
Meeting
in the middle
Harnessing the post COVID-19 rise
of digital public health engagement
in sub-Saharan Africa
vodafone
vodacom
Safaricom
In partnership with
Caribou
Digital
Africa.connected

Introduction

Digital paves the way for healthcare for all

Fast forward ten years from now – what can we expect from the healthcare sector in Africa?

Much has already been said about how the healthcare industry stands to benefit from the adoption of technology like 5G. Increased speeds mean better hospital efficiency, streamlined communication and critical data sharing between departments, clinics and hospitals. There is also the infinite potential of 5G enabled devices. With early clinical studies indicating that spine procedures can be conducted remotely on a 5G connection, imagine how many more patients in rural parts of Africa may one day be able to receive surgery from a remote specialist without the need for extensive travel.

The COVID-19 pandemic, though, has forced us to take a hard look at the state of our medical industry, its successes and its shortcomings, exposing the need for change and innovation which technology can enable.

With professional services typically concentrated in urban areas, hundreds of millions of people living in rural communities battle to access even basic medical treatment. Recent events have exposed the scale of the predicament, with data from the World Health Organisation (WHO) showing there are just 1.2 hospital beds per 1 000 people living in Africa.

In many ways, the pandemic has also opened our eyes to new possibilities in the healthcare space. Even as forward-thinking Governments are driving formal digital health strategies, consumers are taking advantage of increased access to mobile connectivity by seeking out informal health services on their smartphones. The sharp increase in demand for these services is also encouraging new private players to enter the sector. Currently, there is an all-time high of 180 digital health start-ups in sub-Saharan Africa.

Medical journals have dubbed the continent the new 'breeding ground' for global digital health. And with the WHO reporting that 120 health technology innovations have been piloted across Africa since the start of COVID-19, it's easy to understand why. From tracing and tracking to administration of the vaccine, incredible technological innovation has arisen from the pandemic, helping to mitigate the effects of the virus and get people vaccinated.

For instance, Vodacom's Mpilo app is enabling healthcare workers to trace people who have tested positive for COVID-19, and IoT solutions developed by our subsidiary IoT.nxt are allowing businesses to track people's movements across their facilities, using information from thermal cameras to provide real-time body temperatures.

AI is also dramatically accelerating the rate at which medical professionals can detect the likes of COVID-19 and lung diseases. By analysing x-rays and CT scans, AI models can significantly enhance diagnostic capabilities.

Vodacom's partnership with AUDA-NEPAD has brought the power of technology in the health sector to life. To build critical digital infrastructure to manage the distribution of COVID-19 vaccines across 55 countries, we are leveraging our mVacciNation platform to ensure people get the right vaccine, at the right place and time. On a continent with scores of people spread across underserved communities, this initiative helps to ensure that no one is left behind.

The way in which technology is designed is also helping to change lives, and not just of those in rural communities. Vodacom recently launched the Nokia 2720 – a smartphone designed to provide greater access for senior citizens, people living with disabilities and those who experience other communication barriers.

The door is open to drive access to healthcare digitally. Our ability to deliver on the promise of digital solutions at scale presents enormous opportunity - not only when it comes to the reach of healthcare services, but also to dramatically improved health outcomes at decreased costs. Existing research from randomised controlled trials shows that mobile health services create cost savings and increase desired health outcomes in 100% of cases.

Understanding how we bridge the gap between opportunity and success is the next crucial step in Africa's digital transformation. In this spirit, we are launching a series of six policy papers that include digital access, sustainability, financial inclusion, literacy and digital education and SME and enterprises.

We have commissioned this research in order to provide critical insights around the role of technology in elevating key areas of Africa's digital economy.

The vision behind the Africa.Connected campaign - to help close the digital divide in Africa's key economic sectors - is ambitious and we understand that we cannot achieve this alone. While this first paper explores many of the challenges and opportunities associated with digital health solutions, it underscores the necessity of partnerships between the public and private sectors in driving critical outcomes. We must 'meet in the middle', integrating formal and informal digital health systems to harness the current rise in digital health engagement. It is our efforts now, working together to propel digital inclusion, which will determine Africa's future.

Shameel Joosub
CEO Vodacom Group

Governments are accelerating digital health strategies across Africa. This, combined with increasing user engagement of digital health services via smartphones, has created a fertile opportunity to deliver health digitally, at scale, via a combination of formal and informal services.

The COVID-19 pandemic has led to the rise in the use of digital health solutions:

Smartphone penetration is on course to reach 65% in Africa by 2025.
The potential reach is in excess of 475m users. But only 27% of these devices are 4G-enabled

41% of internet users in Africa are regularly using their mobile phones
to search for health information

The Byon8 app, which offers access to online doctors and symptom check-ups, **has shown on average a 40% increase in engagement since March 2020**

This report reflects a healthcare sector on the verge of transformation, with opportunities to improve health outcomes at a lower cost:

75% of African countries have a digital health strategy in place

There is an all-time high of **180 digital health start-ups in sub-Saharan Africa**

100% of African mHealth interventions reduce costs

This is a unique opportunity to reach health **Sustainable Development Goals (SDGs)**

There are challenges with the rise of informal digital health services, including privacy and misinformation:

Trust is a key issue at the intersection of formal and informal systems

69% of South Africans and 55% of Kenyans report that they've seen health information that is obviously false or untrue on social media

Now is the moment for governments to capitalise on this and work in partnership with the private sector to meet in the middle and use formal and informal platforms to digitalise services and improve health outcomes across Africa, especially on the critical COVID-19 vaccination rollout.

The rapidly expanding digital health ecosystem in Africa

Engagement with digital health services has been increasing across Africa in the last decade, supported by the growth of formal digital health strategies adopted by governments. **41 out of 54 African countries now have a digital health strategy and/or architecture** and there has been an exponential rise in adoption of smartphones. Mobile data access reached 49% of all users in 2019.[1]

Several countries in Africa are emerging as sites for digital health service innovation.[2] COVID-19 is playing out within a digital Africa: accelerating demand, testing digital health strategies and plans, and giving rise to new behaviours from consumers with digital access and health concerns.

Governments have responded to the May 2018 WHO resolution to accelerate the adoption of digital health services, which called for health departments to:

"Assess their use of digital technologies for health . . . in order to identify areas of improvement, and scale-up greater utilisation of digital technologies, as a means of promoting equitable, affordable and universal access to health for all."

