

Case study

Digital-First Integrated Care: Rwanda's innovative digital health care service

Written by Marlon-Ralph Nyakabau
November 2021



Digital-First Integrated Care: Rwanda's innovative digital health care service

In alignment with Rwanda's drive to achieve the Sustainable Development Goals by 2030, the country's Health Sector Strategic Plan (HSSP 2018-2024) reflects a commitment to achieving Universal Health Coverage. The HSSP sets the overall objective of Rwanda's health sector as ensuring universal accessibility to quality health services in both geographical and financial terms.



[Photo credit: [Teddy Kamanzi/The New Times](#)]

To deliver UHC, Rwanda set up a community-based health insurance scheme called *Mutuelle de Santé*, a solidarity health insurance system in which members of the community pay contributions towards receiving primary medical care from a health facility anywhere in the country. It was established to help people with low incomes access medical care at affordable cost. As a result, Rwanda has a health insurance coverage of over 90 per cent. However, access to health facilities is challenged by Rwanda's hilly terrain and inefficient transport infrastructure which make it difficult to access health facilities, especially for the rural population that constitutes more than 80 per cent of the population.

To overcome this challenge, the government's vision is to use Information Communication Technologies to transform the health sector. Thus, Rwanda's Digital Health Strategic plan 2018-2023 set an overarching goal to improve health service delivery and accessibility through Digital Health. The Ministry of Health's strategic plan aligns with the SmartRwanda

Masterplan under the Ministry of ICT in prioritising the use of telemedicine technologies to increase accessibility to health services. Through telemedicine, Rwanda hopes to realise the following benefits:

- **Convenience:** The ability for patients to make a virtual visit from their own homes or a nearby primary care facility with a physician at any time of the day, through video, web chat, or phone.
- **Reduced waiting times:** Telemedicine eliminates the time needed to travel to a facility and queue while waiting to see a physician.
- **Cost-efficiency:** The resources that are required to conduct a telemedicine consultation are much less. Telemedicine reduces travel expenses for patients, especially for those living in rural communities.

As a strategic direction for its health service delivery, **Rwanda aims by 2024 to ensure accessible, quality and efficient delivery of health services using technology, towards achieving UHC.** The country has thus been exemplary in Africa in implementing digital health solutions at a national scale including significant contributions from the private sector.

One such private sector initiative is Babyl - the largest digital health service provider in Rwanda. Through a combination of several technology platforms that include SMS, USSD, mobile money, a call centre and artificial intelligence triage system, Babyl delivers more than 5,000 virtual consultations per day. After the consultation, prescriptions and laboratory test orders are sent to patients via SMS code. These codes can then be redeemed at partnering pharmacies and laboratories for service. Since its launch in Rwanda in 2016, Babyl has registered over 2 million users and performed more than 1.3 million consultations.

Rwanda passed a public-private partnership (PPP) law to foster development of long-term partnerships with the private sector in digital health. This enabled the government of Rwanda to sign a 10-year contract with Babyl aimed at rolling out telemedicine services to all of Rwanda. The Babyl system uses text messages and voice calls making it easily accessible to people using phones with limited multimedia and internet capability. As Rwanda reports 98 per cent mobile network coverage, Babyl can thus afford the rural population access to a consultation with a health professional via the mobile phone.

The Ministry of Health signed a Memorandum Of Understanding with Babyl to develop a new healthcare delivery model called 'Digital-First Integrated Care', for convenient access to qualified doctors and nurses, especially for people living in remote areas. Regarding the partnership, Dr Daniel Ngamije, Minister of Health in Rwanda, said:

“We are delighted to have this partnership with Babyl who will work alongside all our health institutions and RSSB to deliver this innovative digital healthcare service. Increasing access to our doctors will help stop self-diagnosis and self-medication which lead to longer-term complications. With the reduced burden on health centres and other medical institutions, our medical professionals will be able to spend more time and

resources on the most serious medical cases, further increasing the quality of healthcare delivery across the country.”

The Rwanda Social Security Board (RSSB), which is under the Ministry of Finance, administers the community based health insurance scheme. The RSSB signed an agreement with Babyl to allow members of the scheme to access prescription medications and lab tests issued via the Babyl system at approved health facilities utilising the insurance scheme. Members of the scheme are also able to process any co-pay payments using the mobile money service integrated within the service.

Regarding the agreement, Dr. Solange Hakiba, the Deputy Director General of RSSB said: *“RSSB strives to increasingly deliver a comprehensive social security package that addresses all social security needs of all Rwandans. Digital healthcare is a significant step towards ensuring that all our members can conveniently access doctors without fear of loss of income or worry about travel to a medical institution. Early intervention with easier access to healthcare will also reduce the burden on our universal healthcare scheme.”*

Rwanda’s National ID Agency (NIDA) partnered with Babyl allowing patients to register and access medical appointments from a shared mobile device. Prior to this, individuals without mobile numbers registered in their name, weren’t able to complete the registration process. Now using just the national ID number, Rwandans can use a shared mobile device to access the Babyl service. **This change alone saw a 64 per cent increase in female registration and a 55 per cent increase in daily consultations.**

To further grow telemedicine and digital health as a means of achieving UHC, the Ministry of Health intends to **improve the legal and regulatory framework** for security, confidentiality and controlled access to information. The country’s digital health strategy aims to have regulatory mechanisms and telemedicine standards in place that are conducive for public and private investors in telemedicine services while protecting the security and confidentiality of patient data.

Key lessons:

- Public Private Partnerships can scale up digital health services in support of government efforts towards UHC. Well defined PPP laws foster the development of such partnerships.
- Telemedicine is a way to support government-led health insurance schemes as it can remarkably improve access to health services and concurrently reduce the cost of service provision. This has to be supported by regulatory frameworks for setting tariffs for telemedicine services that will be covered by the major government-run health insurance schemes.
- Scaling up of digital health interventions to ensure reach to all citizens requires the involvement of diverse government departments and ministries contributing towards achievement of the national vision.

References:

1. [Fourth Health Sector Strategic Plan July 2018 – June 2024](#); Ministry of Health; Government of Rwanda; 2018.
2. [National digital Health strategic plan 2018-2023](#); Ministry of Health; Government of Rwanda; 2018.
3. [Public Private Partnership Guidelines](#); 2018.
4. <https://babyl.rw> (accessed 01 October 2021)
5. <https://babyl.rw/uploads/press-releases/Press-Release-MoH-babyl-VF.pdf>
6. <https://rdb.rw/government-of-rwanda-babyl-partner-to-provide-digital-healthcare-to-all-rwandans/> (accessed 01 October 2021)
7. <https://www.rssb.rw/index.php?id=17> (accessed 01 October 2021)
8. <https://www.babylonhealth.com/blog/business/rwanda-will-be-the-worlds-most-advanced-country-for-digital-health> (accessed 01 October 2021)