation</td>
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<tr>
<td>2. Gather data on uncovered population including costs to provide coverage</td>
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<tr>
<td><strong>SOS: Enhanced governance and accountability systems of integrated MNCH interventions reviewed, updated and enforced at each level</strong></td>
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<tr>
<td><strong>Output 5.1: Existing governance and accountability systems reviewed and updated</strong></td>
<td>Number of sectors providing reports on their respective contributions to improving MNCH outcomes.</td>
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<tr>
<td>1. Multisectoral team(s) reviews existing governance and accountability systems and identifies gaps</td>
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<tr>
<td>2. Align governance and accountability systems with updated policies and strategies</td>
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<tr>
<td>3. Develop and operationalize accountability strategy and implementation plan</td>
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<tr>
<td>4. Develop and implement monitoring &amp; evaluation of governance and accountability systems and integrate into HMIS</td>
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### 10.5 LIST OF CONTRIBUTORS

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