

MCHIP Country Brief: Rwanda



Selected Health and Demographic Data for Rwanda	
Maternal mortality ratio (deaths/100,000 live births)	487
Neonatal mortality rate (deaths/1,000 live births)	27
Under-5 mortality rate (deaths/1,000 live births)	76
Infant mortality rate (deaths/1,000 live births)	50
Contraceptive prevalence rate	45
Total fertility rate	4.6
Skilled birth attendant coverage	69%
Antenatal care, 4+ visits	35%

Sources: World Bank; Rwanda 2010 Demographic and Health Survey; Rwanda 2012 population and housing census; WHO; UNICEF.
 *UNICEF <5 mortality ranking (1 = highest mortality rate)

Health Areas:

- Maternal Health
- Newborn Health
- Child Health
- Malaria
- Family Planning
- HIV/AIDS
- Nutrition



Program Dates	October 1, 2009–March 30, 2014					
Total Mission Funding	Redacted					
Geographic Coverage	No. (%) of provinces	100%	No. (%) of districts	27	No. (%) of facilities	331 HC; 33 DH
Partners	MCHIP Organizations: Jhpiego, JSI, Save the Children, Path Key Partners: USAID, MOH-MOPDD and MCH, WHO, UNICEF					
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INTRODUCTION

Although important achievements have been realized in maternal, newborn, and child health (MNCH) in Rwanda, there is still a need for improvement. The maternal mortality rate decreased from 750/100,000 live births in 2005 to 476/100,000 live births in 2010, while neonatal mortality decreased from 37/1000 live births in 2005 to 27/1000 live births 2010. Malaria decreased from the first cause of mortality in 2005 to the eighth cause of mortality since 2011. Continued dedication and support to address MNCH programming is necessary to sustain and replicate these successes. As outlined in Rwanda's Health Sector Strategic Plan (HSSP) II 2009–2012 and then HSSP III (2012–2018), the government of Rwanda/Ministry of Health (MOH) is committed to comprehensively addressing MNCH programming to improve health outcomes for pregnant women and their children.¹

The goal of USAID's Maternal and Child Health Integrated Program (MCHIP) in Rwanda was to assist in scaling up evidence-based, high-impact MNCH interventions, including malaria, malnutrition, family planning (FP), immunization, and HIV/AIDS, thereby contributing to significant reductions in maternal, newborn and child mortality toward Millennium Development Goals 4 and 5.

MCHIP/Rwanda has been well-positioned to support Rwanda to address MNCH interventions, drawing on technical and programmatic expertise from previous global programs including BASICS, IMMBasics, and the ACCESS Program. Since 2009, with support from the U.S. Government, through both core and field support funds, MCHIP has provided technical support to the National Malaria Control Program and the Community Health Desk to accelerate efforts in malaria in pregnancy (MIP) at both the health facility and community levels, as well as in integrated community case management (iCCM).

In October 2010, MCHIP was awarded a bridge project to build upon the successes of multiple awards that were ending in Rwanda, including ACCESS, BASICS, Twubakane, and Capacity, and the beginning of a new USAID bilateral, the Family Health Project. In addition to the malaria program, the bridge project extended to more districts and more technical areas including MNCH, FP, nutrition, pre-service education, HIV/AIDS, and support to MOH entities.

MCHIP ensured an approach of no missed opportunities in supporting high-impact, evidence-based interventions as well as building the country capacity in MNCH, FP, malaria, nutrition, and HIV/AIDS, reaching a total number of 26,912 health care providers both at the facility and community level. Thanks to a strong partnership with the Rwandan MOH and other implementing partners and support from USAID, achievements were observed in the following technical areas.

KEY ACHIEVEMENTS

Malaria

Before MCHIP interventions, many health care providers working in antenatal care (ANC) services were not updated on the new MIP policy or trained in focused antenatal care (FANC). Therefore, MCHIP trained 895 health care providers from 20 of the 30 districts in FANC including malaria prevention, diagnosis, and treatment. This training allowed providers to focus on assessment and actions needed to make decisions and provide care for pregnant women seeking services at project-supported sites.

¹ DHS 2005 and 2010.

