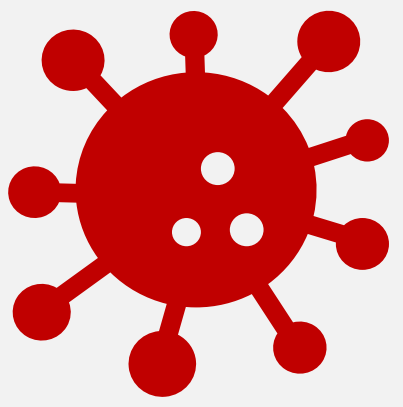


# Using Digital Tools for COVID-19 Vaccines: Perspectives from inside Ghana's Health System

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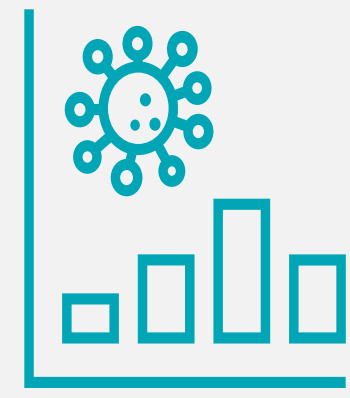
## BACKGROUND



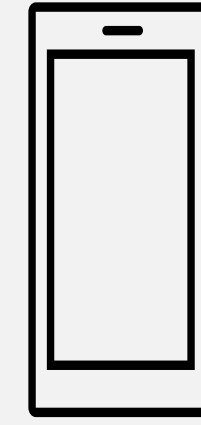
Ghana recorded the first case of COVID-19 in March 2020 and declared a national emergency



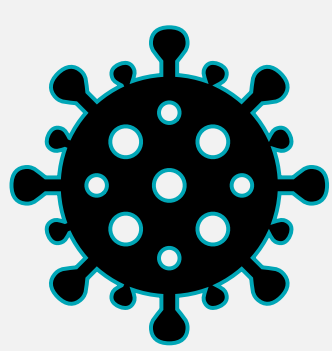
In 2021 convened a TWG to define the modalities for the 1<sup>st</sup> mass vaccination exercise in recent history



Lessons from previous vaccination exercises: inform a case-based data collection method – using digital tools



Utilised existing systems: DHIMS2 aggregate database, e-tracker patient-level data collection, and electronic tablets



To support Ghana's vaccination efforts, the Accelerator team facilitated procurement of over 3,600 tablets (also funded by Rockefeller Foundation), to be loaded with the e-tracker and COVID-19 tool, and distributed for vaccination teams throughout Ghana's 16 regions. Accelerator also supported training of about 1,900 health workers on the use of the tablets and digital tools.

## METHODS

1

Interviewed a cross-section of Ghana Health Service staff from national, regional, district, sub-district and facility levels.

2

Learnt how tablet use had impacted their work, both administering vaccines and using data to drive decision-making.

3

Documented challenges, improvisations to get to the last mile and the farthest person.

4

Recorded lessons to improve similar efforts in the future and other contexts.

## THE STORIES & LESSONS LEARNT

1

### Monitoring from the Regional Level: Coastal Ghana.

By December 2022, this region had received over 1,000 tablets which had been shared with the districts throughout the region. Kofi Ntim\*, a health information officer, is using the data reported from the districts to monitor vaccination coverage in his region, respond to challenges as they arise and provide support where needed.

*"The tablets have been a good data capture tool for real-time decision-making and planning interventions. We know which of the 29 districts are vaccinating more, and if a district has a low rate of vaccination, we can zoom in to see what the challenge is and decide if they need to do more social mobilization, create more awareness for people to get vaccinated based on the data coming from the tablets."*

2

### An Urban Perspective: A Bustling and Crowded City.

In a densely populated sub-district on the coast of Ghana, 20 mobile vaccination teams have served a population of 78,600 people with 15 tablets. The sub-district Disease Control and Surveillance Officer (DSO), Mariama Abdul\* said she receives tablets from the regional office and shares them among staff working in facilities, and those traveling out in the community.

*"Seeing you're not just writing their details on paper, but rather you're entering it in the server, they know that in the future they can retrieve their details later. It makes the people have that confidence that those coming around to vaccinate, they are not just vaccinating but they are very particular about the data they are capturing."*

3

### Outside the City Centre: in a Rural District on the Coast.

Sixty kilometres from the bustling city centre, in a more rural district, Anowa Boateng\*, the District Health Information Officer (DHIO), says her district has 15 tablets in use. The mobile vaccination teams consist of two (2) people: a vaccinator and the person capturing the client data, who sometimes doubles as the social mobilizer.

*"Initially, when we started, we were challenged with logistics, as in inadequate tablets and laptops to use for data entry, and we would have to sometimes work in turns with one device. But since the tablets came in, it has been very helpful. So now all the data officers have access to tablets, and they can do the data entry in their free time."*

4

### Central Ghana: A District far from Accra.

In this district, 385 kilometres inland, mobile vaccination teams travel in groups of 4: a vaccinator, a social mobilizer, a data recorder, and a volunteer from the community. The vaccinators are nurses, midwives or others with a clinical background and the social mobilizers are other health staff who can answer questions, provide information, and report any adverse events.

