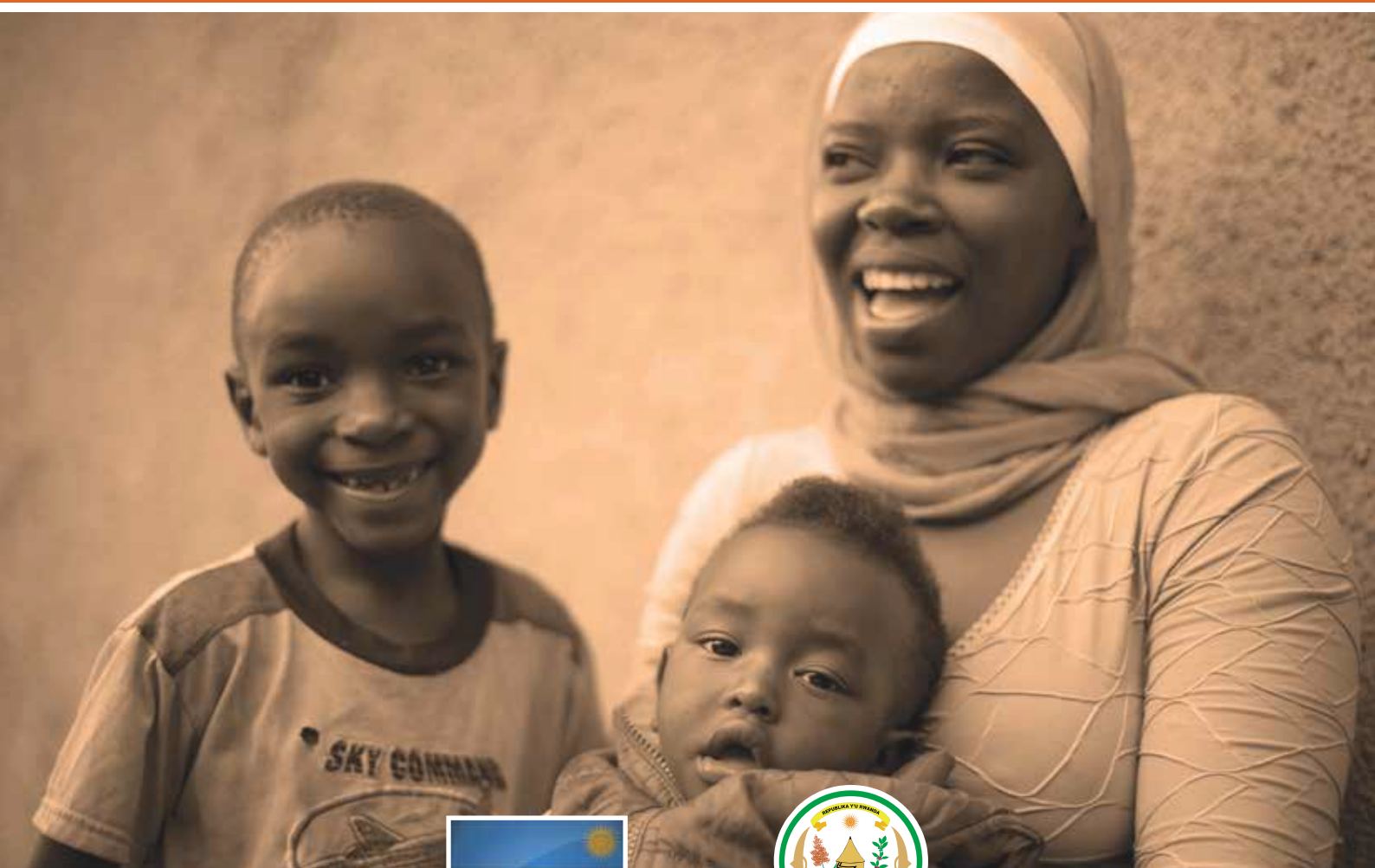


Success Factors for Women's and Children's Health



RWANDA

Ministry of Health, Rwanda

“Success factors for women’s and children’s health: Rwanda” is a document of the Ministry of Health, Rwanda. This report is the result of a collaboration between the Ministry of Health and multiple stakeholders in Rwanda, supported by the Partnership for Maternal, Newborn and Child Health (PMNCH), the World Health Organization, other H4+ and health and development partners who provided input and review.

Success Factors for Women’s and Children’s Health is a three-year multidisciplinary, multi-country series of studies coordinated by PMNCH, WHO, World Bank and the Alliance for Health Policy and Systems Research, working closely with Ministries of Health, academic institutions and other partners. The objective is to understand how some countries accelerated progress to reduce preventable maternal and child deaths. The Success Factors studies include: statistical and econometric analyses of data from 144 low- and middle-income countries (LMICs) over 20 years; Boolean, qualitative comparative analysis (QCA); a literature review; and country-specific reviews in 10 fast-track countries for MDGs 4 and 5a.^{1, 2} For more details see the Success Factors for Women’s and Children’s health website: available at <http://www.who.int/pmnch/successfactors/en/>

WHO Library Cataloguing-in-Publication Data

Success factors for women’s and children’s health: Rwanda

I. World Health Organization.

ISBN 978 92 4 150908 4

Subject headings are available from WHO institutional repository

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Printed in Switzerland

Suggested citation: Ministry of Health Rwanda, PMNCH, WHO, World Bank, AHPSR and participants in the Rwanda multistakeholder policy review (2014). Success Factors for Women’s and Children’s Health: Rwanda.

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1. Executive Summary

Overview

Rwanda has made significant progress in improving the health of women and children and is on the fast track in 2013 to achieve Millennium Development Goals (MDGs) 4 (to reduce child mortality) and 5a (to reduce maternal mortality). A combination of factors has played a key role in driving progress. This review provided an opportunity for the Ministry of Health in Rwanda and other key stakeholders to synthesize and document how these improvements were made, focusing on policy and programme management best practices.



Under 5 child mortality

Reductions in mortality are associated with both improved coverage of effective interventions (e.g. full child immunization coverage increased from 69.8% to 90.1%; exclusive breastfeeding rate increased to 85%) to prevent and treat the most important causes of child mortality and with improvements in socioeconomic conditions. Rwanda's 2015 MDG goal for child mortality is 52 deaths per 1000 live births (LB). According to the United Nations Inter-agency Group for Child Mortality Estimation, Rwanda had already achieved an under 5 year mortality rate (U5MR) of 54/1000 LB in 2013, a reduction of more than 70%. The Rwanda Demographic and Health Survey (RDHS 2010) indicated a rate of 76 U5MR per 1000 LB. Rates of newborn mortality have been slower to decline, and form about one third of all child mortality.

Maternal mortality

Rwanda's maternal mortality ratio (MMR) has trended down at a rapid rate (50% between 2000 and 2010) achieving an MMR of 340/100 000 LB according to the Atlas of African health statistics modelled data. RDHS data showed a rate of 476/100 000 LB in 2010. Declines in maternal mortality are associated with improvements in the contraceptive prevalence rate and skilled birth attendance. Between 2000 and 2010, the modern contraceptive prevalence rate increased from 4% to 45%; the presence of a skilled provider during child birth increased from 31% to 69%.