South Africa's digital health platform

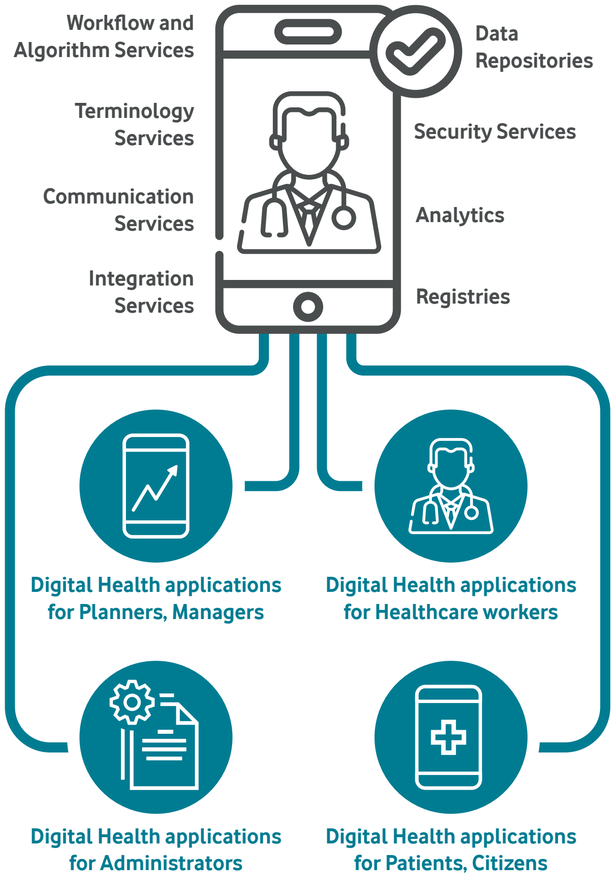


Figure 1 - SA's integrated digital health platform. (Source: South Africa 2019-2024 Digital Health Strategy)

For example, within South Africa's 2019-2024 digital health strategy, this platform builds on the International Telecommunication Union (ITU) Digital Health Platform Playbook and outlines how a digital system can unite a range of health interventions and stakeholders.[3] Health administrators, managers, workers, and patients benefit from a unified system managing data repositories, data analytics, and communication services.

Formal digital health systems and mobile technology are helping to change the way people access digital networks. This is beneficial to services, but also to health outcomes.

This is achieved not just through direct engagement with doctors or treatments, but also from managing healthcare costs, as seen in Kenya, through the use of the M-TIBA digital healthcare financing tool.

Case study

M-TIBA: Dial *253# for healthcare financing

A partnership between Safaricom mobile network operator (MNO), PharmAccess (nonprofit), and CarePay (health financing tech company).

"There are countless cases where people are forced to sell their assets, where farmers sell their cows or land to pay for healthcare. So having a tool that enables you to save or send funds to family via their M-TIBA wallet, which can't be spent on other things, is key for people to access healthcare." Edmund Buobu, DMAC Programme Director

In Kenya, four out of 10 people cannot afford hospital treatment and one million people fall into poverty every year because of out-of-pocket health costs. Digital health platforms like M-TIBA now enable millions of Kenyans to regularly save small amounts of money for future healthcare needs through a mobile money account. Users who are short of funds can borrow money from other users through the platform to cover health costs. Family and friends can also donate to an M-TIBA account holder.

M-TIBA, set up in 2016, has connected four million Kenyans to 1,400 partner clinics and hospitals, in addition to healthcare payers including governments, insurers, and donors through a simple SMS-based system. To ensure users channel the funds into health, money stored in M-TIBA can only be transferred to registered healthcare providers and the National Health Insurance Fund. Small healthcare providers who struggle to access traditional capital can also get loans through the same platform.

These partnerships between governments, digital network providers, and healthcare technology companies help countries achieve UN Sustainable Development Goals around health outcomes by increasing reach. **As smartphone penetration is on course to reach 65% in Africa by 2025, with 27% of these devices 4G-enabled, the potential reach is in excess of 475m users.**[4] Research has shown consistent positive cost benefits from mHealth interventions - with a study of peer-reviewed RCT results showing 100% of mHealth interventions in Africa had positive cost benefits.[5]

The Lancet predicted that Africa is the best 'breeding ground' for digital health systems to become a reality.[6] Formal digital health systems - led by governments, enabled by the digital infrastructure, delivered by the private sector - will bring this prediction to reality.

65%

increase in smartphone reach by 2025

475M people in the region will be mobile internet users by 2025

100%

of African mHealth interventions shown to reduce costs

Academic literature reviews have shown that 100% of African mHealth programmes reduced costs to serve beneficiaries

A unique opportunity to reach health Sustainable Development Goals (SDGs)

As an example, maternal health programmes such as MomConnect have improved maternal health outcomes

The rise in informal digital health engagement

Alongside the growth of formal government digital health strategies, the informal usage of digital health services and apps has also grown. As the private sector has enabled the double-digit percentage growth in the adoption of smartphones, and as network coverage has increased with 4G enabling data services and internet access, informal engagement with digital health by end users has increased. Data shows that 41% of internet users across Africa regularly use their mobile phones to search for health information.[7]

The growth in smartphone adoption has also led to a sharp increase in new private sector players entering the market to meet consumer demand. Currently there is an all-time high of 180 digital health start-ups in sub-Saharan Africa (SSA).[8] The most downloaded and used apps in many countries are global telehealth apps that provide the user with health information and symptoms checking whilst also offering paid access to doctors around the world via telemedicine services.[9] In Kenya, after the government myNHIF health financing app, Byon8[10] is the most used app; and in Ghana it is eHealthGPS.[11] Both of these apps are global services that enable the user to engage with a range of digital health content.

Alongside general digital health app and service usage across populations, Community Health Workers (CHWs) are also using smartphones in informal ways to conduct their work within formal health systems. Research has shown that although CHWs in Ghana and Ethiopia have only used mobile phones infrequently via formal channels (12.2% in Ghana and 2.6% in Ethiopia), the majority of CHWs are using mobile devices informally for their work on a daily basis (91% in Ghana, 87% in Ethiopia).[12]

This informal usage of smart mobile devices ranges from basic communication and searching for information online about diseases and treatments, to using the torch to help assess patients when there is no artificial light.

> "If you go to Google, you will find so many apps that talk about diseases and their treatment. So, when you get a condition that you don't know much about, you need to get that app to know how to treat it."[13]
>
> - Community Health Worker, Ghana

This creates top-down and bottom-up growth in engagement with digital health systems: from governments increasingly realising the potential of mobile technology and digital platforms to increase reach, decrease costs, and improve health outcomes, to bottom-up increases in consumer engagement with digital health as smartphones and apps becoming more widespread.

Case study

A portable ultrasound scanner fills in information gaps for expectant mothers in rural Eastern Ghana

“You can just put it in a backpack and even use regular transport to take it to any health facility.” Edmund Buobu, DMAC Programme Director