Due to the increase in skilled ANC providers in MCHIP assisted facilities, ANC services that were formerly only available twice a week are now offered on a daily basis. Data from formative supervision and provided in program reports show a decrease in waiting time from more than six hours to less than two hours, allowing health care providers to allocate enough time for counseling, examination, and care of pregnant women.

Community involvement is an important factor to the success of health programs because it is the conduit through which people outside of the health system receive messaging and information about available care. Buy-in from the community is essential to the proliferation of health programming. In Rwanda, each village selects a female community health worker (CHW)—called an *Animatrice de Santé Maternelle* (ASM)—to deliver services in maternal and newborn health (MNH). Using especially designed curricula, MCHIP trained 9,556 female ASMs from 11 of the 30 districts on the topics of early ANC attendance, birth preparedness, skilled birth attendance, and malaria prevention. As a result, 61,010 women in labor were accompanied by an ASM to deliver at the health facility, and 45,344 pregnant women in their first trimester were referred to ANC services in 2013. By working in 28 of 30 districts, MCHIP contributed to national trends in combating MIP where, according to Rwanda's DHS 2010, 96% of pregnant women register for ANC in both rural and urban areas. The rate of pregnant women sleeping under a bed net at night increased from 60.3% in 2008 to 72.3% in 2010.

MCHIP also conducted a study on the prevalence of MIP in six districts. The study population included 4,037 women who were tested for malaria during ANC visits. Three different malaria tests revealed the following results: polymerase chain reaction, or PCR (5.6%), rapid diagnostic test (2.5%), and microscopy (1.6%). The study also showed that insecticide-treated bed net (ITN) users were more protected against malaria than non-users (4.9% of ITN users tested positive for malaria using the PCR, while 8.5% of non-users tested positive). As such, ITN use will continue to be highly recommended to all pregnant women during ANC visits. These results call for more vigilance regarding MIP control interventions as many cases are asymptomatic and malaria tests are not yet given routinely during ANC service provision. The next step will be to revise the current MIP policy to integrate a systematic screening and testing approach for malaria during ANC for all pregnant women at both the facility and community levels.

In Rwanda, effective case management of malaria remains a very important component of malaria control. Before 2010, malaria treatment in children under five years old was based mostly on clinical diagnosis. With decreasing malaria transmission due to ITN use, indoor residual spray, iCCM program implementation, and the introduction of artemisinin-based combination therapy (ACT), national policy shifted to parasitological confirmation prior to treatment in all age groups. At the community level as well, use of the RDT was not integrated with the Community Case Management (CCM) program. To align the CCM program with the change in national treatment policies, CHWs needed to be trained or updated. MCHIP trained and equipped 8,960 CHWs from five districts, integrating RDT into the CCM training package. After the training, CHWs conducted 64,186 RDTs between May 2011 and June 2012. Of these RDTs, 18,616 were positive and as a result patients received correct treatment based on national guidelines and protocols.

Child Health

With the spread of antimalarial drug resistance, accurate diagnosis has become an important means of ensuring that malaria treatment is administered on the basis of confirmation of malaria parasites. Moreover, with decreasing malaria transmission and the introduction of ACT, presumption of malaria in all cases of fever could lead to an overestimation of the incidence and excessive use of the ACT. In response to these trends, MCHIP, along with other stakeholders, led the revision of the Facility Integrated Management of Childhood Illness (IMCI) training package which reduced the duration of training from 11 to six days. The

training time was reduced in response to feedback from providers that the long training took them away from their jobs and increased absenteeism in the workplace. The shortened training also focuses more on the practicality of IMCI implementation and is more cost-efficient due to the reduction of days. MCHIP trained 550 health workers from eight districts in Facility IMCI which led to higher coverage of quality facility-based IMCI services.

The findings of the latest national health assessment on the quality of malaria case management at the facility level (October 2013), which was conducted by the National Malaria Control Program with technical and financial support from MCHIP, revealed that care for sick children is available every day in 100% of health facilities and most of the health centers have basic equipment for services including functioning scales, timers, thermometers, microscopes, and hemoglobin tests. In addition, 92% of health centers had first-line antimalarial drugs and more than 60% of health workers were trained in malaria case management and RDT use. The assessment found that 96.4% of simple malaria cases were correctly managed and 100% of severe malaria cases were correctly managed at the health center level. As a follow-up to this, MCHIP supported the Malaria and Other Parasitic Diseases Division to conduct an assessment of severe malaria and malaria deaths in patients admitted to district hospitals in Rwanda. Findings from this assessment provided evidence for the MOH to revise its policy and strategies for malaria prevention and case management. According to Health Management Information System (HMIS) data, malaria incidence decreased from 83.7/1,000 in 2008 to 26/1,000 in 2011.