Health sector initiatives and investments

In response to a severe health workforce shortage (especially of midwives), limited health infrastructure, and very high rates of maternal and child mortality, the Government of Rwanda prioritized reproductive, maternal, newborn and child health (RMNCH) throughout its policies and major health sector reforms within a context of strong national ownership and health sector decentralization. With the goal of providing universal health care, the country has focused on health systems strengthening; government-led coordination and planning; increased national spending on health; evidence-based policy making; strong community involvement; innovative health financing mechanisms; health workforce and infrastructure development; a community-based health insurance (CBHI) scheme and a performance-based financing (PBF) system. The complementarity of these various supply- and demand-side interventions has enabled marked improvements in coverage and equity in access to health services.

Investments and initiatives outside the health sector

In recognition of the strong links between health and sustainable development, the Government of Rwanda has prioritized multipronged approaches encompassing the health sector and other areas

such as education, nutrition, and water and sanitation. Free primary education is available and special attention has been paid to eliminate gender disparities resulting in 90% of primary school age girls being enrolled in school. Coordination between government, donors and other stakeholders has aligned efforts in education, based on national development priorities. Since Rwanda's adoption of the National Nutrition Policy in 2005, an interministerial, coordinated and district-based approach to addressing malnutrition has been led by the President and operationalized by the Prime Minister's Office. Though progress has been made in undernutrition, stunting (short height for age) in children under 5 remains high at 44%. The availability of and access to services has also improved through the construction and equipping of district hospitals and health centres. Rwanda has also prioritized access to clean water and sanitation as well as expansion of its rural roads. The institution of social protection programmes and economic empowerment of women have also been a focus. Rwanda has led regionally in the use of innovation and mobile technology as evidenced by its RapidSMS programme which links community health workers to pregnant women, enabling monitoring of antenatal care and referrals in an emergency. The tool is also used to report births and deaths. Several other homegrown solutions developed in Rwanda provide an additional safety net and supports for the poor.



Key actors and political economy

The Government of Rwanda has employed innovative and evidence-based reforms to develop a coordinated response to improving reproductive, maternal, newborn and child health (RMNCH) outcomes. It has aligned all ministries and development partners under the Vision 2020 Strategy and its subsequent policies, and established intersectoral collaborations, such as the Joint Action Development Forum at the district level, which have been an essential driver in the improvement of RMNCH outcomes. Both the president and the first lady have taken key roles in promoting improvements that have affected women's and children's health.



Governance and leadership

Good governance has been prioritized through its integration into Rwanda's overarching country development policies, and is the first pillar of the country's Vision 2020 Strategy. The government's emphasis on crosssector collaboration, decentralization and the sector-wide approach (SWAp) framework has promoted accountability between the local and national level. Rwanda's performance-based environment and zero tolerance policy on corruption has further strengthened accountability among actors and institutions. The Government of Rwanda has also instituted a national gender policy, structures to empower women and to prevent gender-based violence. Female representation within the parliament is high, with women currently holding a majority of seats (64% in the lower house and 40% in the Senate). Rwanda has been continually improving in securing political stability, rule of law, control of corruption, and government effectiveness.

Challenges and future priorities

Despite notable improvements in RMNCH, maternal and newborn mortality and morbidity remain high in Rwanda. Key priority actions to accelerate progress are to:

- increase the number and improve the distribution of skilled birth attendants;
- improve the quality of health services;
- improve geographical access to health facilities; and
- strengthen efforts in the areas of family planning, newborn health and nutrition.

2. Introduction

Rwanda is one of 10 low-and middle-income countries (which also include Bangladesh, Cambodia, China, Egypt, Ethiopia, the Lao People's Democratic Republic, Nepal, Peru and Viet Nam) with a high maternal and child mortality burden that in 2012 were on the fast-track to achieve MDGs 4 (to reduce child mortality) and 5a (to reduce maternal mortality).^{3, a}

The primary objective of this document and accompanying review process was to identify factors both within and outside the health sector that have contributed to reductions in maternal and child mortality in Rwanda – focusing on how improvements were made, and emphasizing policy and programme management best practices and how these were optimized and tailored to Rwanda's unique context. Methods used for the Success Factor review in Rwanda included:

- A literature review based on peer-reviewed and grey literature, policy documents, programme evaluations and sector strategies and plans;
- A review of quantitative data from population-based surveys, routine data systems, international databases and other sources;
- Interviews and meetings with key stakeholders to inform and help validate findings and to identify factors based on local knowledge and experience;
- A review of the draft document by stakeholders and local experts to finalize findings.

It was recognized that it can be difficult to establish causal links between policy and programme inputs and health impact. For this reason, plausibility criteria were used to identify key policy and programme inputs and other contributing factors that could be linked to potential mortality reductions. These criteria included, the potential impact of the policy or programme on mortality reduction, that it had been implemented long enough to have influenced mortality, and it had reached a large enough target population to explain national-level reductions in mortality. Following this, stakeholders reviewed the identified policies and programmes to reach consensus on the key inputs that could have likely influenced mortality. Research is needed to better quantify how policies and programmes contribute to improved health outcomes. More data in this area would enable the analysis to be further refined.

The first draft was developed by local and international experts. Interviews and group meetings with stakeholders were conducted between February and March 2014 to further review, revise and achieve consensus on findings. Findings were presented and discussed at the Maternal and Child Health Review meeting in June 2014. A final draft was developed and approved by the MoH also in June 2014.



^a In addition to MDGs 4 and 5a, other targets discussed in this analysis, where relevant, include MDG 3a (to eliminate gender disparity in primary and secondary education), MDG 5b (to achieve universal access to reproductive health), and MDG 7c (to halve the proportion of people without sustainable access to safe drinking-water and basic sanitation).

3. Country Context

Overview

Rwanda is a landlocked country in central east Africa with both mountainous terrain and plateaus. Following decades of unrest, up to a million lives were lost during the 1994 genocide, which left a further two million homeless. After this, the government began to rebuild the country with policies to support equitable economic development. Policies emphasized investment in major infrastructure, commercial and agricultural productivity and skills development. Agriculture and the service sector became key contributors to economic growth.

