

Scaling Digital Healthcare Solutions in Rwanda

Lessons from Babyl – Sub-Saharan Africa’s first digital-first health company
operating at scale

“We proved it’s possible.”

Disclaimer:

The Digital Connected Care Coalition (DCCC) (www.digitalconnectedcarecoalition.org) is a global multi-stakeholder coalition committed to accelerating the digital transformation of healthcare. These efforts are part of a larger strategy to achieve universal health coverage in low- and middle-income countries by 2030. DCCC aims to enable the environment and infrastructure for digital health transformation across such countries by finding new ways for public and private organizations to partner. As part of this process, DCCC connects stakeholders in the digital health landscape, fast-tracks on-the-ground digital health initiatives, and shares knowledge and insights.

This document seeks to share some clear and easy-to-digest lessons learned from the activities of Babyl in Rwanda. It was co-produced by Dr. Shivon Byamukama (the former Managing Director of Babyl Rwanda), Dr. Jeroen Maas (Philips) and Stella Pfisterer (Rotterdam School of Management), and is based on a series of structured conversations and publicly available information about Babyl. The lessons presented here are derived from Dr. Shivon Byamukama's experiences as Managing Director of Babyl and do not necessarily represent DCCC's or the other co-authors' views. Neither can it be seen as a full evaluation of Babyl's activities.

About Dr. Shivon Byamukama

Dr Shivon Byamukama is currently the Chief Operating Officer of the University of Global Health Equity. Previously, she was Managing Director of Babyl Rwanda, a subsidiary of Babylon, which was a global digital healthcare provider focused on providing accessible and affordable health services. She was previously the Company Secretary and Head of Corporate Affairs at the Bank of Kigali, where she was responsible for Legal Affairs, Investor Relations, Public Communications, and Corporate Social Responsibility. Before joining the bank, she was the Company Secretary and Chief Legal Officer for RwandAir, Rwanda's national carrier. Shivon serves on several boards and is an Eisenhower Fellow (2016). She has a PhD from Glasgow Caledonian University (Scotland) and a Bachelor of Laws Degree from Makerere University (Uganda).



Introduction

Sub-Saharan Africa's first digital-first health company operating at scale

From its launch in 2016, Babyl was Rwanda's first and largest digital health consultation service provider. In 2020, Babyl signed a 10-year partnership with the Government of Rwanda to develop a new “Digital-First Integrated Care” healthcare delivery model, where Rwandans could access qualified doctors and nurses through their mobile phones. By 2023, Babyl supported quality healthcare access by providing over 3,000 virtual consultations daily, serving over 2,500,000 registered users.¹ Unfortunately, in the same year, Babyl had to wind down its operations in Rwanda due to the bankruptcy of its parent company, Babylon, a UK-based digital health group.

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As the first ‘digital-first’ health company that operated at scale in sub-Saharan Africa, Babyl offers many valid lessons. DCCC collected these insights during structured conversations with Dr. Shivon Byamukama, who was Babyl Rwanda’s Managing Director throughout its existence. Shivon also supported the writing of this report.

Before sharing the lessons learned, we will briefly overview Babyl in Rwanda. Ultimately, we hope the insights shared in this document can inform and inspire more digital health approaches – particularly in low- and middle-income countries.

Background

Babyl: putting Rwandans first by transforming healthcare with digital solutions

Even though Rwanda has a health insurance coverage of over 90%, the accessibility and affordability of healthcare remain key challenges³ – as is the case worldwide. In Rwanda, this is mainly caused by the distance to health facilities for the rural population and the loss of income when traveling to see a doctor. In Rwanda – also known as ‘the land of a thousand hills’ – the walking time to a health facility takes an average of 45 minutes.⁴ A shortage of healthcare workers also influences the long waiting times.

The increasing use of mobile phones presented an opportunity to address health access and affordability barriers. In Rwanda, there were 9.69 million mobile connections, which was equivalent to

¹ <https://www.babyl.rw/> (accessed 11.11.2023)

² <https://www.babyl.rw/> (accessed 11.11.2023)

³ Sourced from: <https://transformhealthcoalition.org/insights/digital-first-integrated-care-rwandas-innovative-digital-health-care-services/> (accessed 11.11.2023)

⁴ Sourced from: <https://www.who.int/news-room/feature-stories/detail/rwanda-s-primary-health-care-strategy-improves-access-to-essential-and-life-saving-health-services> (accessed 30.04.2024)

73.9% of the population in 2021.⁵ Digital solutions are generally considered to have the potential to help close gaps and contribute to more high-quality, timely, and affordable care.⁶

The Rwandan government's vision was – and is – to use Information Communication Technologies to transform the health sector. Such digital tools are believed to also stimulate prevention and reduce costly treatments. This is why Rwanda's policies aim to improve healthcare delivery and accessibility through digital health.⁷

On the invitation of the Rwandan government, Babylon's operations in Rwanda began in 2016, when the company launched its telemedicine service to further digitize the national healthcare system. As a comprehensive digital healthcare solution, the project aimed to provide anyone with access to a mobile phone (smart or feature phone) with virtual health services integrated into local health services – including remote triage, consultations and diagnosis, prescriptions, laboratory tests and specialist referrals.⁸

The benefits of Babyl's approach included faster and easier access to clinicians nationwide, reduced clinic waiting times, and increased privacy and comfort.