In general, Rwanda made great progress with iCCM interventions due to the leadership of the MOH in partnership with MCHIP and other implementing partners. The following factors have also contributed to the progress of iCCM interventions:

- High coverage of health insurance for all Rwandans (90.7%)
- Institution of performance-based financing at the community and facility level
- Capacity building and support to providers at the community and facility level
- Large distribution of ITNs free of charge and high ITN use rate of 72.3% (DHS 2010)

Maternal and Newborn Health

According to the DHS (2005) the maternal mortality ratio in Rwanda was 750 deaths/100,000 live births. Hemorrhage was listed as the leading cause of death (46.1%) in the MOH's 2008 Maternal Death Audit Report. The neonatal mortality rate was 28/1,000 and the main causes of death were prematurity, infections, and low birth weight.

The MOH, in partnership with the Rwandan development partners, calls for innovative approaches to saving lives in order to combat these staggering statistics. Among the interventions proposed, MCHIP supported the improvement of MNH programs at the national level, starting with the revision and adaptation of the Integrating Lifesaving Interventions training package, which includes Kangaroo Mother Care (KMC), Helping Babies Breathe®, active management of the third stage of labor (AMTSL), prevention of pre-eclampsia and eclampsia, and prevention of postpartum hemorrhage (PPH) at the community level using misoprostol.

As a result of MCHIP contributions—which included revision of the emergency obstetric and newborn care (EmONC) training package, training of health care providers, post-training follow-up, and provision of basic equipment—the Integrating Lifesaving Interventions training package has been used at the national level by all partners to train providers. There was a need for refresher training for many providers who, according to the MCHIP needs assessment report, had spent more than three years without any in-service training. A total of 16 providers were trained as clinical trainers for other providers using the revised training package. They, in turn, trained 261 providers on basic EmONC and 39 in comprehensive EmONC in eight districts. Due to capacity building and systems strengthening, a total of 11 district hospitals

now have KMC units that function without the support of MCHIP. From October 2010 to September 2012, 7,741 low birth weight babies received KMC services.

To better understand the status of quality of care in Rwanda, in 2010 MCHIP conducted a health facility survey on quality of care for prevention and management of common maternal and newborn complications. The survey revealed the following key findings:

- All policies were in place to support AMTSL use in Rwanda at the time of the survey
- Administration of oxytocin was universal at all facilities (100%)
- 56% of providers gave oxytocin intramuscularly within three minutes following delivery
- Only 7% of deliveries observed received all components of AMTSL
- The most dramatic differences were due to delays in administration of uterotonic
- 75% of women who received iron folic acid were counseled on how to use it
- 44% of women were asked about bleeding during their current pregnancy and only 36% about bleeding in a previous pregnancy

Using the results of the survey, the MOH with MCHIP and other stakeholders drafted the following recommendations to improve MNH services in Rwanda:

- Disseminate and orient providers to in-service training in basic EmONC
- Standardize data collection tools at the facility level to collect information for the MOH and the project, including data on delivery, the status of the mother and baby, and use of uterotonic for the AMTSL
- Update the national guidelines and integrate the recent inclusion of the use of the misoprostol
- Magnesium sulfate should be made available at all health facilities that offer EmONC services
- All facilities should maintain effective procedures for procurement and distribution of key EmONC drugs and supplies (magnesium sulfate, oxytocin, and misoprostol)

The number of maternal deaths in district hospitals decreased from 211 in 2010 to 134 in 2012 according to HMIS. A decrease occurred in neonatal mortality (from 37/1,000 in 2005 to 27/1,000 in 2010), as did an increase in skilled birth attendance (from 39% in 2005 to 69% in 2010). With MCHIP targeted interventions in these areas, the project hopes that these trends will continue to improve.

