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# **‘NAIJACARE’ DIGITAL PLATFORM IMPACT EVALUATION DATA COLLECTION**

*A Data Management Plan created using DMPonline*

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**Project abstract:**

The Nigerian National Health Strategies identify the shortage of health professionals working as drug vendors with the expertise to deliver community-based health advice and diagnostic services as one of the main health system challenges. Given the existence of a market for medicine that was not entirely filled by the formal health system, a new set of actors appeared to fill the gap – the patent and proprietary medicine vendor (PPMV). ‘NaijaCare’ is a digital platform that aims to support PPMVs to provide essential medicines to the population in Lagos, Nigeria. This digital health intervention was set up to deliver a proof of concept concerning the viability and relevance of a ‘for profit’, digital service for PPMVs. The ultimate aim for this digital service is to create a financially sustainable online community, which will enable PPMVs to provide better service delivery while growing their businesses and while providing better quality medicine and services to its clients. NaijaCare’s impact evaluation will provide sufficient evidence to determine the effectiveness of a digital tool in Nigeria’s PPMV setting. The goal of this project is to explore the effectiveness of digital health interventions to improve population health.

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## Data Collection

Quantitative data shall be collected from the participants of this survey. some of the data that will be collected will include geographic information, socio-demographic, business characteristics, ordering, stocking and pricing of fast-moving consumer goods, sales and revenue, 'NaijaCare' as well as psychology and entrepreneurship.

An existing data in excel xlsx format containing the biodata and contact of active PPMVs in the selected area in Lagos State shall be used as a sampling frame. This will enable the research team to randomly select PPMVs that are at least 500 metres apart. Data shall be warehoused in a 'OneDrive' folder accessible to the data manager and the project coordinator.

The volume of data is expected to be less than 1GB. the data shall be available for download in Stata .dta, excel .csv and xlsx formats. The data shall contain demographic information, business characteristics and practices of the PPMV. Similarly, the clients' data shall have the biodata of the client, details of drugs/services procured and reasons for the choice of the outlet where drugs/services were sought.

Data shall be collected electronically using android tablet devices. The questionnaires shall be programmed using the Survey Solutions platform.

A face-to-face interview methodology shall be employed. A listing of PPMVs outlets, pharmaceutical stores, health facilities within 500 metres radius of the selected PPMV shall be carried using Location Radius mobile application and the programmed listing questionnaire on android devices. Similarly, interview of the PPMVs and their clients shall be carried after the completion of the listing exercise. a maximum of 10 clients who visited the PPMV on the day of the interview to seek drugs and other healthcare services shall be interviewed.

The Android devices that will be deployed for data collection shall be protected with passwords to prevent unauthorized access to the data on the devices. Data shall be aggregated and stored on the encrypted Survey Solutions server. Form versioning and naming convention shall be made serially in the format (v1, v2, v3). Data consistency and validation checks shall be factored into the questionnaire programming to provide real-time feedback to the enumerator on data quality. Completed questionnaires shall be reviewed by the supervisors and pre-approved for final review and approval by the Bank's team.

## Documentation and Metadata

A pdf printable version of the research questionnaires, data codebook and data cleaning do-files shall be shared with the data. All data cleaning and wrangling activities shall be documented.

Useful metadata such as self-explanatory files names, dates, document creators, file passwords shall be created in a 'readme' file that shall be made available for all intending secondary users.

## Ethics and Legal Compliance

The National Health Research Ethics Committees (NHREC) has approved the conduct of the survey. Letters of introduction to relevant associations and Lagos State Ministry of Health has been provided by the Bank's team.

Data containing personal identifiable information of the respondents shall be shared with the data manager only via the dedicated OneDrive folder. This shall be used for survey management purpose only and would not be shared with any member of the team.

Completed forms shall be synchronized to encrypted survey solutions server dedicated for this project. The final dataset shall be de-identified and anonymised in compliance with the global best practices.

The training materials and dataset are the sole properties of the World Bank. Only the World Bank team shall grant access to third-party users and determine when it is appropriate to do so.

## Storage and Backup

A 1TB storage capacity server has been approved by the Survey Solution technical team for this project. This server is encrypted and requires a password to access it. Data shall be synchronized daily from the android tablets of the enumerators to the dedicated server to prevent data loss.

enumerators shall be responsible for synchronization from tablets to the server while the supervisors ensure data uploads by their team by 7 PM daily. In an unlikely event of data loss on the server, the Bank's team shall seek for the support of the Survey Solutions technical team.

Enumerators shall be responsible for the protection of data on android tablet devices. Devices shall be protected with a password. Respondents' identifying information shall be preloaded on the interview assignments sent to the enumerators on the survey solutions. This shall be shared via the dedicated OneDrive folder for this project.

The World Bank research field coordinator as well as data managers from the Bank and survey firm shall have access to the survey solutions server.

## **Selection and Preservation**

The unique ID, name of outlet, GPS coordinates and NaijaCare participation status of the PPMVs shall be retained for follow-up data collection and impact evaluation. These shall be destroyed 7 months after the endline impact evaluation activities.

Datasets shall be archived by the World Bank. This shall follow the Bank's procedure for data archiving, accessibility and reuse.

## **Data Sharing**

The raw dataset shall be available for download to the research team member on the survey solutions server. Cleaned dataset shall be shared with the Bank two weeks after the completion of field data collection via the secured OneDrive folder dedicated for this project.

The dataset, codebook and data documentation shall be encrypted and password protected before uploading to the OneDrive folder. The Bank's team shall decide the duration of exclusive access to the dataset by the principal investigator prior to making it available for secondary users.

## **Responsibilities and Resources**

Draft data management plan shall be developed by the survey firm, while the Bank's research team shall make inputs, finalize and approve.

Questionnaire programming shall be jointly managed by the data managers from the Bank and the survey firm.

The survey firm data manager shall be responsible for survey management, review and approval of completed forms, follow-up on observed discrepancies and documentation of such. s/he shall be responsible for enumerators' tablets configuration. s/he shall also share the raw and cleaned dataset via the OneDriver folder. The Bank's data manager shall provide oversight function in all data management activities.

The data management team shall require four computers with 8GB RAM, 1TB storage, intel core i7 processors, super-fast internet connectivity and updated javascript. These computers shall have the complete Microsoft office packages installed.

The data management team shall be comprised of a team of four with a good working knowledge of programming and survey management.

A request for a dedicated server for the project shall be made by the Bank's project coordinator to the survey solutions technical. The dedicated server shall ensure unauthorized access to the programmed questionnaires and dataset.

The budget for personnel professional fees, equipment, software and all data management activities is estimated to be \$5,000.