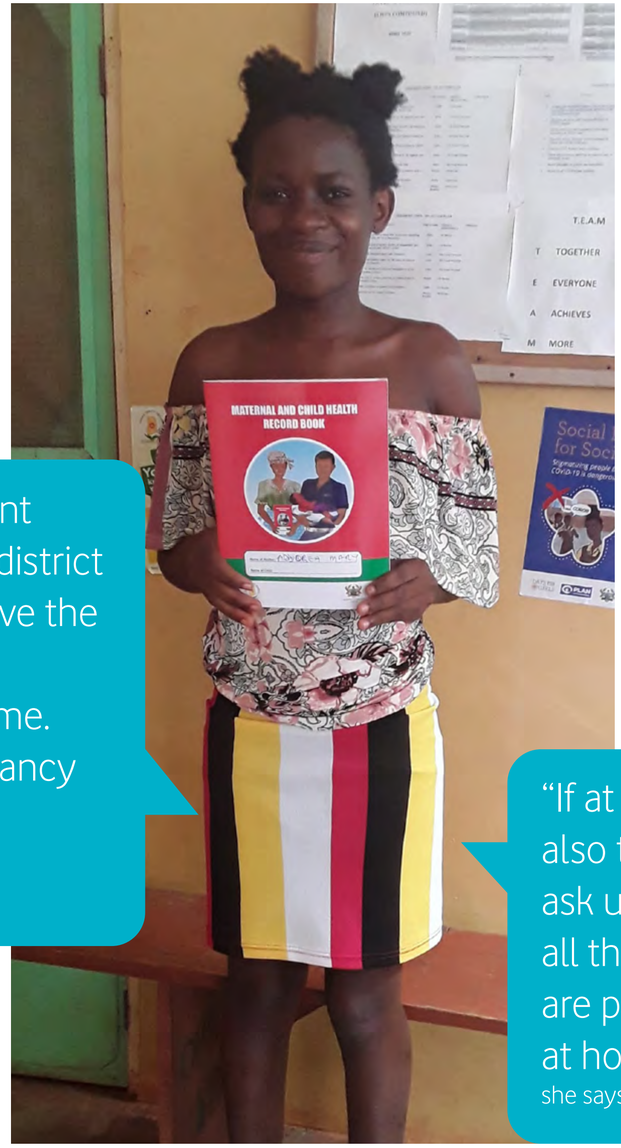
Charity Offei, 19, is expecting her first child later this year. She only found out she was 13 weeks pregnant after her first-ever ultrasound scan, made possible through a partnership between a local nonprofit, Divine Mother and Child Foundation (DMAC), and Vodafone.

Without this intervention, when she found out she was pregnant, she would have had to pay for a motorcycle and car ride to travel for almost two hours to reach the closest government hospital to access the service for free, or pay between up to 3-5USD to a private health provider closer to her village. This time, it only took 30 minutes on a motorbike to get to the village health clinic and access the portable ultrasound scanner brought by DMAC. Most villages have a clinic that can only provide basic services for pregnant mothers and not all district hospitals have a scanner.

When she has her baby, Charity will be among the more than 20,000 mothers in the remote villages of Eastern Ghana who have received free mobile ultrasound scan services through the program since 2015.

> “We were all happy. Many pregnant women used to take a car to the district but it is expensive. Some don’t have the money. So they stay at home.
> But because this is free, we all came. Some didn’t know how the pregnancy was going,”
>
> Charity says of her first visit.

The free and easily accessible service has also encouraged more mothers to go for regular antenatal checks as they don’t have to spend on trips to the private or district hospital.



“We have been able to save some women who would have lost their lives if it wasn’t for the scanner. We had women who thought they were pregnant but only to be told they have fibroids. We’ve had women with incomplete abortions and didn’t know.” says Edmund Buobu, DMAC Programme Director.

The service is also helping to address other health concerns beyond maternal issues as others take advantage of the availability of the service and come for regular scans.

“Another gap is a lab to check hemoglobin levels. Most pregnant women don’t have access to this. We are trying to add this service so that when they come to do the scan we also check their hemoglobin levels. If we are able to do this, they wouldn’t have to travel.” Edmund says.

> “If at least we can get the scan and also the lab tests that the midwives ask us to do, we will be able to attend all the antenatal clinics anytime we are pregnant and we will not just stay at home,”
>
> she says.

Challenges with the rise in informal engagement with digital health services

When formal health systems become too cumbersome, expensive, or difficult for citizens to access, they will use informal systems that are more accessible. However, there are risks to both healthcare workers and citizens, if they circumvent formal systems:

Trust is a key issue at the intersection of formal and informal systems. How do medical professionals foster trust, especially if they are unknown to the patient prior to that interaction?

The use of informal methods such as **social media for doctor-patient communication is a 'double-edged sword'**[14]

COVID-19 accelerated the use of these platforms, for diagnosis, communications and prescriptions. However, there are **privacy** concerns (both for the patient and medical professionals), including **where data is stored** and how using these platforms **crosses personal and professional boundaries.**

Medical misinformation (as seen during COVID-19)[15] is a very real threat - a difficult phenomenon for governments, private sector and medical professionals to contend with.

Research shows the level of misinformation users are exposed to on social media and other informal systems: **69% of South Africans and 55% of Kenyans** report that they've seen information that is obviously false or untrue on social media.[16] How can formal systems undo the reliance on unverified health information and rebuild trust in reputable sources?

Outside of formal systems, there are greater opportunities for **corruption, abuse of power and other risks**, with less chance of accountability or grievance redress. A reliance on the healthcare professional may also mean unnecessary expectations of the worker (e.g. to reply out of hours).

In addition, some healthcare professionals are concerned that the trend during and post-COVID-19 to use mHealth for emergency diagnosis **may prioritise urgent care**, whereas preventative and non-urgent care may be delayed, causing bigger problems down the line.[17]

mHealth services can widen health inequality because of patients' varying levels of **digital literacy and access to digital devices and infrastructure**.

This was seen during COVID-19 when many vaccination appointments, for example in South Africa, were made through online systems; those without digital skills were left behind or had to ask others to make appointments for them.

Those at highest risk are likely to be illiterate, older, living alone and/or in rural areas, migrants, of lower socio-economic status, and ethnic minorities. When developing mHealth initiatives, these factors must be acknowledged and addressed.

One strategy would be to produce hybrid models of rollout, for example, combining the use of community radio with mobile phones and apps. A simple interactive voice response system like Viamo's 3-2-1 dial-in service can deliver carefully curated health information to those with basic feature phones and low levels of digital literacy.[18]

Informal systems place the **burden of cost on the end user or health worker** rather than spreading cost more equitably across the population.

Finally, a reliance on informal systems atomises patient data across many systems, **preventing governments from accurately understanding health situations** on a large scale.

Meeting in the middle

The dual role of private sector partners in digital health systems

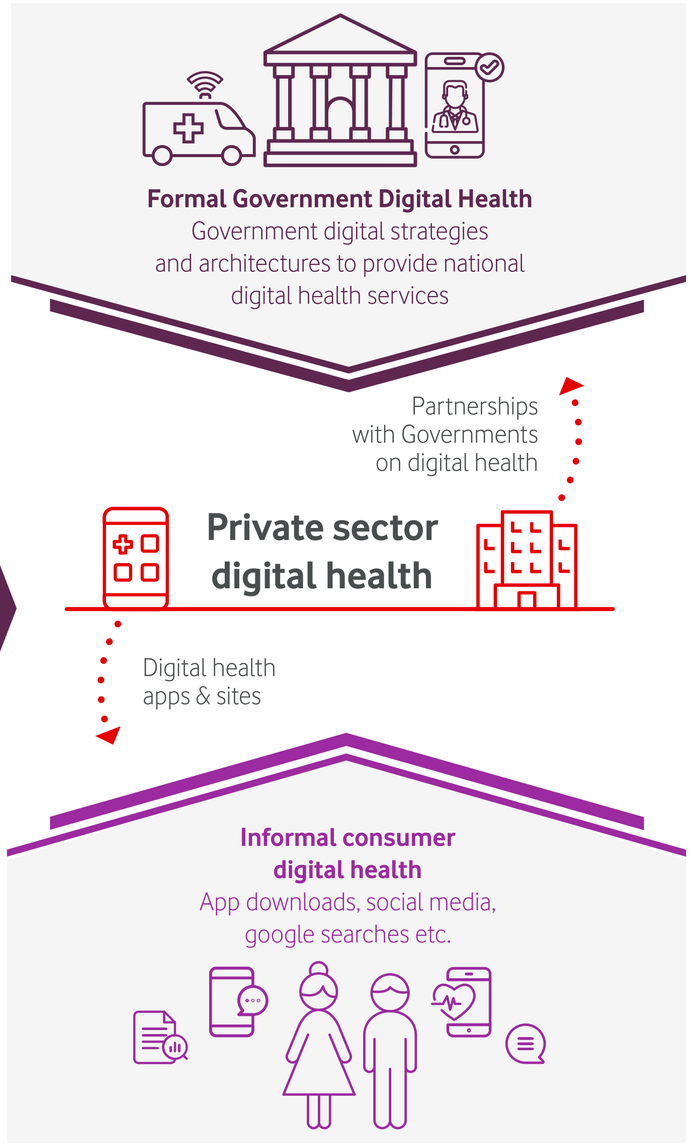
As documented in the previous section, there is rapidly increasing activity in top-down formal digital health architectures instituted by governments, and a large increase in bottom-up digital health engagement from an increasingly connected and smartphone-enabled public.