The gross domestic product per capita rose from (purchasing power parity, PPP, Int\$) \$707 in 1990 to \$1167 in 2012 (see Table 1: Key country indicators).⁴ Further social and political reform led to higher living standards and increased life expectancy. As the overall Success Factors studies show, improvements in gross domestic product per capita, together with progress across health and other sectors, have contributed to improvements in health and development.² The total fertility rate (TFR) is at 4.6 births per woman, and 41% of the population are below 15 years of age; despite urbanization, over 81% of the population lives in rural areas (see Table 1: Key country indicators).^{4, 5}



Table 1: Key country indicators^{*,†}

| | INDICATOR | 1990-1999 | 2000-2009 | 2010-PRESENT |
|--|---|--------------|--|---|
| Population | TOTAL POPULATION (millions) | 7 (1990) | 8 (2000) | 10.5 m (2012, Rwanda Census) |
| | TOTAL FERTILITY (births per woman) | 7 (1990) | 6 (2000) | 5 (2011) |
| Health Financing | TOTAL HEALTH EXPENDITURE PER CAPITA (PPP, constant 2005 international \$) | 21 (1995) | 25 (2000) | 135 (2011) |
| | OUT-OF-POCKET HEALTH EXPENDITURE (as % of total expenditure on health) | 26 (1995) | 25 (2000) | 21 (2011) |
| Economic Development | GROSS DOMESTIC PRODUCT PER CAPITA (PPP, constant 2005 international \$) | 707 (1990) | 631 (2000) | 1167 (2012) |
| | FEMALE PARTICIPATION IN LABOR FORCE (% of females age 15-64) | 90 (1990) | 88 (2000) | 88 (2012) |
| | GINI INDEX (0 equality to 100 inequality income distribution) | N/A | 52 (2000) 51 (2000, EICV)* 52 (2005, EICV) | 51 (2011) 49 (2011, EICV) |
| Health Workforce | PHYSICIANS (per 1000 population) | 0.04 (1993) | 0.02 (2002) | 0.06 (2010) 1 doctor/16,001 |
| | NURSES AND MIDWIVES (per 1000 population) | N/A | 0.43 (2004) | 0.69 (2010) 1 nurse/1291 |
| Education | GIRLS' PRIMARY SCHOOL NET ENROLLMENT (% of primary school age children) | 82 (1999) | 81 (2004) | 90 (2010) |
| | ADULT LITERACY RATE (% of males (M) and % females (F) aged 15 and above) | N/A | 71(M) 60(F) (2000) | 82 (M) 77(F) (2010, RDHS) |
| Environmental Management | ACCESS TO CLEAN WATER (% of population with access to improved source) | 62 (1990) | 66 (2000) | 74 (DHS, 2010) 74.2 (EICV3, 2010/11) |
| | ACCESS TO SANITATION FACILITIES (% of population with improved access) | 32 (1990) | 47 (2000) | 75 (DHS, 2010) 74.5 (EICV3, 2010/11) |
| Urban Planning/ Rural Infrastructure | POPULATION LIVING IN URBAN AREAS (% of total population) | 5 (1990) | 14 (2000) | 19 (2012) |
| | ELECTRIC POWER CONSUMPTION (kilowatt hours per capita) | N/A | N/A | N/A |
| Human Development Index (Composite of life expectancy, literacy, education, standards of living, quality of life) | VALUE (reported along a scale of 0 to 1; values nearer to 1 correspond to higher human development) | .23 (1990) | .31 (2000) | .43 (2012) |
| | COUNTRY RANK (2012) | 167 | | |
| Good Governance (Reported along a scale of -2.5 to 2.5; higher values correspond to good governance) | CONTROL OF CORRUPTION (extent that public power is used for private gain) | -0.93 (1996) | -0.65 (2000) | 0.66 (2012) |

* EICV-Integrated Household Living Conditions Survey

4. Key Trends, Timelines and Challenges

In the last decade, Rwanda has made dramatic improvements in RMNCH. It has achieved MDG 4 and is considered on the fast track toward achieving MDG 5a according to several UN sources.^{3, 4, 6} Rwanda's 2015 MDG goal for child mortality is 52 deaths per 1000 live births (LB). As of 2010, it had achieved 76/1000 LB according to the 2010 Rwanda Demographic and Health Survey (RDHS).⁷ (See Figure 1.) However, according to the UN Inter-agency Group for Child Mortality Estimation, it had already achieved an under 5 year mortality rate (U5MR) of 54/1000 LB, a reduction of more than 70%.^{3, 4, 8} Reductions in mortality are associated with both improved coverage of effective interventions (e.g. full child immunization coverage increased from 69.8% to 90.1%; exclusive breastfeeding rate was 85%) to prevent and treat the most important causes of child mortality and with improvements in socioeconomic conditions. Rates of newborn mortality have been slower to decline and form about one third of all child mortality in Rwanda.

Rwanda's maternal mortality ratio (MMR) has also trended down at a rapid rate (50% between 2000 and 2010) to a rate of 340/100 000 LB according to modelled data.⁶ However, RDHS data showed an MMR of 476/100 000 LB in 2010.⁷ (See Figure 2.) Declines in maternal mortality are associated with improvements in the contraceptive prevalence rate and skilled birth attendance. Between 2000 and 2010, the modern contraceptive prevalence rate increased from 4% to 45%; the presence of a skilled provider during child birth increased from

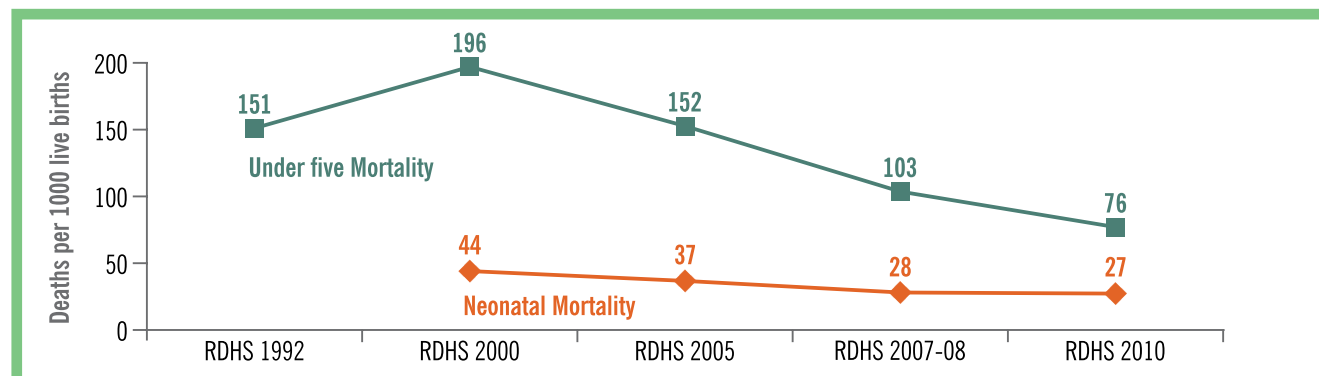
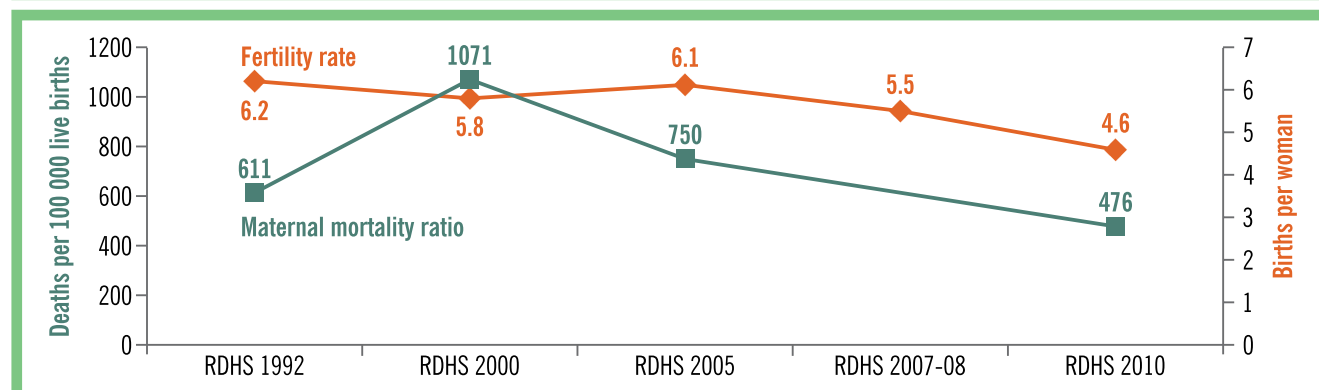
31% to 69%. (See Table 2.) However, the total fertility rate is still quite high at 4.6.