*"For us, continuity of the COVID vaccine is a concern... If somebody takes the first jab in location A then moves to location B, it becomes very easy to capture the person's details and to match the two... When the community members come, and you can tell them, 'I realize you took your first jab at this location,' it builds their confidence, they are able to tell the other people that look, they are recording what we're doing, so it's good you go and take your vaccine."*

— Municipal Health Information Officer (HIO), Boadu Asenso\*

5

### At the Frontline: A Health Centre

Naa Kwaley Quartey\*, a midwife at a Health Centre in inland Ghana, works on the frontlines as a vaccinator on mobile teams during COVID-19 immunization days. There are six team members: two midwives, one nurse, three community health nurses plus volunteers from the community.

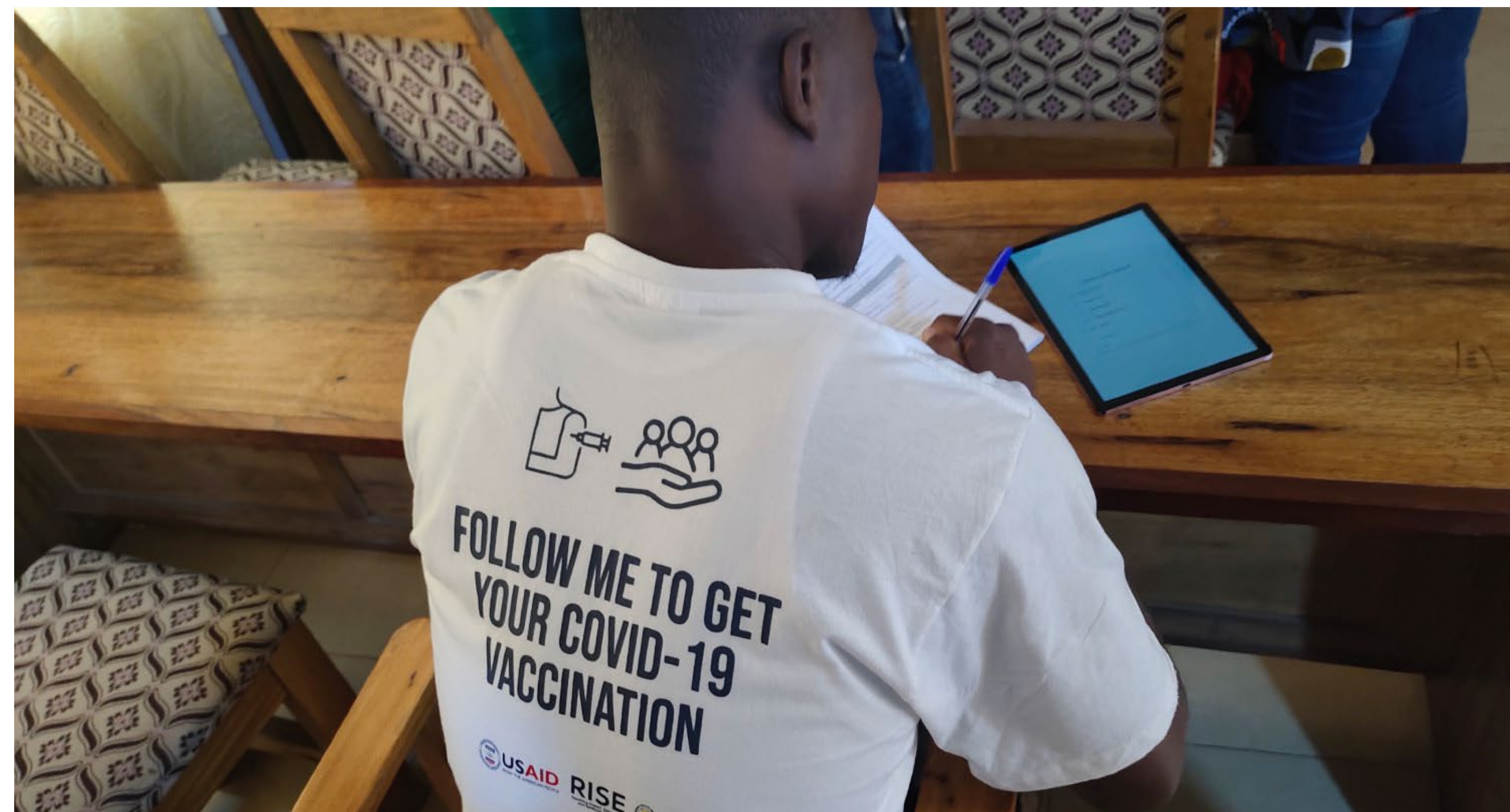
*"We encountered a challenge during one of the vaccination exercise. A community decided not to vaccinate because we were strangers who didn't know their culture. The volunteer led us to the assemblyman so we could talk to him and educate him. The volunteers help a lot. They help us talk to their people, they know the roads, the landmarks and everything and guide us where we need to go."*

6

### Closing the Loop: Using Digital Data to Inform Decisions at the National Level.

As data from the tablets flow back to GHS officials at the district, regional and national levels, it is used to track the progress of fully vaccinated citizens and direct support to the districts that need it most. Pascal Adu, a national-level Systems Analyst explained,

*"I had to analyse district-level data to visualize proportion fully vaccinated and categorize. Once we categorize, we can determine which districts need additional support. These visualizations informed the push of development partners to the northern zone. With additional support, all the northern zones have turned green because the proportions fully vaccinated have gone beyond 50%."*



\*Names were changed to protect identity and encourage open dialogue