↑ 40%

Digital health apps have seen increased usage during the pandemic.

For example, the Byon8 app has shown avg. 40% increase in engagement since March 2020[19]

In between these two movements are private sector digital health partners, mobile networks and other digital platform providers. On the one hand, they partner with governments in creating robust digital health architectures at a national scale. On the other hand, they create the marketplaces and enable the demand from consumers for digital health content.



So how can these informal and formal ecosystems 'meet in the middle' to create benefit at scale for the public?

We suggest three steps:

Governments partner with the private sector on formal systems - The architecture of a national digital health ecosystem needs to be robust and government-led.

Manage the end user digital health ecosystem - Governments can implement policy and regulation to encourage integration between start-ups and formal health systems, and prevent the spread of misinformation.

Understand how to integrate the informal within the formal - Accept that social media, apps and Google searches are the most common digital health tools used by beneficiaries and understand how to safely and ethically utilise them within a national digital health ecosystem.

Partner with private sector partners on formal systems

"Africa's booming digital sector offers great opportunities for public-private partnerships to help build resilience in the aftermath of the COVID-19 crisis and respond to critical continental priorities,"

- Dr Ibrahim Mayaki, CEO of AUDA-NEPAD (African Union New Partnership for Africa's Development)

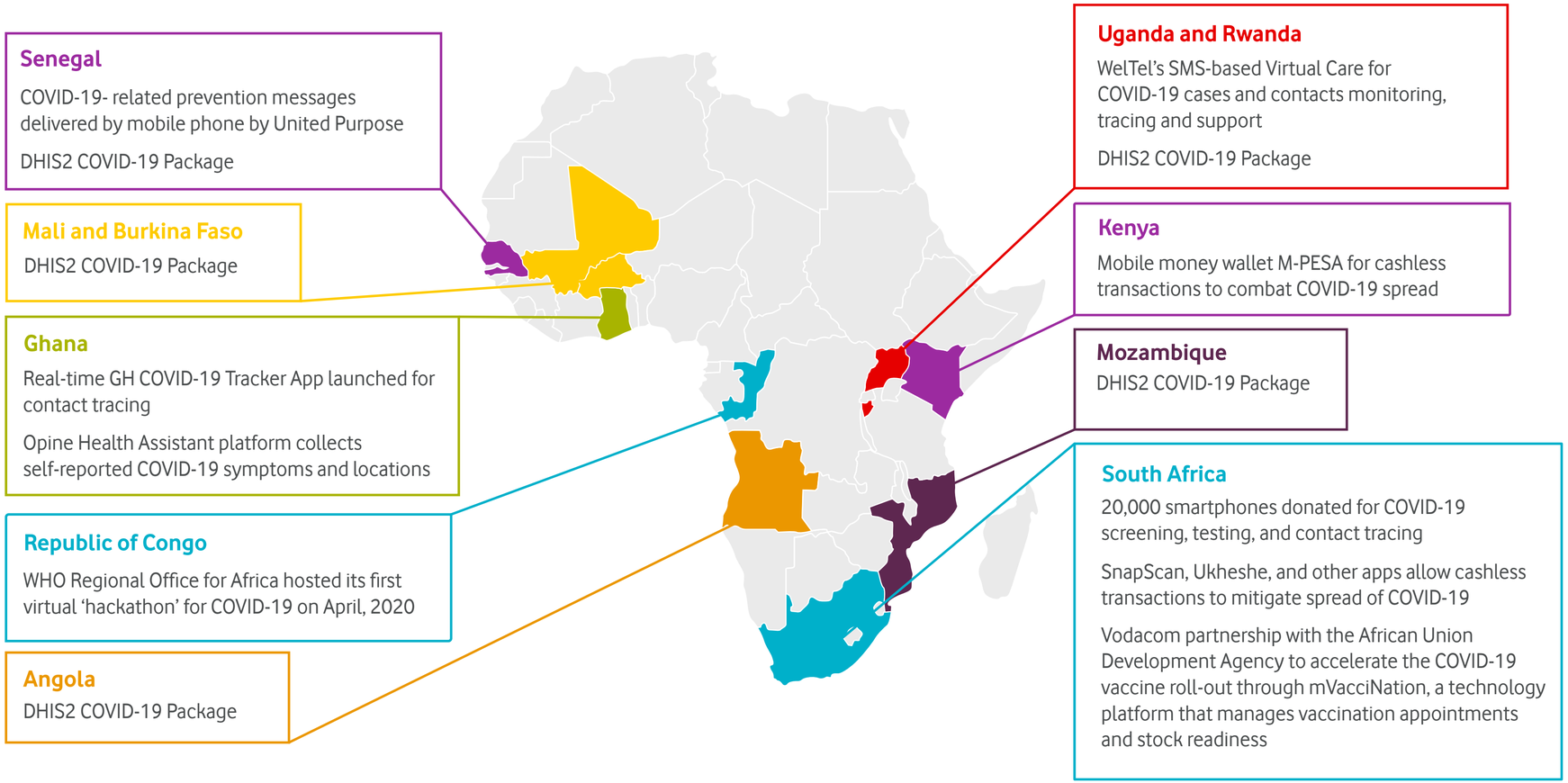


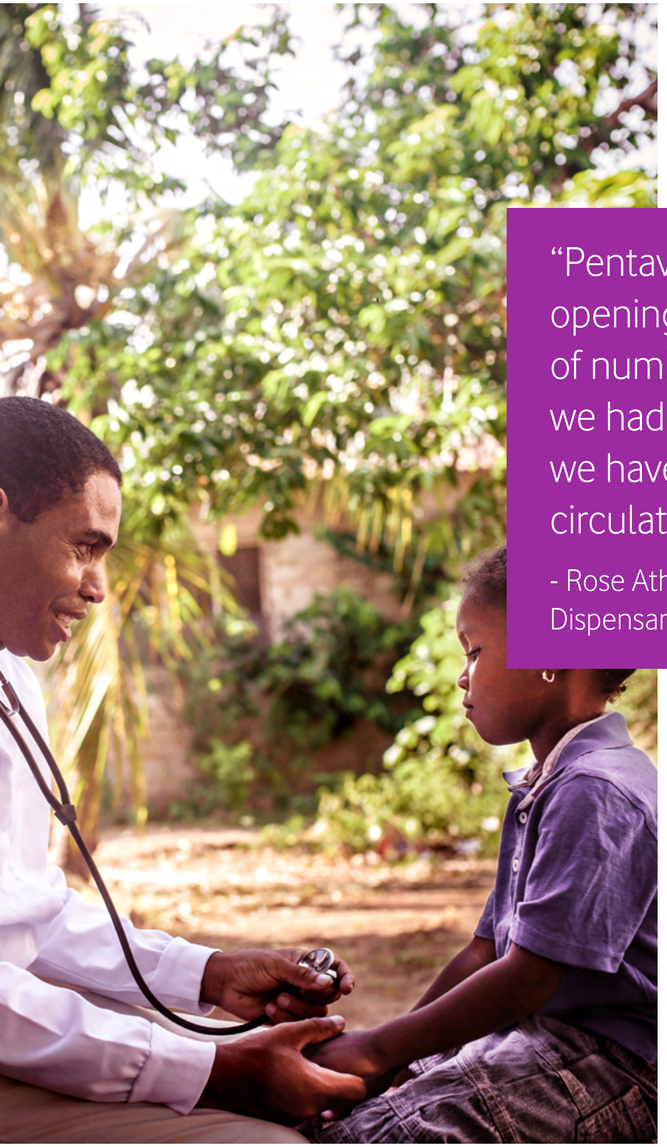
Figure 3 - Examples of the role of mobile phones in COVID-19 response. (Source: https://www.ajtmh.org/view/journals/tpmd/103/1/article-p3.xml)

Governments responded immediately to the COVID-19 crisis in 2020, using systems such as the open-source District Health Information Software 2 (DHIS2), which quickly developed a COVID-19 package to allow case monitoring. Mobile networks were at the forefront of the response to COVID-19 in many ways:

- Mobile messaging was used as a primary means of communicating conditions and advice targeted to districts affected by rises in COVID-19 cases.
- Mobile devices quickly became the default method of contact tracing to help contain the spread of the pandemic.
- Mobile money platforms saw an immediate spike in transaction volumes as users started to use more digital money rather than cash.[20]

The rate of innovation and speed of delivery seen from governments and private sector partners responding together to COVID-19 is a momentum that should continue, particularly to address the most pressing need at the current stage of the pandemic crisis: managing vaccination at a national level.

