A HEALTHIER RWANDA:
Progress for Mothers and Babies
case study | health unit

EARTH matters
Studies For Our Global Future

Between the mid-1990s and 2015, Rwanda made dramatic gains in public health, resulting in the world's fastest reduction in child and **maternal mortality.**[1] Deliberate government efforts to expand health care coverage and reduce inequality saved the lives of an estimated 590,000 children over those 15 years.[2] While there is still room for improvement, Rwanda's rapid success in improving the fate of mothers and babies offers lessons for **less developed countries** stuck in a cycle of poverty and poor health outcomes.

Women in Kigali, Rwanda

Recovering from war and genocide

Between 1990 and 1993, Rwanda, one of Africa's poorest and most densely populated countries, was enmeshed in civil war. A 1993 peace deal paused the conflict, but in 1994, the relative peace collapsed when the plane carrying President Juvenal Habyarimana was shot down over the capital. Over the next 100 days, Hutu extremists killed close to 1 million ethnic Tutsis and moderate Hutus. More than 2 million people were displaced.[3]

The war and genocide devastated the country. The banking system had dissolved. Almost no taxes were collected. Fewer than five percent of the population had access to clean water, and water-borne infections were common. Rates of AIDS and malaria also were high. **Life expectancy** at birth was a mere 28 years. Health and educational systems were in disarray. Only a handful of health care workers remained in the country.[4]

In the years that followed, Rwanda worked on recovery under the leadership of President Paul Kagame. In the late 1990s, as the resource-strained government faced a population that would quickly double to about 16 million by 2020 in the absence of stepped up **family planning** efforts, it began to develop its strategy for future development. In 2000, it released the Vision 2020 plan to lift citizens out of poverty and transform Rwanda into a middle income country, all while increasing gender equality and protecting the environment. The key indicators for measuring success included slowing population growth, lowering fertility and mortality, reducing child **malnutrition**, boosting educational attainment and literacy, growing the economy, and decreasing income disparity.[5]

Health care for all

Between 1990 and 1995, Rwanda's childhood death rate was the highest in the world. Even before the conflict and genocide, as many as one in five Rwandan children were dying before their fifth birthday, mostly from malaria, diarrheal diseases, pneumonia, and malnutrition. These are all treatable diseases, but the children were not getting the care they needed. Large numbers of mothers were dying in childbirth as well. Many lived an hour or two from any health facility.[6]

Thus, when the national government set out to turn things around, it made affordable and accessible health care a priority. In 1999, Rwanda piloted a community-based health insurance program, called Mutuelles de Santé. The program went nationwide several years later, and by 2010, with health insurance now mandatory, 90 percent of the country's population was enrolled.[7]

To participate, community members pay roughly US$3-7 per person each year, depending on their wealth, and then benefit from lower out-of-pocket fees for health care at public and non-profit health centers.[8] Vaccinations are fully covered, along with other preventative tools like bed nets to ward off malaria-carrying mosquitoes. As of 2013, Rwanda had the highest bed net use for small children among sub-Saharan African countries. Ambulance transportation also is covered, an important lifeline for rural villagers.[9]

To ramp up local care, each village elected three people to serve as community health workers. The government trained 45,000 of these workers nationwide in basic health care: taking temperatures, checking breathing, screening for and treating the most prevalent diseases, and giving vaccinations. The workers' successes determined their pay. For example, if they vaccinated 90 percent of their village's children, they would get 90 percent of the available payment. If the share of women giving birth at health facilities rose, so, too, would the health workers' wages.

Healthier mothers and babies

Two of the three village-elected health workers are women, one with a focus on maternal and newborn care. All three work to expand family planning options. As the Population Reference Bureau notes, "Research shows that family planning can prevent as many as one in three maternal deaths by allowing women to delay motherhood, space births, avoid unintended pregnancies, and stop childbearing when they have reached their desired family size."[10]

Because many Rwandans rely on faith-based hospitals and health facilities that do not provide modern contraceptives, the government built secondary posts nearby to increase contraceptive access. It also partnered with religious and traditional leaders to openly share their support of family planning.[11]

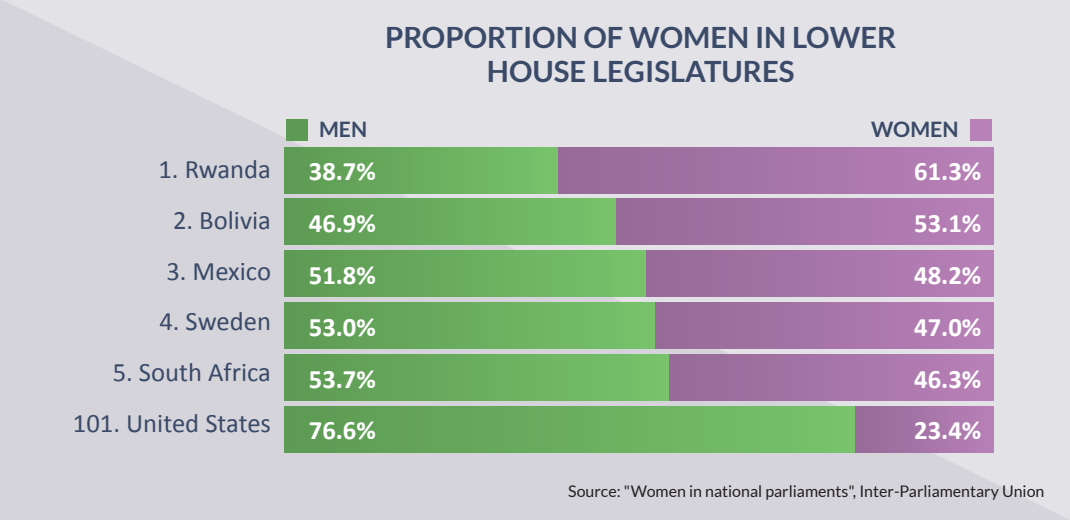
Another novel feature of Rwanda's campaign to cut maternal and childhood deaths was the use of mobile communications. Health workers use a system called RapidSMS that allows them to log and track pregnant women and their children for their "first 1,000 days" – that vulnerable period between conception and a child's second birthday – and ensure that they receive appropriate care.[12]