To achieve the much-needed progress in RMNCH outcomes in post-genocide Rwanda, the government had to overcome a number of challenges. Rwanda faced a severe health workforce shortage, especially of midwives. Other challenges included its limited health infrastructure, poor access to institutional and skilled care during pregnancy and child birth, inadequate coverage of emergency obstetric and newborn care (EmONC) services, as well as an improved but still extremely low uptake of family planning services in a context of rapid demographic growth. There are also both socioeconomic and geographic barriers to health care that prevent women from accessing essential RMNCH services.⁹

In response, the Government of Rwanda prioritized RMNCH throughout its policies and major health system reforms (see Timeline of key policy inputs). On its road to universal health care, the country has focused on health systems strengthening, government-led planning, evidence-based policy making, strong community involvement, innovative health financing, health workforce and infrastructure development, a community-based health insurance (CBHI) scheme and a performance-based financing (PBF) system. The complementarity of these various supply- and demand-side interventions has enabled marked improvements in coverage and access to health services (see Table 2: Key RMNCH coverage indicators).^{9, 10}

Table 2: Key RMNCH coverage indicators

| | | | |
|-------------------------------|--|--------------|--|
| Prepregnancy | DEMAND FOR FAMILY PLANNING SATISFIED (% of women age 15-49 with met need for family planning) | 73 (2010) | RDHS 2010 |
| Pregnancy to Postnatal | ANTENATAL CARE (% of women attended at least four times during pregnancy by any provider) | 35 (2010) | RDHS 2010 |
| | SKILLED ATTENDANCE AT BIRTH (as % of total births) | 69 (2010) | WDI |
| | ANTIRETROVIRALS FOR WOMEN (% of HIV infected pregnant women receiving ART prophylaxis) | 93 | UNAIDS Report of the Global AIDS Epidemic, 2012; Rwanda MOH Annual Report, 2011-12 |
| | POSTNATAL CARE FOR MOTHERS (% of mothers who received care within two days of childbirth) | 19 (2010) | RDHS 2010 |
| | INFANT FEEDING (Exclusive breastfeeding for first six months) | 85 (2010) | RDHS 2010 |
| Newborn to Childhood | IMMUNIZATION (% of children ages 12-23 fully immunized) | 90 (2011) | WHO and UNICEF Estimates of National Immunization Coverage (WUENIC) 2012 |
| | PNEUMONIA (Antibiotic treatment for pneumonia) | 63 (2010) | RDHS 2010 |

Figure 1: Trends in childhood mortality rates, Rwanda DHS data

Figure 2: Fertility rate and maternal mortality ratio, Rwanda DHS data


Timeline of key policy inputs

| Pre 1990 | 1991-2000 | 2001-2010 | 2011 to present |
|--|--|---|---|
| 1980 Expanded Programme on Immunization (EPI) Strategy 1985 Health system decentralization; Development of a decentralized primary health care system post-genocide | 1996 Mutual health insurance 1999-2000 CBHI pilot project 2000 Vision 2020 Strategy; Integrated Management of Childhood Illnesses (IMCI) Strategy | 2001 Performance Based Financing pilot project 2002 Revitalization of the EPI strategy and campaign 2003 National Reproductive Health Policy 2003 Education Sector Policy 2004 National Health Policy 2004 Mutuelles Health Insurance Policy 2005 Nationwide implementation of PBF system 2005 National Nutrition Policy 2006 Nationwide implementation of Community Based Health Insurance system 2006 Community Health Desk established 2008 National Community Health Policy of Rwanda 2008 National Family Planning Policy 2009 Institutionalization of maternal death audits 2008 Girls Education Policy 2009 National Policy on Child Health 2010 Education Sector Strategic Plan 2010 National Policy and Strategy for Water Supply and Sanitation Services | 2011 Gender-Based Violence Policy 2011 Neonatal and child death review instituted 2008-2012 Strategic Plan for Acceleration of Child Survival 2008-2012 National Strategic Plan to Accelerate the Reduction of Maternal and Neonatal Morbidity and Mortality 2008-2012 Economic Development and Poverty Reduction Strategy of Rwanda 2009-2012 National Health Sector Strategic Plan II (HSSPII) 2011 Pro-poor adaptation of CBHI scheme; Human Resource Strategic Plan 2011 Home-based Management of Mother and Newborn 2012 Rwanda Family Planning Policy; Rwanda Family Planning Strategic Plan 2012-2016 Policy on Reproductive Health 2012 Strategy on Adolescent Sexual and Reproductive Health and Rights 2013 Moving to Maternal Death Surveillance and Response approach 2013-2018 National Health Sector Strategic Plan III 2013-2018 National Strategic Plan to Accelerate Progress towards Reducing Maternal and Neonatal Morbidity and Mortality 2013-2018 National Child Survival Strategic Plan |

5. Health Sector Initiatives and Investments

Health financing and donor alignment

The Government of Rwanda has strong oversight and ownership over its national development agenda.¹⁰ Any health system spending and decision-making in Rwanda is steered by the central and local government and guided by the Vision 2020 Strategy, Economic Development and Poverty Reduction Strategy of Rwanda 2 (EDPRS 2) and Health Sector Strategic Plan III (HSSP III) and organized under a sector-wide approach (SWAp) framework. A SWAp framework has helped improve aid effectiveness and facilitated greater coordination across government health priorities and plans. Domestic and external partners are required to align to the government's legislation, policies and strategies. The health sector is governed through a decentralized system, where 30 districts are responsible for implementing health financing policies and for delivering equitable and efficient health services. The community-based health insurance (CBHI) scheme is the main organizing and financing mechanism for health care.