Lessons learned from initiatives such as mVacciNation in many African countries highlight how digital health PPPs can deliver solutions not only for the current crisis, but for ongoing and future vaccinations needs.



mVacciNation: Improving efficiencies in vaccination programmes

> "Pentavalent vaccines last 28 days after opening. Because of the unpredictability of numbers, vaccines were wasted when we had low numbers turning up. Now we have accurate estimations and we circulate vaccines before they expire."
>
> - Rose Athumani Magambo, Midwife, Buganzo Dispensary, Tanzania[21]

A pentavalent vaccine, also known as a 5-in-1 vaccine, is a combination vaccine with five individual vaccines conjugated into one

The mVacciNation app – an electronic health record solution that supports vaccination coverage – was developed by Mezzanine, a member of the Vodacom Group, to help African countries deal better with persistent vaccine stock-outs, distribution inefficiencies, and poor record keeping. After its successful pre-pandemic rollout in Mozambique, Tanzania and Nigeria, the South African government recognised its value and integrated it into its COVID-19 Electronic Vaccine Data System (EVDS) and used it to efficiently administer COVID-19 vaccines to health workers.

MVacciNation allows health workers administering vaccinations at clinics to capture and record information for all vaccinated individuals. It also enables health workers to track vaccine stock levels to optimise the supply chain and fridge temperatures to ensure the safe storage of vaccines.

mVacciNation's digital capabilities benefit stakeholders in various ways. Caregivers receive reminder messages about vaccination schedules, health centres receive vaccines based on the registered stock levels on the app, and refrigerator issues can be addressed quickly. By collecting patients' information through the app, health programme managers are able to calculate vaccination coverage rather than estimate it.

In Tanzania, the mVacciNation programme was implemented in 50 healthcare facilities. It increased vaccination coverage of children under five years by 5% to 98%, reduced immunisation stock-outs from 78% to 28%, and data quality and accuracy increased from 78% to 93%.

The African Union Development Agency has endorsed the mVacciNation initiative and is partnering with Vodacom to roll out the solution to accelerate the COVID-19 vaccine rollout in its 55 member states. As more governments on the continent fight to secure more COVID-19 vaccines for their citizens, deploying a tested solution to improve the rollout of the vaccine will help to save the lives of millions of people.

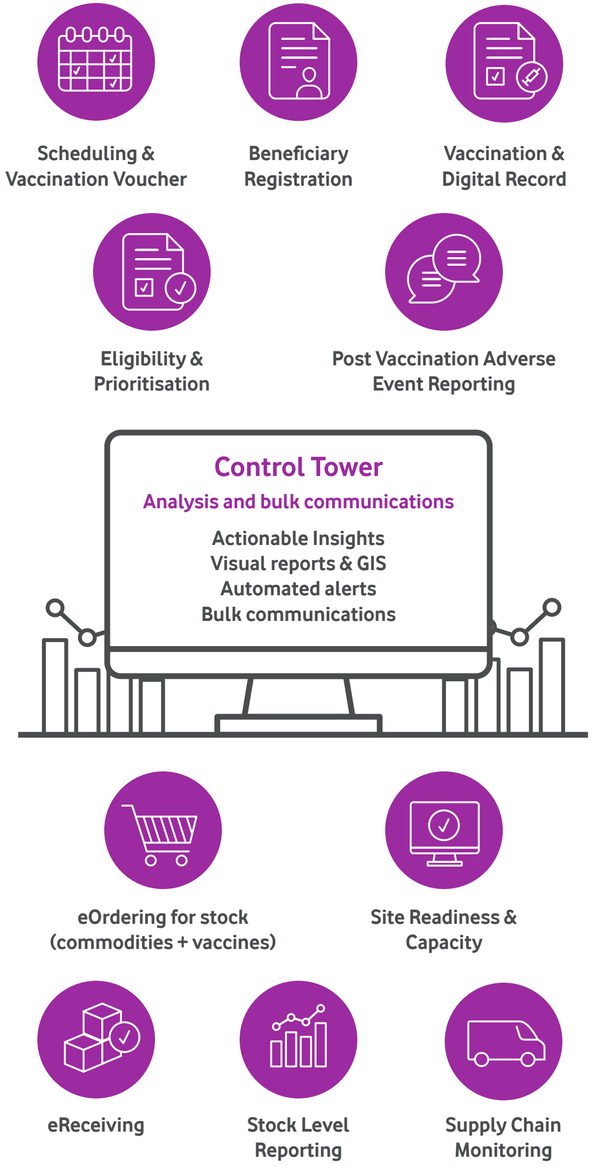


Figure 4 - How mVacciNation platform manages vaccine partners. (Source: mVacciNation)

Managing the end user digital health ecosystem

Social media is increasingly synonymous with consumer digital internet services, so much so that in research, users often report they are using 'the Internet', but they are on Facebook and WhatsApp.[22]

