Use of Call Detail Records in the Covid-19 Response

GWG Big Data Conference
by
Ghana Statistical Service
The **Ghana Statistical Service** (GSS) has been working with Call Details Records (CDRs) in partnership with **Flowminder Foundation** and **Vodafone Ghana** since 2018.

In line with Ghana’s Data Roadmap priorities, the project harnesses this non-traditional data source to create use cases for the public good. It is funded by **Vodafone Foundation** and the **Hewlett Foundation**.

To date, the project has developed a use case with **National Disaster Management Organisation**; created **legal** and **technical infrastructure** for CDR data flows and trained six GSS staff members as **data science**.
Responding to the Covid-19 Pandemic

- Mid March 2020, GSS approached Ministry of Planning and Ministry of Health and **proposed mobility analysis to support government intervention**. The analysis aimed to assess the effectiveness of travel restrictions and lockdown in responding to Covid-19.

- GSS **coordinated with project partners** during this process and liaised with decision makers. Initially, Government interest focused more on contact tracing activities, meaning there was little end user input into the first report (published 3rd April).

- Through active dissemination more interest was generated in the second report, published on 15th May.
Sourcing the Data

- Prior to the pandemic, a 13-month contracting process overseen by Ghana’s Data Protection Commission led to establishing of a data sharing agreement between GSS, Flowminder and Vodafone Ghana lasting until January 2022.

- The Statistical Services Act 2019 provided legal space for the use of Big Data for official statistics in the remit of the National Statistical System, coordinated by GSS, thus expanding the legal scope for using non-traditional data sources.

- A data pipeline for access had been established in 2019. By leveraging on existing legal and technical infrastructure, data could be quickly mobilised for the covid-19 analysis. At this stage only Flowminder is able to access the anonymised Data, GSS is yet to access and analyse data in-house.
The two reports raised the profile of the Data for Good project. For the first time external data requests are being received for CDR data from within the Government and internationally.

This was a catalyst to the inclusion of GSS in COVID-19 policy space as member of the National Technical Coordinating Committee (NTCC) chaired by the Minister for Health.

Whilst there’s no explicit evidence of the analysis leading to policy change, many decisions makers retrospectively noted the relevance of the analysis to policy formation and operational decisions for future application.
Using Big Data Sources post-COVID

• GSS anticipates a continued use of big data sources for the public good in Ghana. Data science features in the GSS’ 2020-24 Strategic Plan and a new Data Science and Research Directorate is being created.

• In recent months, the API to the Data Pipeline has been built so GSS can access anonymised CDRs directly through FlowKit software and generate insights in-house.

• Following the increased profile of the CDR work, data requests are being received from a range of Ghanaian and International institutions. This will lead to more user-driven outputs.

• GSS looking to begin publishing a quarterly infectious diseases release in collaboration with Ghana Health Service.