After registering on the platform, the patient could book an appointment. A clinician (nurse or medical doctor) would then call for a medical consultation. After the consultation, prescriptions and laboratory test orders were sent to patients via SMS code. These codes issued via the Babyl system could then be redeemed at partner pharmacies and laboratories for services.⁹ By 2020, Babyl was embedded within 501 health centers across the country.¹⁰



Picture 1: Babyl call center

The benefits of Babyl's approach included faster and easier access to clinicians nationwide, reduced clinic waiting times, and increased privacy and comfort. Despite its successes and promising outlook for further expansion, Babyl had to wind down its operations in the autumn of 2023 when its mother company, Babylon, filed for bankruptcy.

⁵ Babyl (2022). Building & scaling digital-first primary health care. (not online accessible)

⁶ Babyl (2022). Building & scaling digital-first primary health care. (not online accessible)

⁷ Sourced from: <https://transformhealthcoalition.org/insights/digital-first-integrated-care-rwandas-innovative-digital-health-care-services/> (accessed 11.11.2023)

⁸ Babyl (2022). Building & scaling digital-first primary health care. (not online accessible)

⁹ Sourced from: <https://transformhealthcoalition.org/insights/digital-first-integrated-care-rwandas-innovative-digital-health-care-services/> (accessed 11.11.2023)

¹⁰ Rwanda's healthcare system is divided into health centers, health posts (which are mainly involved with the outpatient programmes such as immunizations and family planning services), and district hospitals. The villages are served by community health workers.

Lessons learned

As managing director, Shivon oversaw the process of setting up, implementing and closing the operations of Babyl. In the process, she learned some key lessons. They can be summarized as:

- 1) Build key relationships and track your impact
- 2) Know and establish your place in the wider ecosystem
- 3) Think and act more like a business and not a social enterprise
- 4) Embrace agility – and learn, learn, learn
- 5) Digital healthcare really helps to make healthcare more accessible
- 6) Private and public sectors can work together on this

And now, let's dive in deeper...

1) Build and strengthen government relationships – confidently and with a focus on results

At Babyl, collaboration with key stakeholders and the development of partnerships were essential. The Rwandan government was one of the key stakeholders, particularly the Ministry of Health, the Ministry of ICT and Innovation, the Rwanda Social Security Board (RSSB), and the Rwanda Development Board (RDB).

A convener could ensure that all stakeholders were at the table speaking with one voice – even if these different departments had differing interests.

Having a government convener proved particularly supportive when one wants to collaborate successfully with various governmental actors from different institutions simultaneously. A convener could ensure that all stakeholders were at the table speaking with one voice – even if these different departments have had differing interests. This was particularly useful during Babyl's start and dissolution.

Since the RDB is charged with supporting investors in the country and acts as the Government negotiator for major Government contracts, the board was the natural convener to ensure that the interests of both the Government and Babyl were aligned.

Meanwhile, each department had its own responsibilities. The Ministry of ICT and Innovation looked for innovative ways to solve a particular problem in Rwanda, such as Babyl's proposition for digital health. Through licensing and inspection, the Ministry of Health ensured that Babyl's proposition provided appropriate quality healthcare to its population. And RSSB, who footed the bill, ensured the Government received fair value for the services rendered. It was, therefore, critical to convene these different interests of the Government into one room.

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Babyl was the first organization to receive a digital care license from the Rwandan Ministry of Health. This was an evolving process, with the Ministry building its understanding and confidence in Babyl and virtual care provision over time. In this process, Shivon, with a background in the private sector, had to “go out of her comfort zone.” To build and nurture relationships, it helped she was Rwandan with an extensive and active network, and had a mindset geared towards collaboration, persistence and being result-oriented.

Shivon states, “It required time and focused conversations on impact to overcome assumptions and perceptions about digital health. Such conversations had to develop an understanding that digital health supports patients who would otherwise walk long distances and wait in long queues – for healthcare, they could get more quickly over their mobile phones.”