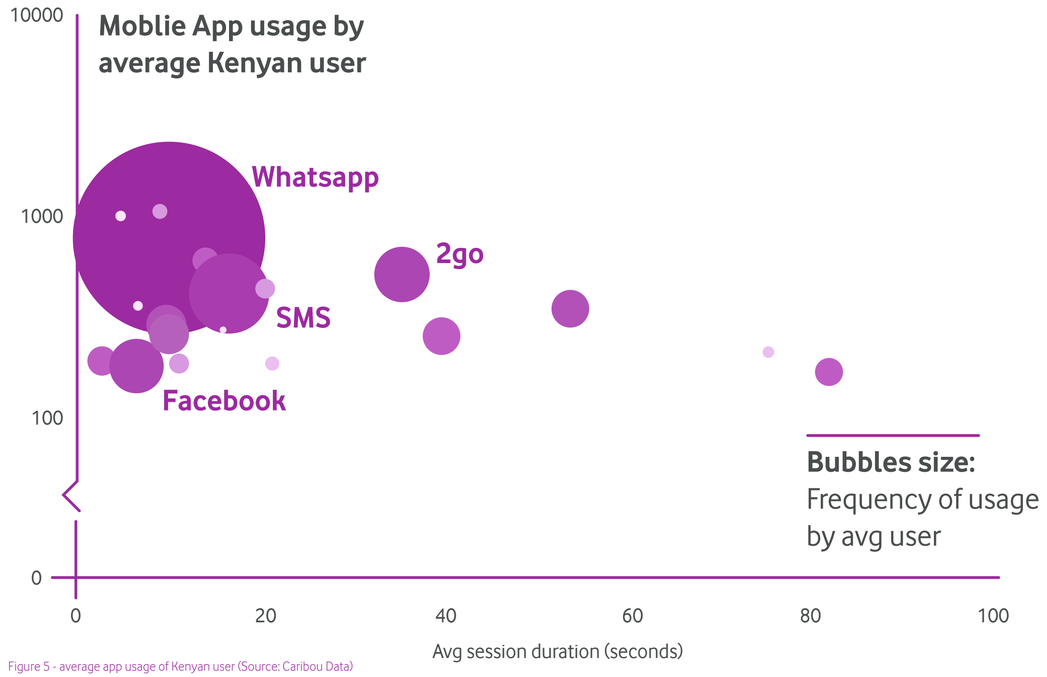


Figure 5 - average app usage of Kenyan user (Source: Caribou Data)

WhatsApp has increasingly become ubiquitous and constitutes the vast majority of time online for many users. The chart below shows how the average Kenyan user spends their time on apps. The data is drawn from a privacy-controlled panel of users representing the broad demographic of the Kenyan population, and is drawn from real usage data from devices:

The big bubble to the far left is WhatsApp usage: 70% of all users are active WhatsApp users.

The size of the bubble indicates the high frequency with which messaging apps like WhatsApp are used. Facebook and SMS usage also stand out, alongside digital financial services, but the sheer size and dominance of WhatsApp usage is notable.

This predominance of WhatsApp creates an opportunity to extend the reach of digital health services, but, as discussed above, social channels may also aid the spread of misinformation. During the COVID-19 crisis WhatsApp limited forwarding capabilities for their app in Africa specifically as an attempt to counter the misinformation that was being spread on their platform.[23] Facebook fact-checking and Twitter's message asking whether the user would like to first read a link before retweeting also work towards more meaningful use of social media. Governments, medical professionals and social media companies need to work together to understand how medical campaigns can pick up on commonly shared misinformation and counter it.

This also presents the need for greater regulation of informal media health channels. For example, during COVID-19, the WHO worked with WhatsApp to establish a WHO WhatsApp channel, but it is unclear how this is regulated, how information is localized (in different languages) and made easy to understand, and how it is maintained so it is up to date.[24] Companies also propose WhatsApp Business API integration in the healthcare industry, but there are important issues of regulation that need to be addressed before this can occur. Equally, while some jurisdictions apply health data protection regulation, others do not.

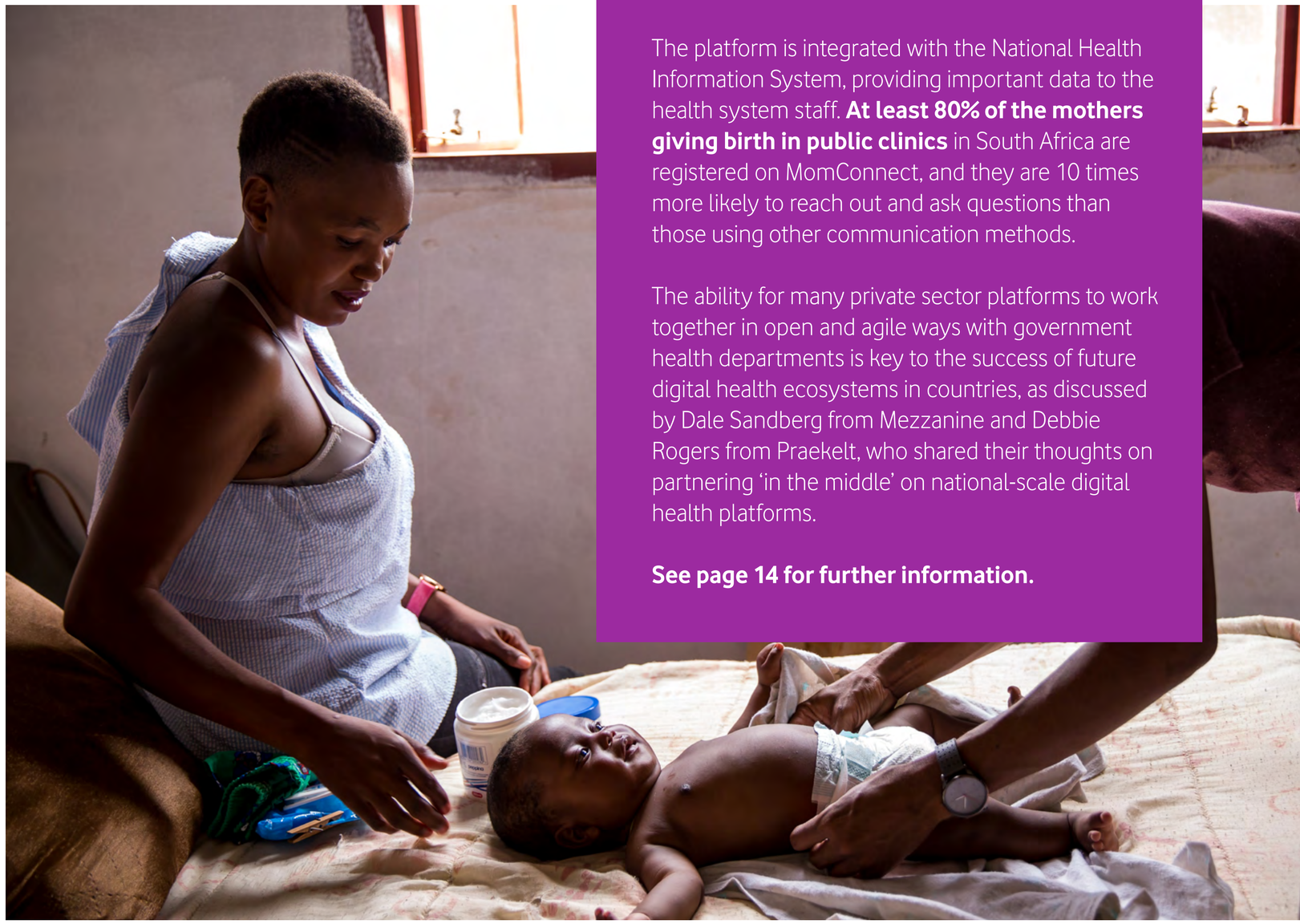
Understanding how to integrate the informal within the formal

Formal engagement within informal platforms is possible. MomConnect in South Africa is a useful example of going to where the user is to deliver meaningful digital health services. MomConnect, a free interactive SMS- and WhatsApp-based messaging platform, provides pregnant women with carefully curated information throughout the pregnancy stages.[25]

WhatsApp is the most popular social media platform in South Africa with at least 93% of internet users- about 23 million-using the messaging app. This number, WhatsApp estimates, will increase to 28.6 million by 2026.