To contribute to prevention of PPH, MCHIP implemented a combined approach at both facility and home deliveries, designed to increase the use of uterotonics at all births. ASMs for MNH were mobilized to counsel pregnant women and administer misoprostol at the time of delivery. The program measured uterotonic use at facility-based deliveries to provide an overall picture of uterotonic coverage for PPH prevention at all births. The program was conducted in four districts of Rwanda (Rubavu, Musanze, Gakenke, and Nyanza) from September 2012 to February 2013. The next step of this introductory study is to scale up PPH prevention using misoprostol at the community level throughout the country. The training package, guidance, job aids, and information, education and communication (IEC) materials developed by MCHIP will be used for the scale-up.

Family Planning

MCHIP's contributions to FP improvement began with an assessment of the comprehensiveness and effectiveness of the existing FP policy developed for 2006–2010. After reviewing the results, MCHIP developed a new FP policy in 2012 that promotes integration, quality, accessibility, voluntarism, community, male and youth participation, and women's empowerment. MCHIP operationalized the revised FP policy by strengthening health care providers' capacity to provide long-term and permanent FP methods as well as to scale up FP provision at the community level. Until May 2011, health care providers (relevant cadres) could not offer tubal ligation without general anesthesia or during a caesarian section. These methods were not only risky for women but were also not accessible due to the lack of trained providers in tubal ligation. MCHIP was the first program to initiate the training of 41 health care providers in tubal ligation under local anesthesia and 11 trainers in tubal ligation. MCHIP also trained 77 nurses in IUD insertion and 325 health care providers in all FP methods. The MOH decided to use the training package and the pool of trainers developed by MCHIP to scale up tubal ligation training nationwide.

Based on HMIS data, IUD use increased and data shows that with MCHIP support, 4,340 IUDs were inserted between 2011 and 2013 and 1,301 tubal ligations were performed between 2011 and 2013.

At the community level, a total of 177 providers were trained to become trainers of CHWs for community based provision (CBP) of FP methods. Training in CBP of FP teaches CHWs where and how to find FP products, how to use them, contraindications, and distribution methods. It also reminds CHWs how to make referrals to a health facility in case of contraindications and/or emergencies. MCHIP trained 2,798 CHWs from five of the 30 districts, subsequently validating and equipping them to provide FP methods at the community level including pills, injectables, condoms, and the Standard Days Method®.

HIV/AIDS Prevention

MCHIP supported HIV/AIDS prevention through two main interventions: strengthening of the MOH pediatric HIV/AIDS program, and increasing voluntary medical male circumcision (VMMC) service provision with the Rwandan National Police (RNP).

To strengthen the pediatric HIV/AIDS program, MCHIP introduced a mentorship approach in 13 out of 30 districts where trained mentors coached providers on a monthly basis to improve the quality of pediatric HIV/AIDS services and to make sure that providers were following standards.

HIV prevalence within the RNP is 0.4 percentage points lower than the national average (3%). This slightly lower rate is attributed to the intense HIV prevention activities conducted across the country and especially the IEC messages targeting policemen since 2005 through mobile voluntary counseling and testing activities. MCHIP initiated the VMMC program in four RNP health facilities by training 60 health care providers in the procedure; these providers subsequently performed 1,226 male circumcisions within six months. In Rwanda, when 44 men are circumcised, one new HIV infection is averted and \$3,304 is saved.²

For increased infection prevention management, MCHIP also procured a modern incinerator in Kayonza District. This incinerator not only serves the district hospital's waste management needs, but is also used to fill the gap in a lack of modern incinerators in the region. In addition, it generates income for the district.

² Emmanuel N et al. Voluntary Medical Male Circumcision: Modeling the Impact and Cost of Expanding Male Circumcision for HIV Prevention in Eastern and Southern Africa. *PLoS Medicine*. (2011)

