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**COLLEGE OF HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH
Office of the Dean**

2024-25 UGANDA POPULATION-BASED HIV IMPACT ASSESSMENT SURVEY (UPHIA)

Background

The Ministry of Health (MoH), Makerere University School of Public Health (MakSPH) and the U.S. Centers for Disease Control and Prevention (U.S CDC) will be implementing the 2024 Uganda Population-based HIV Impact Assessment (UPHIA 2024) survey. The survey will assess the prevalence of key Human Immunodeficiency Virus (HIV)-related health indicators such as incidence, prevalence, viral load suppression, and risk behaviors in a nationally representative sample, and describe uptake of key HIV prevention, care, and treatment services. The survey will also assess the prevalence of raised blood pressure, raised blood glucose and obesity, and describe facilitators of and barriers to viral load suppression among people living with HIV on ART in two selected regions.

To support this activity, MakSPH seeks to hire highly qualified personnel for the following temporary positions for a period of 12 months, renewable:

Job Title: Senior Data Manager/Statistician
Reports To: Lead Statistician
Location: Kampala, Uganda

Job Summary

The Senior Data Manager/Statistician will play a pivotal role in the Uganda Population-based HIV Impact Assessment (UPHIA 2024-2025) survey, leading and directing all data management activities. This role involves managing the production of statistical studies and handling data using advanced statistical tools like SAS, STATA, R, and Python. The Senior Data Manager/Statistician will also supervise data analysts and data managers and manage the presentation of findings to stakeholders.

Key Responsibilities:

1. Statistical Study Design and Analysis

- Design, analyze, and implement targeted statistical studies for survey/public health research.
- Conduct statistical analyses of complex survey data.
- Use SAS, STATA, R, and Python for data manipulation, analysis, and visualization.

- Generate weighted point estimates and inference estimations for survey outcomes, applying Jackknife or Taylor series linearization techniques as needed.

2. Data Management

- Develop the Survey Data Management Plan
- Handle large and complex data sets, ensuring data quality, integrity, and confidentiality.
- Develop and implement robust data management processes to ensure data accuracy and consistency.
- Manage large databases and maintain data systems using tools such as SAS, R, Python, and SQL.
- Oversee data cleaning and verification to ensure data quality and reliability.
- Prepare comprehensive data reports using appropriate data visualization tools for effective communication with stakeholders.
- Employ advanced SQL scripting for complex data extraction and management.
- Support the design and review of survey instruments like questionnaires, tracking forms, etc.
- Analyze survey data using SAS, STATA or R, accounting for design features like stratification, clustering, and weighting.

3. Reporting and Presentations

- Write detailed analysis plans, finalize tabulation plans and descriptions of analyses and findings for research protocols or reports.
- Develop and present routine progress reports to stakeholders in weekly and monthly meetings using various data visualization tools.
- Input real-time data to dashboards to provide stakeholders with live updates on the survey's progress.
- Prepare comprehensive data reports, including tables and graphs to present clinical or survey results.

4. Team Management

- Lead, mentor, and monitor the performance of the data analysts and data managers.
- Set performance standards and conduct performance appraisals.

Qualifications:

- Master's degree or higher in Statistics, Biostatistics, Data Science, or a related field.
- At least 5 years of experience in a data management role, preferably in a research or health care setting.
- Proficiency in statistical software such as SAS, STATA, R, and Python.
- Extensive experience with SQL scripting for complex data extraction and manipulation.
- Knowledge of advanced statistical methods, including analysis of data from $J_i g_j f_r n o l p_s$ $\wedge_n a h n$ longitudinal analysis, mixed-effect modelling, logistic regression analyses, and model-building techniques.
- Proven experience in survey instrument design and data collection in field studies.
- Strong leadership skills with experience in training and mentoring team members.
- Knowledge of variance estimation techniques such as Jackknife and Taylor series linearization.

Additional Requirements:

- Excellent written and verbal communication skills.
- Ability to work in a fast-paced environment and manage multiple tasks simultaneously.
- Deep understanding of public health surveys and response rates.
- Demonstrated ability to explain complex technical concepts to non-technical stakeholders.
- Familiarity with the survey's study data system, including real-time data monitoring, household monitoring, field team management, laboratory sample tracking, quality and proficiency test tool, real-time dashboard, and linkage-to-care applications.

Job Title: Data Systems and Health Informatics Officer

Reports To: Lead Statistician

Location: Kampala, Uganda

Job Summary

The Data Systems and Health Informatics officer will play a pivotal role in the successful implementation of the Uganda Population-based HIV Impact Assessment (UPHIA 2024-2025). The incumbent will oversee all aspects of data management, systems development, and IT infrastructure support. The ideal candidate will possess hands-on experience and skills in the areas they manage, with an extensive understanding of specific technologies and systems such as SQL scripting, continuous integration/continuous delivery (CI/CD) pipelines, and the UPHIA study data system, which includes applications for real-time data monitoring, household monitoring, field team management, laboratory sample tracking, quality and proficiency testing, real-time dashboarding, and linkage-to-care tracking.

Key Responsibilities:**Data Systems**

- Manage the data systems team responsible for developing and maintaining the Computer-Assisted Personal Interviewing (CAPI) software using CSPro and other components of the study data system.
- Ensure the proper design, implementation, and maintenance of databases and data management systems, including systems for real-time data monitoring, household monitoring, field team management, and more.
- Monitor the data systems to ensure they meet the needs of the UPHIA study, implementing updates and improvements as necessary.