Since it was set up in 2013 by the Praekelt Foundation, more than 3.9 million mothers have signed up and about 1.2 million are active at any time.

The maternal health service is available in 11 of South Africa's official languages. MomConnect's two-way communication system means that women can ask questions about their health and the health of their baby and receive immediate feedback from qualified health professionals. The mothers can also provide feedback on services they receive at antenatal care clinics to which health officials respond.[26]



The platform is integrated with the National Health Information System, providing important data to the health system staff. **At least 80% of the mothers giving birth in public clinics** in South Africa are registered on MomConnect, and they are 10 times more likely to reach out and ask questions than those using other communication methods.

The ability for many private sector platforms to work together in open and agile ways with government health departments is key to the success of future digital health ecosystems in countries, as discussed by Dale Sandberg from Mezzanine and Debbie Rogers from Praekelt, who shared their thoughts on partnering 'in the middle' on national-scale digital health platforms.

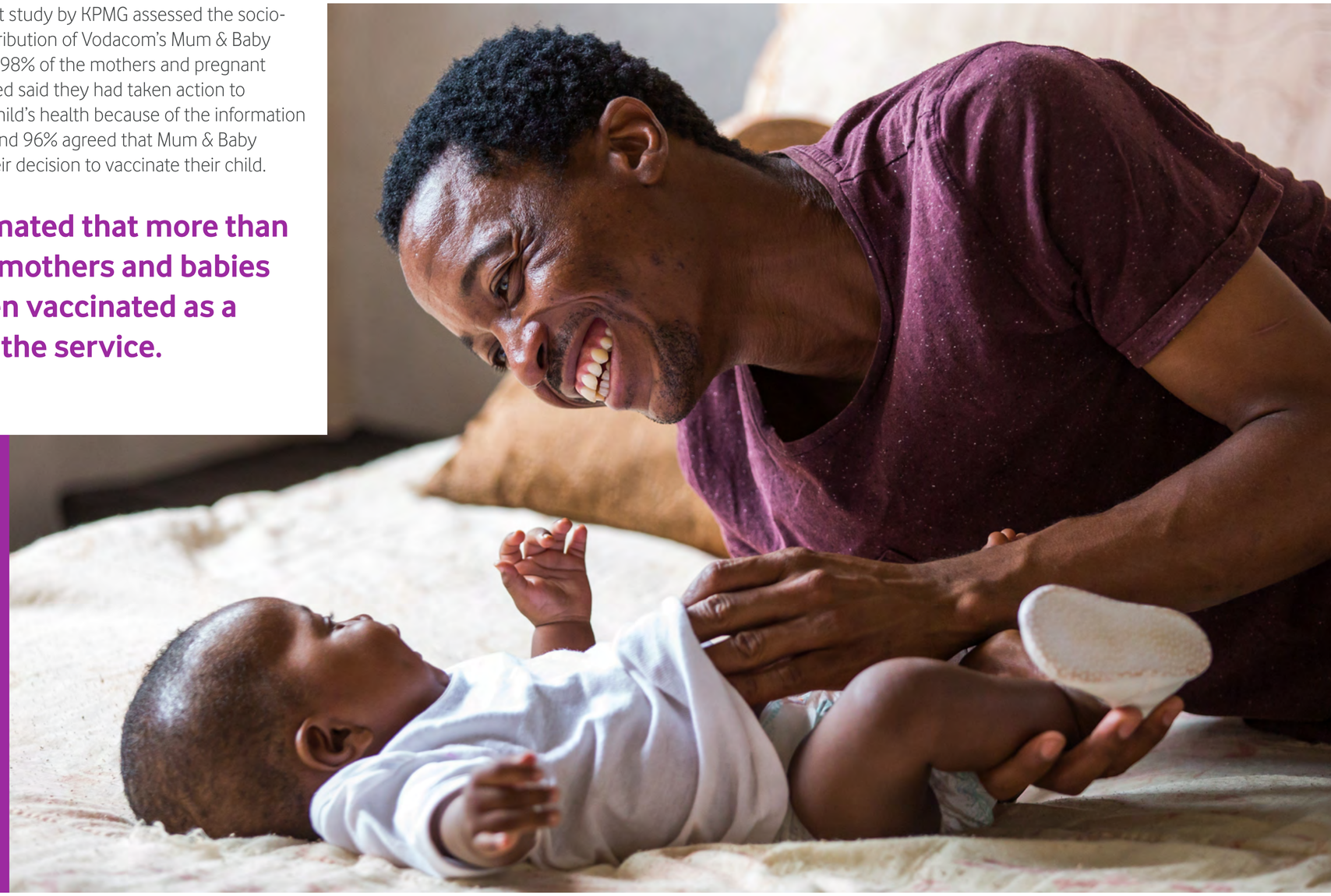
See page 14 for further information.

Vodacom's Mum & Baby service provides free information about pregnancy and childcare via mobile devices for parents-to-be in South Africa. This includes regular text messages, articles, tutorials, videos, an immunisation calendar and a pregnancy medicine checker.

Since 2017, Mum & Baby has helped **1.9 million parents and caregivers** to take positive action to improve their child's health. In South Africa, where there are only 1.2 nurses for every thousand people and where it can be difficult for families in rural communities to get to health centres, Mum & Baby has provided a lifeline for many parents.

An independent study by KPMG assessed the socio-economic contribution of Vodacom's Mum & Baby mobile service. 98% of the mothers and pregnant women surveyed said they had taken action to improve their child's health because of the information they received and 96% agreed that Mum & Baby helped with their decision to vaccinate their child.

It is estimated that more than 650,000 mothers and babies have been vaccinated as a result of the service.



"This programme has really helped our customers to make significant behavioural changes around breastfeeding, immunisation and regular clinic visits. We've also heard of fathers who are enthusiastic about nutrition and cooking now or who no longer smoke in the house because of the information they received."

- Joe Griffin, Senior Manager, Sustainability Strategy at Vodafone Group

Interview

The ‘informal’ in practice

Starting a multi-partner platform

Q: How do you start to build a multi-partner digital health platform with a government health department?

Dale Sandberg

Managing Executive: Health & Social Innovation at Mezzanine

“We begin with the appreciation that we’re not entering into a vacuum.

There are always existing systems, years of investment, years of back-breaking work created by public sector officials. Often, there is also private sector stakeholders who have been part of shaping some of the policy landscape and the market. When we approached the South Africa’s National Department of Health we knew it was a complex stakeholder ecosystem but we knew we were able to bring something crucial to the table. That’s why we went there with our hands up to say ‘we think we can help you with the vaccine roll-out’.