Other Areas Supported

- MCHIP provided technical assistance to the Expanded Program of Immunization (EPI) team in preparation of the rotavirus vaccine introduction as well as revising the country's comprehensive multi-year plan for immunization (cYMP) and in developing proposals for measles-rubella (MR) catch up campaign proposal. The rotavirus vaccine, MR catch up introduction plan and measles second dose (MSD) have now all been introduced into the routine immunization system.
- To fight against malnutrition at the community level, MCHIP strengthened the capacity of 1,993 community members in the establishment of family kitchen gardens. 156,601 (76%) family kitchen gardens out of 204,860 have been established in 717 villages. At the facility level, 162 health care providers have been trained to monitor and counsel in the areas of infant and child nutrition.
- To improve pre-service education, MCHIP collaborated with the Nursing and Midwifery Council to conduct a needs assessment of five nursing and midwifery schools and develop a plan for improvement. A total of 72 preceptors and teachers have been trained on Effective Teaching Skills followed by formative supervision. In addition, 282 students have been supported to complete clinical practicums.
- In partnership with the White Ribbon Alliance for Safe Motherhood, an international coalition of individuals and organizations was established to promote increased public awareness of the need to make pregnancy and childbirth safe for all women and newborns. MCHIP supported the training of 27 journalists who organized radio shows to help change public behavior on safe motherhood and FP and also increase the level of commitment from stakeholders towards this issue. Nationally, 16 media houses participated and published or aired stories; regionally, an article was published in The New Vision in Uganda during WRA Citizen Voice coverage of the IPU General Assembly. At the international level, the Huffington Post published three articles to increase awareness within the public and with stakeholders.
- MCHIP led the process and provided financial support for the development of the Social Behavior Change Communication sub-strategy for MNCH. After this sub-strategy was finalized, MCHIP initiated its implementation in the two districts of Nyabihu and Nyanza.

WAY FORWARD

Malaria

- As Rwanda moves to the pre-elimination phase of malaria elimination phase of malaria, support is needed for the NMCP in malaria prevention, case management, and scale-up of best practices documented for the fight against malaria.
- According to the MIP study findings, malaria cases identified by the PCR test have been found in districts with low endemicity of malaria and where no confirmed malaria cases were revealed using RDTs and microscopy. Therefore, it is important to support the process of revision of Rwanda's malaria policy and advocate for MIP, systematic RDT during ANC, and PCR in districts with low endemicity.

Child Health

- Due to a lack of information on the causes of death in children under five that can lead to erroneous decision-making, support is needed for the process of death audits for children under five years old in Rwanda.

Maternal and Newborn Health

- Since PPH is still the leading cause of maternal mortality and there is still a high proportion of home births in Rwanda, it is important to scale up an integrated PPH prevention and management program both at the community and facility levels.
- Because uterotonic coverage at the community level is low, qualitative formative research should be conducted among ASMs to better understand the barriers to uterotonic coverage, understand better ways to reach pregnant women, and improve misoprostol counseling and administration.
- Since community health interventions are an integrally important factor to the success of health programs, support is needed for Rwanda to strengthen the capacity of CHWs in areas such as:
 - Training of newly recruited CHWs and regular refresher training of CHWs based on findings of the CHW performance assessment.
 - Use of rapid SMS as a tool to track indicators of community interventions using electronic medical records.
 - Support to the department of health community interventions in program management and data processing
- Given that newly graduated nurses and midwives in Rwanda are not competent in new MNH skills (e.g., AMTSL, HBB, KMC, Helping Mothers Survive, and integration of early infant male circumcision into postpartum care) all nurses and midwives should be trained in these new areas. In addition, these topics should be integrated into the pre-service curriculum of nurses and midwives.
- Given that PPH and AMTSL indicators are not yet integrated in the current HMIS tracking tools, HMIS data collection tools should be updated with new MNCH indicators like PPH

Family Planning

- Since the new FP policy for Rwanda and the SBCC sub-strategy for MNH are not accessible to all and are not made available to future users, support should be provided for the dissemination of Rwanda's new FP policies, norms, standards, and guidelines.
- Based on innovations developed in the new FP policy and the BCC strategy for MNH, support is needed to scale up new technologies in FP (including tubal ligation under local anesthesia, no scalpel vasectomy, IMPLANON®, and task shifting for nurses to provide IUD insertions).

HIV/AIDS Prevention

- Given the potential for VMMC to reduce HIV transmission from HIV-positive females to HIV-negative circumcised males by almost 60%, and given that Rwanda is a traditionally non-circumcising society, continued support should be provided for Rwanda to reach the target set in the national HIV strategic plan to reduce the burden of HIV/AIDS and the human papilloma virus, which is responsible of cervical cancer.
- Continued assistance should be provided to the MOH to increase early identification, management, and referral of people living with HIV/AIDS