

Open Data Kit (ODK) Collect use in a UK-PHRST Lassa Fever Study

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Field Validation of a novel ELISA assay to identify Lassa virus specific antibody response in oral fluids: Case-control study of antibody responses from oral fluids and blood samples in Sierra Leone London School of Hygiene and Tropical Medicine (LSHTM), UK-Public Health Rapid Support Team (PHRST)

We used ODK Collect to support our work conducting a small scale study in Sierra Leone. A total of 175 participants were recruited, with data and samples collected from Lassa unexposed individuals in Freetown, and Lassa fever survivors in Kenema district.

The ODK Collect tool was relatively uncomplicated to independently code for design using Excel, though categorising responses and designing certain conditional clauses could sometimes be a bit tricky. Design of our questionnaire in ODK Collect was completed with useful guidance but limited direct support from the LSHTM ODK team. In addition, guideline ODK documents and essential tools were available via internet searches. Data security is a key issue, and the LSHTM ODK team provided data encryption and decryption keys, and directions on how to use them.

When the questionnaire was complete, we used the ODK Collect app on mobile phones to test our data collection process. It was possible to create updated versions of the questionnaire after testing, though this required a new version to be created and downloaded over an internet connection to the app. We used different versions of our questionnaire during our study, as we noticed small items that needed to be tweaked as work proceeded. While the app could be used effectively to collect and store data in the absence of an internet connection, encrypted data could only be downloaded later when internet was available; as such I understand data would be stored only on the mobile device until this point. When data was downloaded for analysis, as we had a relatively small study population, so it was not difficult to integrate data from different versions of the questionnaire.

Using ODK Collect for data collection was of real benefit to the study; the tool helped to avoid the need and cost (in time, effort and money!) of data entry. In addition, the tool helped us to create a database that could be easily reviewed at the end of each working day (provided internet was available) and allowed easy modifications for ongoing work.