In line with the Government of Rwanda's objective to be independent from development aid by 2020, there has been a decrease in external funding (as a proportion of the total health expenditure), from 52% in 2000 to 42.6% in 2008.¹¹ However, from 2003 to 2010, official development aid for RMNCH has increased annually by US\$ 7.4 million, which equates to a 29.5% mean annual increase.¹² The health sector's budget as a percentage of the total government expenditure has also seen continual increase, from 8.2% in 2000 to 16.5% in 2013-14 according to the Ministry of Finance. (see Table 1: Key country indicators).

Human resources for health



Delivering quality RMNCH services requires an adequate number of skilled health workers. Decades of instability in the region have greatly reduced Rwanda's health workforce through emigration and mortality.^{10, 11} As of 2012, there was one doctor per 16 001 population, one nurse per 1291 population, and one midwife per 66 749 population.¹³ Prior to 1997, no midwifery cadre was trained in Rwanda. Since 2005, the government of Rwanda has increased its efforts to address the challenge of the human resource shortage through various reforms and initiatives, such as the decentralization of human resource management and the increase in the number and quality of skilled birth attendants (especially midwives). Rwanda has also established new norms and professional standards to improve quality of care.¹⁴⁻¹⁷ All nurses are being upgraded through additional training and bachelor's degree training is also being promoted. Specialized residency training programs are being developed for doctors.

To mitigate the workforce shortage in Rwanda, 45 000 community health workers (CHWs) provide essential health services at the village level, an initiative that started in 1995.¹⁶ One of Rwanda's strategies has been to create new positions and roles. Rwanda established two types of community health workers: binomes (a male and a female) in charge of integrated case management of childhood illness (IMCI) and family planning, and female community health workers in charge of maternal and newborn care. Health facility staff and CHWs receive financial incentives in addition to their monthly salaries

based on Rwanda's national performance-based financing (PBF) system (see Health sector spotlight). The goal of offering incentives is to enhance staff commitment to high quality standards,¹⁸ where rewards and incentives are allocated based on health service delivery.

Outcomes monitored using evidence

To ensure effective decision-making within the health sector, the government has prioritized evidence-based policies and strategies.¹⁰ Since 2007, Rwanda integrated maternal and child health services; namely emergency, obstetric and neonatal care (EmONC), essential newborn care (ENC), integrated community case management (iCCM), clinical IMCI, family planning and HIV services under a national monitoring and evaluation (M&E) framework.¹⁶ This comprehensive system has enabled the close monitoring and analysis of RMNCH for improved priority setting, planning, and resource allocation.^{15, 16}

Rwanda's web-based Health Management Information System integrates data from a breadth of sources, such as the CHW Information System, the CBHI Monthly Indicator Reporting System, and data from private health facilities.¹⁶ Data from the health management information system are reviewed regularly to inform health sector strategic plans, monitor results, assess progress and facilitate priority setting, planning and resource allocation.

Since 2009, maternal death reviews have been scaled up at the national level in three forms: facility-based audits, verbal autopsies (community-based reviews) and confidential enquiries into maternal deaths. As of 2013, Rwanda adopted WHO updated guidance to use the maternal death surveillance and review approach. The findings are used to understand causes of deaths and to inform health sector planning.¹³ Rwanda also has a systematic and functional community reporting system in place, where CHWs are employed to record births and maternal and child deaths.¹⁶ Training for child and newborn death reviews is currently being scaled up. Various community committees participate in M&E activities, through



the verification of facility activity reports and by providing feedback on health service provision.¹⁸ Rwanda has made health information publically accessible to enable a wider range of stakeholders to use information to improve health services, thereby facilitating transparency of results.

Political prioritization of essential health interventions

The numerous health sector reforms that have taken place in the last decade confirm the government's prioritization of MDGs 4 and 5. The government's sustained focus on health systems strengthening has been a key factor in providing effective RMNCH services. Instead of implementing vertical and disease-specific programmes, the government has been pooling these funds (i.e. The US President's Emergency Fund for AIDS Relief and Global Fund to fight AIDS, TB and Malaria) to finance the integration of primary health care services.¹¹

All health facilities whether public, private or not-for-profit (mainly faith-based) are integrated within the public health system and governed by the Ministry of Health (MoH). Although some faith-based health centres may not offer modern methods of family planning, they are obliged under the Family Planning Policy to provide clients with information on all family planning options and to refer them to family planning outlets (*postes secondaires*) where they can access the required services;¹⁹ this is another example of service integration.

Until recently, Rwanda had administratively heavy and very restrictive abortion laws that only permitted abortion to protect a woman's physical health or to save her life. In May 2012, the government made a step towards securing women's reproductive rights by including cases of rape, incest, forced marriage and fetal impairment as legal grounds for abortion.

Legal and financial entitlements, especially for underserved populations

In the Vision 2020 Strategy and throughout the government's policies and strategies there is a commitment to securing equitable social and economic development.^{10, 20} The government's objective of providing universal health care is an indication of its readiness to address economic and social barriers to accessing health services.^{16, 21}



The overall objective of the latest Health Sector Strategic Plan III (2012–2018) is to ensure universal accessibility (in geographical and financial terms) of quality health services for all Rwandans.

~ Health Sector Strategic Plan III, 2012¹⁶

Rwanda has implemented various initiatives since 2000 to improve financial and geographic access to RMNCH services such as the innovative CBHI scheme known as *Mutuelles*.^{9, 21–24} A measure of its impact is that between 2000 and 2007, growth in utilization of health services was greatest among the poorest quintile.⁷ Such schemes were further reformed in 2011 to a three-tiered system of premiums to enable the poorest households to pay a lower premium or no premium at all.^{21, 24}

Mutuelles de santé is an innovative CBHI scheme that was established in line with the government's National Health Strategy to provide universal health care to the Rwandan population.²¹ The scheme was piloted in 1999 and extended nationwide in the mid-2000s with the objective of providing a long-term solution to financial barriers to accessing primary health care, focusing on RMNCH services.^{9, 10} The scheme intends to provide financial risk protection by lowering catastrophic out-of-pocket payments and ensuring access to health care for vulnerable populations through a network of 30 district-based *mutuelles*,²² managed by the district and central governments. Community committees play a key role in the scheme as they are responsible for mobilizing and registering members, collecting fees and clearing bills from health facilities.^{9, 21, 22}



Health sector spotlight

IMPROVING ACCESS TO RMNCH SERVICES



The impact of performance-based financing:

Since 2005, a PBF system has been implemented nationwide, covering both public and faith-based facilities as well as CHW cooperatives. This innovative results-based financing system has increased political prioritization of RMNCH at the district and village level, since all health facilities and CHW cooperatives are rewarded financially based on a number of indicators (mainly RMNCH-related). Examples of indicators are: the proportion of women delivering at health facilities; the percentage of children receiving a full course of basic immunizations; and other qualitative measures such as the correct use of a partograph.^{13, 16} The community-based PBF system incentivizes health services and referrals provided by CHWs.²⁷ The PBF system fosters competition between facilities and districts, as users of the PBF web database can monitor their targets against the performance of other

service providers.⁹ To minimize manipulation of data and corruption, government and community-based verification and audit systems have been put into place.