It was off the back of many years of trusted service provision to the Department of Health. That’s key.

It’s not often the technology on its own, it’s the relationships and the operating models that go with the technology and how they enable these stakeholders to work together.

We have been working with the Department of Health for many years. Sometimes it is all about being in the right place at the right time, all the stars aligning essentially to enable the technologies to be leveraged quickly and at the service of something so critical like the vaccine roll-out.”

Debbie Rogers

Managing Director, Praekelt.org

“I love the idea of meeting in the middle.

I think it’s very important, when you have this kind of transdisciplinary engagement, you need a broker, and you need an organisation or an entity that can see both sides and can bring them together to almost act like a translator.”

Responding to COVID-19 at speed

Q: How quickly were you able to respond to COVID-19?

Debbie Rogers

“There was just a lack of good information, a lack of trusted services that people could get hold of for Covid information. We started looking at our MomConnect platform and we thought, well, this is not something that just affects mothers, this is something that affects every single citizen in the country. If we could use that to set up a service as quickly as possible, where people could go and know that that information is reliable and from the National Department of Health, and can access it through really basic technologies, then maybe we’ll be able to get something up and running quickly that lots of people can take advantage of.

So we spoke to the National Department of Health, we spoke to WhatsApp, we set up a WhatsApp line, and launched an interactive information service within days. Within just six weeks, the service had 750,000 people on the on the platform and it has now reached 9 million people.

The platform is constantly evolving. We started with just a WhatsApp service containing some easy-to access information and now also offer a symptom checker, which makes the service even more accessible and useful to people.

The symptom checker has had three million people completing 13 million symptom checks, to get information about whether whether they should quarantine, isolate or continue on as usual. And then we were very easily and quickly able to collaborate with Mezzanine’s platform and do vaccine registration.”

Dale Sandberg

“I think our story is fairly similar. We were in the middle of a huge multi-province project in South Africa when COVID-19 hit and we had to sort of stop everything in its tracks. And it was like, well, is everything going to go on pause?

We did a very similar kind of taking stock. What do we have in our platform? How could we help with COVID-19?

The first thing that actually took off on our platform was PPE monitoring, and that was critical. It was already in the primary healthcare clinics, but had to very quickly get into all the hospitals to monitor PPE.

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Dale Sandberg

...continued:

And because Mezzanine was an existing trusted platform and they knew our ability to move quickly in terms of deployment we were able to deliver on that.

Then, on Christmas Eve last year we heard that the government was exploring how to deal with the vaccine roll-out and we were immediately able to offer a ready solution.

The strength was in the fact that it was easy to deploy and it was tested in other sectors, so the deployment was just two weeks.

We have passed some critical milestones with over five million people in total registered for vaccinations. It's about being agile, moving quickly and being a trusted partner and broker for all stakeholders.

”

Moving forward together

Q: Where do we go from here? How do we harness the rise in digital health engagement from citizens and governments to finally scale digital health solutions at national level?

Debbie Rogers

“I think the key next step is to empower citizens in their own health journey. And when I say health journey, I don't just mean treating illness, but staying healthy.

I think that this past year has shown how critical this is, it is now an imperative to empower not just health professionals but every single citizen.

People are hungry for information and if you don't provide it to them in a trusted format they will find it elsewhere.

The increased misinformation out there is only going to get worse, so we have to tackle this proactively.

We have to be empowering citizens in their own health journeys.

”

Dale Sandberg

“I was a qualified Health Economist before I joined a tech company. I always go back to the issue that we have a tremendous resourcing problem when it comes down to the nuts and bolts of health systems.

From a health system perspective the resources are extremely limited while the health needs are growing worldwide. The pandemic has shed light on those resource inequalities and has made the gaps even starker and wider.

So how can we solve this? How can we improve reliability at its most basic while also increasing responsiveness?

I believe in the power of technology in enabling transformative policy intervention

If all the examples we have been talking about start positively impacting health outcomes, improving citizens' lives, then we are on the right path to succeed.

”

Conclusion

The COVID-19 pandemic has had a profound impact on the health and lives of citizens and communities all around the world and it has started changing our society. In Africa, the pandemic has triggered an unprecedented rise in digitalisation across all sectors of society, but it has also exposed the impact of the existing digital divide. This report shows a healthcare sector on the verge of transformation with many opportunities and some challenges that need to be addressed if we want to make Africa the forecasted 'breeding ground' for digital health and improve the lives of citizens.

The report highlights a surge in the use of digital health solutions, with data showing a 40% rise in engagement on the Byron8 health app since March 2020, and 41% of internet users now using their mobile phone to search for health information.

However, while this rise in engagement with informal healthcare systems is creating new opportunity, there are significant risks in circumventing formal systems. Concerns range from privacy and the security of personal data to the unauthorised distribution of medical misinformation. To mitigate these risks there is a need for governments and the private sector to forge partnerships that 'meet in the middle' and facilitate greater access to digital healthcare across the continent.

The joint response to the pandemic deployed by the public and private sector has demonstrated the opportunity for success through the adoption of a multi-partner approach in the delivery of digital health services. These digital solutions, albeit introduced to help combat COVID-19 are now an integral part of national health systems.

This paper showcases how millions of people in sub-Saharan Africa have received timely information and advice on COVID-19 and vaccinations through trusted online sources.

It has also emerged that the rollout of mass COVID-19 vaccination across Africa will only be possible by using a comprehensive digital system to support every step of the process, from appointment management to the tracking and distribution of vaccines. The urgency, scale and multifaceted nature of this rollout can only be achieved if all actors involved do 'meet in the middle' and integrate their efforts.

Not only will this approach to the COVID-19 vaccination programme help combat this disease and save lives now, it will also establish systems that will help future vaccination efforts and will contribute to strengthening the resilience of Africa's society. Moreover, by continuing to partner and scale digital health services, governments and private sector actors can make significant steps towards reaching the SDG targets on health service reach. A key question addressed by this paper is how countries across the continent can leverage the rise in usage of digital health solutions and integrate them into the formal health system.

To achieve this, we need to bridge the existing gap between formal and informal so that the people of the African continent are able to access trusted, secure government-led digital health initiatives.

The paper outlines three recommendations that need to be addressed to harness the adoption of digital health and maximise the opportunity it presents:

1 Digital health initiatives must be led by Government, with private sector partnerships to enable trust that reduces the risks associated with healthcare workers and citizens going outside of formal systems

2 Manage end-user digital health adoption to ensure trusted and accurate information and help prevent the spread and harm caused by misinformation

3 Understand how the informal and formal can combine in a way that is safe at scale. Given the pervasive use of social media, apps and internet searches, it's necessary to find a way of using these tools safely within the national health ecosystem.

The overall vision behind the Africa.Connected campaign is to help to accelerate efforts to narrow the digital divide in African economies and societies and improve the lives of its people. To improve health outcomes for people across Africa, we must join efforts and create partnerships that integrate formal and informal health systems. The opportunity to harness the rise in digital engagement is now if we work together and make high quality, trusted online medical services are available to all.

If you would like to discuss digital health partnerships, please contact Dr. Peter Breitenbach from Mezzaine peter@mezzanineware.com.

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