IT Infrastructure Support

- Lead the configuration of servers and always ensure their functionality.
- Oversee IT support functions, ensuring the optimal operation and security of servers, both on-premises and cloud, mobile devices, and other IT tools.
- Establish and maintain processes for effective IT crisis management, including development and implementation of Disaster Recovery and Business Continuity Plans.

- Develop and implement strategies for managing the hundreds of mobile devices used by the field teams, utilizing Mobile Device Management (MDM) solutions.
- Conduct regular Information Security training sessions for the IT and Infrastructure Support team to ensure adherence to best security practices and protocols.

Data Management

- Implement and oversee rigorous data quality assurance and quality control processes.
- Develop and manage data protocols to ensure the privacy and security of research participants.
- Oversee mapping and listing processes, ensuring effective geographic data management and the production of key control data files, such as Enumeration Area (EA) and household selections and locations.

Additional Responsibilities:

- Provide consistent updates to stakeholders regarding all aspects of data and IT operations.
- Manage cross-functional teams and foster a collaborative and innovative work environment.
- Conduct training sessions for data management and data systems personnel, providing support and knowledge enhancement opportunities.

Qualifications:

- Bachelor, Master's degree or PhD in Computer Science, Information Systems, Data Science or a related field.
- Minimum of 5 years of experience in data engineering, data management, or a related field, preferably in public health or social science research.
- Proven experience in managing large and complex databases, with expertise in using data management software such as SAS, Stata, R, Python, SQL, and CPro.

Requirements:

- Understand key survey metrics, such as response rates, and utilize this information to drive study procedures and goals.
- Extensive experience with mapping and listing procedures, including geographic data management and the production of key control data files.
- Experience with a suite of tools and applications for managing and monitoring field data collection activities, including systems for real-time data monitoring, household monitoring, field team management, laboratory sample tracking, quality and proficiency testing, real-time dashboarding, and linkage-to-care tracking.
- Experience in managing IT support services and a deep understanding of IT infrastructure, including on-premises and cloud computing, servers, network systems, and Mobile Device Management (MDM) solutions.
- Demonstrated experience in crisis management and communication.
- Proficiency in data analysis and interpretation, with the ability to transform data into actionable insights.

- Strong leadership and team management skills, with the ability to supervise and guide team members effectively.
- Excellent communication skills, with the ability to convey complex technical information to a non-technical audience.
- Proficiency in English, both written and spoken. Knowledge of local languages would be an asset.
- Willingness and ability to travel domestically and internationally as needed.
- Ability to work in a fast-paced and challenging environment.
- Commitment to the highest ethical standards.
- Knowledge of and experience with HIV/AIDS-related studies.

Job Title: Survey Analyst

Reports To: Lead Statistician

Location: Kampala, Uganda

Job Summary

The Survey Analyst for Uganda's 2024 Population-based HIV Impact Assessment (UPHIA) will collect and review data and create reports based on the findings of the survey. In addition to collecting and analyzing survey data, they will be expected to develop techniques or statistical models that interpret the data in a clear and accurate manner.

Responsibilities

Key functions:

- Work closely with representatives from the Ministry of Health (MoH), Uganda Bureau of Statistics (UBOS), CDC and other key stakeholders and members of the relevant Technical Working Group (TWG) to review the project's statistical aspects and address any challenges or issues that arise during the implementation of the project
- Through survey methodology, demography and geostatistical modelling techniques, yield estimates of national and sub-national population estimates in line with the protocol objectives
- Implement sampling and weighting strategies for household and other data collection strategies including the use of geostatistical and geospatial modelling techniques
- Technically support with identifying capacity gaps and training the data management teams on relevant aspects.
- Provide technical assistance and training in sampling frame construction, sample design, sample size calculations, stratification, sample selection and weighting for the UPHIA team
- Prepare descriptions of sampling procedures for UPHIA reports as well as provide technical assistance or statistical advice to the UPHIA project team
- Working closely with the Senior Data Manager/Statistician and the Data Systems and Health Informatics Officer, support the mapping and listing processes, ensuring effective geographic data management and the production of key control data files, such as Enumeration Area (EA) and household selections and locations
- Communicate findings in written documentation and presentations and assist in country report writing and writing peer-reviewed papers
- Perform other duties as assigned

Qualifications

- Master's or PhD in Mathematics, Statistics or Statistical Demography
- Proven experience in conducting large and complex population-based surveys and data analysis using either Python, R, STATA or SPSS.
- Experience supporting surveys for sampling, collecting, computing, and analyzing statistical data and applying statistical techniques such as measurement of central tendency, dispersion, skewness, sampling error, simple and multiple correlation, analysis of variance, and tests of significance including demonstrated experience in survey sample design in local and international settings

Requirements

- Demonstrated skills in designing samples for household and/or facility surveys, calculating weights for survey data, and calculating sampling errors
- Experience in developing sampling capacity of a core team and familiarity with a wide range of advanced statistical techniques
- Demonstrated experience in demography, statistical analysis and development, and collaborating with several stakeholders.
- Experience in analysis of laboratory data is an added advantage.
- Experience in publications using statistical techniques in survey research as well as knowledge of and experience with HIV/AIDS related studies

How to apply

Interested persons should submit their **signed** application letter, updated curriculum vitae and academic documents stating at least two referees as **ONE PDF DOCUMENT** to recruitment@musph.ac.ug not later than 5:00PM on Friday 23rd August, 2024. The application should be addressed to the Dean, School of Public Health, Makerere University and the position applied for should be the email reference. Please provide a reliable 24-hour phone contact.

Only short-listed candidates will be contacted for interviews.