Several studies show that PBF increases utilization of maternal health services, boosting family planning coverage¹⁵ and numbers of institutional deliveries,^{15,18} and reducing out-of-pocket health expenditure.¹⁵ The contractual approach also improves health facility performance¹⁴ and promotes the increase of district health budgets through involvement of district officials.⁹

The full impact of PBF is, however, difficult to measure as other parallel initiatives within the health system tend to confound the results, especially in terms of outcome indicators. A next step would be to assess the impact of PBF on RMNCH health outcomes.

Annual premiums are based on wealth categories plus a 10% copayment for each episode of illness.^{9, 10} CHWs transfer premiums to district-level *mutuelles* funds, which are 50% subsidized by external donors.^{21, 23} Funds are used to pay healthcare providers on a payment per case basis. A standard set of RMNCH services is covered by the scheme, such as antenatal care (ANC), deliveries, EmONC, family planning, laboratory tests and essential drugs.²⁵ Members are entitled to ambulance transport, a minimum service package at a health centre and a complementary package at district facilities and national referral hospitals.²¹

The insurance scheme was made compulsory in 2008.^{21, 23} By June 2012, 90% of the Rwandan population was enrolled.¹⁰ The scheme enhanced the performance of primary healthcare providers and improved medical care utilization.^{21, 23}

Furthermore, the scheme was shown to reduce excessive out-of-pocket payments and was significantly associated with a higher degree of financial risk protection.^{23, 24} The *mutuelles* system is promoted and supported by the government, international agencies and nongovernmental organizations.

A key initiative promoting access to RMNCH care is the CHW strategy. These elected community members broaden the reach of the health system by connecting communities (especially in remote areas) to health services and monitoring health at the village level. Each village elects three volunteers who are then trained by the MoH: a male and female community member for integrated community case management (iCCM) and an additional woman for RMNCH services. They provide curative services, e.g. for malaria, pneumonia and diarrhoeal diseases, and play a key role in expanding the coverage of family planning, antenatal care and childhood immunization; when required, they refer patients to health centres.²⁶

6. Initiatives and Investments Outside the Health Sector

Education

Women's level of education has an impact on a variety of factors such as fertility rates, childbearing age and modern contraceptive use.⁷ Improved educational status in women has been shown to be related to lower infant mortality rates and improved performance on other health indicators. Under 5 mortality in Rwanda is almost twice as high for children born to women with no education than women with at least secondary education (63 versus 125 deaths per 1000 live births).⁷ In 2008, Rwanda developed a Girls' Education Policy with the aim to improve girls' enrolment, retention, completion and transition to higher levels of education. This has contributed to progressively eliminating gender disparities in education.



Rwanda has made great efforts in attaining MDG 2 and is on track to achieving universal primary education. Currently, 90% of primary school age girls are enrolled in school (see Table 1). The Government of Rwanda is implementing a Nine Year Basic Education programme which provides free primary education to all Rwandan children. As of 2012, the 12-year basic education programme is also being rolled out.^{28, 29} Furthermore, an increasing number of schools have adopted the

United Nations Children's Fund (UNICEF) child-friendly initiative promoting the integration of gender-sensitive initiatives to support retention of girls in schools. An innovative program known as One Laptop per Child has been initiated in Rwanda to promote computer literacy and better preparation for jobs in the 21st century. Rwanda also provides opportunities for young men and women who have dropped out of school to catch up and complete their secondary education as well as pursue technical and vocational training.

Coordination between government, donors and other stakeholders has aligned efforts in education based on national development priorities. This collaboration, based on multi stakeholder partnerships, a SWAp framework and comprehensive policies and strategies, was identified as critical to improving educational outcomes. All activities are aligned under the Vision 2020 Strategy, the 2003 Education Sector Policy, the 2008 Girls' Education Policy and the Education Sector Strategic Plan 2010–2015. In line with the Government's multisectoral approach, the MoH contributes to various health promotion programmes in schools in the area of hygiene, nutrition, promotion of immunizations, reproductive health, and HIV prevention.²⁷



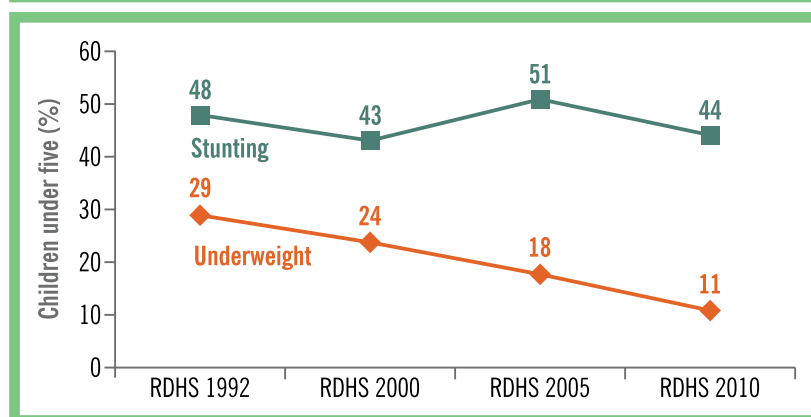


Nutrition

Achieving MDG 1 (to eradicate extreme poverty and hunger) and addressing malnutrition is a priority area within Rwanda's multisectoral approach.¹⁶ The political prioritization, commitment and establishment of national plans, strategies and laws to reduce malnutrition and micronutrient deficiencies are well-documented in Rwanda.

The integration of nutrition programmes and alignment of policies, stakeholders and donors across sectors to improve nutrition has been effective. Since Rwanda's adoption of the National Nutrition Policy in 2005, an interministerial and coordinated approach to addressing malnutrition has been led by the President and operationalized by the Prime Minister's Office, through: the implementation of the National Emergency Plan to Eliminate Malnutrition; a National Protocol for the Treatment of Malnutrition; a National Strategy for the Elimination of Malnutrition; and the District Plan for the Elimination of Malnutrition.¹⁶ These strategic documents have promoted a district-based national scale up of various nutrition interventions from national level interventions such as fortification of maize and a National Food and Nutrition Summit, to community-based nutrition programmes promoting balanced nutrition for pregnant women and children under 2 years; kitchen gardens; nutrition activities in schools; and improved management of malnutrition cases within health facilities and at the community level. CHWs have been involved in active screening of children for malnutrition since 2009¹⁶ as well as promoting healthy diets.