Picture 2: Visit of Government of Rwanda representatives to Babylon Headquarters in the UK.

2) Holistic view of the patient journey is needed for scaling

Understanding the patient’s needs within a particular context was a key moment for Babyl. Shivon remembers a time when Babyl was giving consultations for free, but the uptake was still minimal. She quickly came to understand that in Rwanda, even with free patient care, you would yield no results when over 90% of the population has insurance. You needed to be connected to the larger system.

“When treating patients, you need a holistic view of the patient journey. At first, digital health only controlled a small portion of the care journey – digital consultations – and not the entire ecosystem,” says Shivon.

This is why Babyl went on to partner with pharmacies and laboratories nationwide and over 500 health centers. Another key partner was the RSSB, Rwanda's biggest insurance provider and responsible for the country’s universal healthcare system. “Once Babyl understood how and where patients accessed care throughout their entire patient journey and we made it more affordable using the patient’s own insurance coverage, the numbers started growing.”



Picture 3: Babyl community engagement

3) Find where you fit – and make it work financially

From its inception, Babyl was incorporated as a private company but ran like a social enterprise. The contract signed between the Government of Rwanda and Babylon Rwanda to deliver digital consultations was for a fee that was too low to cover its operational costs. Investments and funding from Babylon and supportive donors such as the Bill and Melinda Gates Foundation created a financial leeway for Shivon and her team to implement the services.

“If digital health is to become sustainable, you have to find a way from the beginning to have your piece throughout the patient's entire care journey.”

But two factors soon became very clear:

- (1) Babyl would need to quickly partner with other private insurance companies at a fee significantly higher than its operating costs to balance the net loss from the Government contract.
- (2) Babyl would have to diversify its services to include laboratory services and pharmacies. Babyl calculated that many regional insurance companies spend $\pm 60-70\%$ of their costs on laboratory-related services, $\pm 20\%$ on prescriptions, and only about $\pm 10-15\%$ on actual consultations. The business plan of Babyl would have to extend to other aspects of the patient care ecosystem that attracted more funding to become an economically viable organization.

“If digital health is to become sustainable, you have to find a way from the beginning to have your piece throughout the patient's entire care journey,” says Shivon.

The first point led Babyl to open its services to private insurance holders, bringing convenience in healthcare access to a new demographic and strengthening the company's financial viability. The second realization led to extensive discussions with insurers and government bodies, given that Babyl was now proposing to change its offering to include laboratory tests.

“Digital health is something you must be willing to learn from, alter, and change.”

4) Embrace agility: be bold, try new things, and be open for change when needed.

When Babyl was set up, digital health was new in Rwanda. There was no playbook for Shivon to follow. She and her team had to navigate the challenges they encountered along the way. This required responsive meetings with staff, the courage to change strategies and operations, the boldness to take steps forward, and a sense of determination to learn from other Babylon operations facing similar challenges.

“Digital health is something you must be willing to learn from, alter, and change. You must be agile,” says Shivon.



Picture 4: Co-creation session between Babyl and representatives of the Government of Rwanda

5) Digital healthcare as a complimentary way to access care is possible

Babyl aimed to create an easily accessible and convenient quality healthcare service. Patients would no longer have to wait in line or travel long distances to access health care – without losing working hours or arranging babysitters. It was now available via their phones.

The actual doing and experiencing of the Babyl service contributed to the larger behavior change,

Shivon explained that one of the ways Babyl’s service grew was by ensuring that patients got the healthcare they needed when they needed it, usually in less than an hour. “There was initially some skepticism on whether digital health works – whether someone could actually be treated over the mobile phone. One of the ways we combated it was in the *doing* – allowing patients to experience digital health firsthand. And by doing our best to provide excellent service, our users became our ambassadors. The actual doing and experiencing of the Babyl service contributed to the larger behavior change.”

“Rwanda was a proof-of-concept country, and I am convinced the Government of Rwanda will continue on digital health in the future.”

Although Babyl managed to put all triggers for success in place, it had to be wound down in 2023. Shivon reflected that “closing the company was very daunting because the service was really successful. And closing a company so successful and loved by many was one of my most painful experiences”.

From Shivon’s perspective, Babyl’s main impact was to show Rwandans there is another way to access care – that digital health care is possible. “Rwanda was a proof-of-concept country, and I am convinced the Government of Rwanda will continue on digital health in the future.”



Picture 5: Delegation visit to a partner health centre of Babyl

6) The private sector can support governments in implementing digital health services

Babyl proved that digital health can be implemented at scale and showed the private sector's role in complementing the government's mission and agenda to provide much-needed healthcare to the Rwandan population. Babyl has “paved the way for other digital health providers because **it showed that digital health care services can be done at scale.**”