Neonatal care in Kirehe District Hospital; Ministry of Health Rwanda, 2019.

Rwanda's authoritarian government would fine women who chose not to receive prenatal care or deliver their babies in health care centers. By 2015, skilled providers attended 90 percent of births, up from just 39 percent in 2005. Maternal mortality dropped nearly 80 percent from 2000 to 2017, and improved contraceptive coverage helped to drop the average family size to four children in 2017, down from six in 2000.[13]

The annual number of child deaths fell, even as the population grew. The odds of a child dying before their fifth birthday fell by 80 percent between 2000 and 2019 and is now less than half the average rate of other countries in the region. The average life expectancy at birth, which was less than 50 years old prior to 2000, increased to above 69 by 2018.[14]

Rwanda's success in reducing child and maternal mortality is not just a health care story. It also is a story of increasing equality, largely through boosting female empowerment and education. A rapid growth in female education over the early 2000s led women to occupy 43 percent of higher education classroom seats as of 2019.[15] Youth literacy is now actually slightly higher among females than males.[16] Rwanda also has one of the world's highest proportions of women serving in the government. The new constitution passed in 2003 allocated 30 percent parliamentary seats to women. In 2020, 61 percent of Rwandan parliamentarians were women.[17]



The proportion of women and men serving on national legislatures for select countries. 191 countries were ranked by descending order of the percentage of women in the lower or single House, as of January 2020.

Bigger bang for the buck

It took a decade for Rwanda's **gross domestic product (GDP)** to return to the pre-conflict level, but between 2005 and 2019, GDP quadrupled. A divide between the rich and the poor persists, but the gap is not as large as some other countries in the region. In 1994, 78 percent of Rwanda's population was living below the poverty line. This fell to 59 percent in 2000 and dropped further to 38 percent in 2016.[18]

About 8 percent of Rwanda's public spending goes to public health.[19] This level of investment would not have been possible without international aid; conversely, without strong infrastructure, government support, traceability of funds and systems of accountability, aid would not have gone so far. Experts from Partners in Health, an aid organization founded by Dr. Paul Farmer of Harvard University that works in Rwanda, laud Rwanda's Ministry of Health for "demand[ing] robust financial management, transparency, and accountability

standards of all of its partners."[20] In 2010, the country received $277 million in external aid for health initiatives, which accounted for 47 percent of total health spending. The goal is to gradually reduce this dependency. By 2018, external aid only comprised 22 percent of Rwanda's health spending.[21]

Health Minister Dr. Agnes Binagwaho set out to make sure that investments in health infrastructure work for all Rwandans and last far into the future. Her stated philosophy is that "if you give Rwanda money to save the life of the oldest person in Rwanda today, we will make sure that the infant born tonight benefits too."[22]

Rwanda's commitment to public health has extended to its response to the global COVID-19 pandemic. By responding early, instituting robust testing, contact tracing, quarantining and clinic services, the country has successfully contained the spread of the virus, kept its caseload low, and has served as a model for other countries in the region. The government mobilized community health workers, police and college students to work as contact tracers, and persuaded Rwandans to wear masks, wash hands and practice social distancing.[23]

Looking forward

Rwanda still faces challenges. Poverty is widespread. Forty-two percent of the population lacks access to safe drinking water.[24] Over one-third of the population is malnourished, 35 percent of children have stunted growth, and the arable land available per person is shrinking.[25] A full 65 percent of the population do not have access to electricity.[26] While over half of women of child-bearing age use contraceptives, the United Nations estimates that 18 percent of women still have an unmet need for family planning.[27]

In 2015, the Rwandan Health Ministry targeted the following priorities to accelerate improvements in women's and children's health: one, to increase the number and improve the distribution of skilled birth attendants; two, to improve the quality of health services; three, to continue to improve the geographical access to health facilities; and four, to strengthen efforts in family planning, newborn health, and nutrition.[28]

Nevertheless, Rwanda's impressive reductions in child and maternal mortality demonstrate that the cycle of poverty and disease can be broken. The country was able to improve health outcomes faster than other sub-Saharan African countries at similar stages of development without spending more on health care per person. By focusing on systemic change and prioritizing prevention, treatment and education, Rwanda is building a health care system for the future. This is good news for newborns, their great-grandmothers, and everyone in between.[29]

Author: Janet Larsen (2017); Updates by Pam Wasserman (2021)

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