Figure 3: Nutrition status of children, Rwanda DHS data



Although Rwanda needs further progress to reduce the proportion of people who suffer from hunger by 2015,³⁰ it has improved some key nutrition-related indicators. Between 2005 and 2010, the percentage of underweight children reduced from 18% to 11%. However, continued focus is needed since the rate of stunting in children under 5 remains high at 44% (see Figure 3). From 2005 to 2010, the prevalence of anaemia among children decreased from 52% to 38%, and from 33% to 17% among women aged 15–49. There has also been an increase in Vitamin A supplementation coverage, from 87% to 93% for children aged 6–59 months and from 34% to 52% for mothers in the postpartum period.^{7, 31}

Infrastructure, water supply and sanitation

After the 1994 conflict, the government focused on rebuilding the country's infrastructure, including the health system. Today, 60% of the population lives within a 5 km radius of a health facility and 85% within 10 km.³² The 2005 National Health Sector Policy prioritized the development of health infrastructure in response to gaps in geographical accessibility to health services. The availability of and access to services improved during the second and third health sector strategic plans (HSSP II and III, 2005–2009 and 2009–2012) through the construction and equipping of district hospitals and health centres. In 2012, there were five national referral hospitals, 40 district hospitals, 450 health centres, and 157 private health facilities. On average, each district has at least one district hospital and one health centre per 20 000 population.^{13, 16}



Access to safe drinking water and improved sanitation are associated with better health outcomes. With its high population density and growth, Rwanda has faced challenges in securing environmental health and sustainability. Although 74% of the population has access to an improved water source, continued efforts are needed to increase access to clean water. Rwanda needs to continue to improve sanitation facilities for its population.³⁰ However, a number of policies and programmes have been elaborated to achieve the MDG targets for water and sanitation, under the umbrella of the Vision 2020 strategy which aims for universal access to clean water and sufficient sewage and disposal systems by 2020.²⁰ These initiatives include promotion of hand washing stations, known as *kandagira ukarabe* for restaurants, schools and public places.

Other infrastructure development efforts such as Rwanda's rural feeder roads program have improved access to health care as well as to markets thus improving economic development. The national commitment to providing fibre optic connectivity to every district has also meant increased access to information for staff at health centres, hospitals and schools as well as for district leadership. A focus on crosscutting factors, including innovation and research as well as governance and leadership, has provided an important platform to stimulate further progress on women and children's health in Rwanda.



Social protection

Rwanda has taken seriously the provision of social protection and safety to its citizens, particularly women. This includes a Policy and Strategy Against Gender Based Violence implemented in 2011 by the Ministry of Gender and Family Promotion. The First Lady has been a key champion in promoting gender equity and prevention of gender-based violence. In addition, Rwanda's focus on security and combating crime has contributed to the health and safety of women and children.

Coordination and communication in a decentralized system

In order to address the challenges inherent in decentralization, Rwanda created the Social Affairs Cluster of Ministries which includes the Ministries of Education, Health, Gender and Family Promotion, Local Government, Agriculture, and Public Works. The District Council brings together all these sectors and is the decision making and coordinating body at the district level. Additionally, the monthly Joint Action Development Forum provides a coordinating as well as reporting mechanism bringing all partners, local and international, and sectors

together to report on progress against targets as well as to plan. This level of coordination is repeated at the cell level enabling strengthened partnerships and better use of available funds, which has contributed to Rwanda's ability to scale up key interventions within and outside of the health sector.

Innovation and research

There is high political commitment for the promotion of research and innovation in Rwanda, which is emphasized across Rwanda's policy framework.^{10, 20} In 2012, a specific Health Sector Research Policy was developed to further promote and streamline the linkages between health research, policies and programmes within the health sector, as well as reinforce country ownership of the research agenda.

Rwanda has engaged in a number of innovations in the RMNCH field, with its pioneering health financing policies (PBF and *mutuelles*), its focus on health systems strengthening and its investment in expanding the use of information and communication technology. Since 2010, an innovative application developed by UNICEF, called RapidSMS, has been scaled up at the national level and is now an integral part of the health system. RapidSMS is an information tracking tool that collects data from mobile users through short message service (SMS) text messages.

All 15 000 CHWs responsible for RMNCH promotion were given mobile phones which are linked to a central MoH server. They use the tool to stay connected with pregnant women, monitor ANC, identify and refer women at risk and alert the nearest health facility in case of an emergency. CHWs also use the tool to report births and maternal and child deaths.¹⁷ An initial evaluation of the RapidSMS pilot in Musanze district revealed an increase in ANC visits and facility deliveries.³³

Promotion of women's economic empowerment



Rwanda has promoted women's economic empowerment by fostering women's cooperatives which provide access to low interest loans without collateral. This has had the effect of improving women's control of and access to income, enabling them to pay their *mutuelle*/CBHI contribution, feed their children and send them to school, all of which ultimately influence the health of women and children.³⁴

The Ministry of Gender and Family Protections in collaboration with the Business Development Fund and the Rwanda Cooperative Agency have put in place mechanisms to improve access to financing for women. These include capacity building, credit guarantees, microloans and business advisory services.



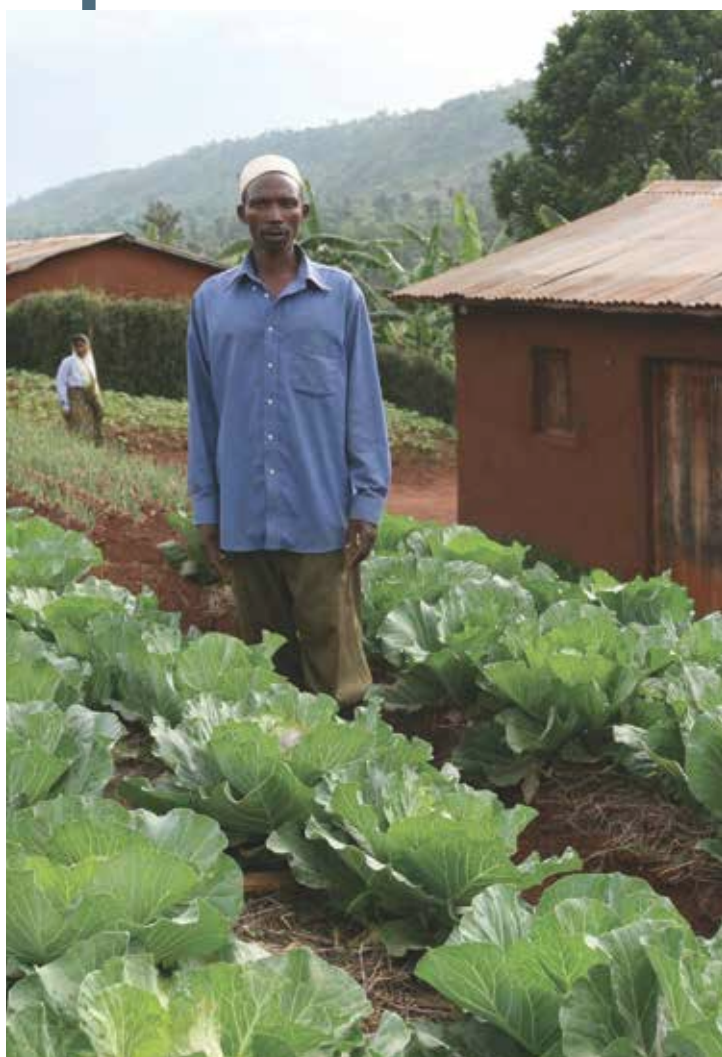
Spotlight of a sector outside of health

RWANDA'S HOMEGROWN SOLUTIONS

Rwanda has implemented a number of innovative solutions outside of the health sector that have impacted women's and children's health. Several of these are based on historical traditions and others are new interventions.

These include:

1. **Imihigo**—Under *Imihigo* which is championed by the President, each district has an annual performance contract with the President based on their district plans. The districts contract with the President to achieve the targets they set for themselves and present results at an annual meeting with the President. This approach has strengthened Rwanda's overall development and therefore had an impact on improving services and infrastructure.
2. **Girinka**—is a local solution to improving nutrition and economic stability. Families are given a cow and when the cow has a calf they are to pass on the gift to another family in their community, focusing on families with the most need.
3. **Ubudehe**—builds on traditional culture in which inequities are addressed and social supports are provided for the poorest families through community members helping to cultivate land and/or build a house. The program promotes hygiene and sanitation.
4. **Umuganda**—is a monthly community day of service during which everyone is expected to volunteer to contribute to and improve their community and country through cleaning the environment and promoting healthy practices.



7. Key Actors and Political Economy



Rwandans have a sense of pride in what has been accomplished in their country and acknowledge the role of community members and CHWs as well as the important role of each component of the district and national system, including national leadership. The First Lady and the President have both championed causes affecting women's and children's health. The President strongly supports the work of community health workers as evidenced by his authorizing the distribution of mobile phones to each CHW to enable

implementation and scale up of the RapidSMS system. The First Lady of Rwanda started the Imbuto Foundation which addresses the problems of widows and orphans and HIV/AIDS, as well as providing scholarships for girls. She has also championed other causes such as the prevention of gender-based violence and promotion of immunization against the human papilloma virus (HPV). The President has led the country in tackling malnutrition as well as overall efforts at ensuring coordination and accountability.



8. Governance and Leadership



Good governance has been prioritized through its integration into Rwanda's overarching country development policies, and is the first pillar of the country's Vision 2020 Strategy.²⁰ The government's emphasis on crosssector collaboration, decentralization and the SWAp framework has promoted accountability between the local and national level; Rwanda's performance-based environment and zero tolerance policy on corruption has further strengthened accountability among actors and institutions. The MoH and development partners participate in Bi-annual Joint Health Sector Reviews and Health Sector Working Groups (including a RMNCH working group), which promote active collaboration within the health sector.¹⁶ Female representation within the parliament is very high, with women currently holding a majority of seats (64% in the lower house and 40% in the Senate). According to the Worldwide Governance Indicators, Rwanda has been continually improving in securing political stability, rule of law, control of corruption, and government effectiveness (see table 1: Key country indicators).³⁵ Rwanda also has developed its own Governance Scorecard which it produces and monitors annually.

The Government of Rwanda has also instituted structures to empower women:

- the Women's Council was established in 1996 and includes organized structures from the grassroots to the national level. It plays a key role by sensitizing women in all domains of health including their basic rights;
- The Rwanda Women Parliamentarian Forum (FFRP) strongly advocates for policies that improve the welfare of women. In 2006, the FFRP introduced a bill on gender-based violence and two years later, the bill passed the Parliament.

A national gender policy has been put in place to guide planning processes across sectors. This policy facilitates equal opportunities between women and men, boys and girls in every sector.



9. Challenges and Future Priorities

Through an effective combination of innovative and evidence-based reforms within and beyond the health sector, Rwanda has made significant progress in attaining MDGs 4 and 5. Rwanda prioritized sectoral collaboration and alignment of donor support for its national priorities. It has addressed human resource shortages in several ways including creating a cadre of CHWs to promote healthy behaviours and provide a range of community-based services to improve access to key primary health services for women and children. It has reduced financial barriers to services through an innovative insurance scheme and has improved quality and coverage of services through performance based financing. It also created accountability mechanisms from the community to the President as well as instituting reforms which empower women, educationally, politically and financially. Further accelerating this progress, however, will require addressing the following challenges:

Strengthen the midwifery workforce:

The critical shortage and poor distribution of midwives in Rwanda requires investment to be made in training and in supplementary midwifery schools. Rwanda needs 586 additional midwives to attain 95% skilled birth attendance by 2015.¹⁷

Improve geographical access:

Currently, 40% of patients live more than an hour away from a health facility. To further increase access to RMNCH services, investments in infrastructure and equipment should be prioritized in underserved areas.

Improve quality of care:

The various health sector reforms have increased the utilization of RMNCH health services. Interventions should continue to focus on continuous improvement and monitoring quality of care and health outcomes.

Sustain the focus on family planning:

With Rwanda's rapid demographic growth and high fertility rate, focus should be sustained on addressing unmet need for family planning. An integrated approach to providing family planning services, including to young people, will be necessary to further curb maternal mortality in Rwanda.



Intensify efforts in mother and child malnutrition:

Although nutrition is an interministerial priority within the government, progress in several key indicators is lagging behind. Today, 44.2% of children are classified as stunted (51% in 2005) and severe anaemia among children and women is on the increase.⁷ Better coordination between sectors and ministries and greater budget allocation will be necessary to make further progress.

Greater focus on newborn health:

Although infant and child mortality rates have fallen dramatically, the reduction in neonatal mortality is slow: it currently accounts for 39% of all deaths among children.³⁶

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II. Acronyms

| | |
|----------|--|
| ANC | Antenatal Care |
| ART | Antiretroviral Therapy |
| CBHI | Community-Based Health Insurance |
| CHW | Community Health Worker |
| EmONC | Emergency Obstetric and Neonatal Care |
| EDPRS | Economic Development and Poverty Reduction Strategy |
| EICV | Integrated Household Living Conditions Survey |
| ENC | Essential Newborn Care |
| EPI | Expanded Programme on Immunization |
| FFRP | Rwanda Women Parliamentarian Forum |
| GDP | Gross Domestic Product |
| HIV/AIDS | Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome |
| HPV | Human Papilloma Virus |
| HSSP | Health Sector Strategic Plan |
| iCCM | Integrated Community Case Management |
| IMCI | Integrated Management of Childhood Illness |
| LB | Live Births |
| LMIC | Low- and Middle-Income Countries |
| M&E | Monitoring and Evaluation |
| MDG | Millennium Development Goal |
| MMR | Maternal Mortality Rate |
| MOH | Ministry of Health |
| PBF | Performance-Based Financing |
| PMNCH | Partnership for Maternal, Newborn and Child Health |
| PPP | Purchasing Power Parity |
| QCA | Qualitative Comparative Analysis |
| RapidSMS | Rapid Short Message Service |
| RDHS | Rwanda Demographic and Health Survey |
| RMNCH | Reproductive, Maternal, Newborn and Child Health |
| SWAp | Sector-wide Approach |
| TFR | Total Fertility Rate |
| U5MR | Under 5 Mortality Rate |
| UN | United Nations |
| UNAIDS | Joint United Nations Program on HIV/AIDS |
| UNICEF | United Nations Children's Fund |
| WDI | World Development Index |
| WHO | World Health Organization |

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ISBN 978 92 4 150908 4

