

Basil Owiti Okola

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Github: <https://github.com/Bokola>

Website: <https://bokola.github.io/>

Shiny project: <https://bokola.shinyapps.io/shinyApp-data-quality/>

R package: <https://github.com/Bokola/glmsummary>

EMPLOYMENT HISTORY

Dec 2022 – April 2023	Research Assistant, Karolinska Institute	Sweden
	<ul style="list-style-type: none">• Data management for the cognitive burden of covid-19 and Amyotrophic Lateral Sclerosis (ALS) projects (70%)• Statistical modelling of risk of compromised cognitive function post covid-19 pandemic (30%)• Drafting statistical analysis plan for cognitive function post covid-19 pandemic project• Assessing data quality standards (completeness, timeliness), raising queries on gaps, and advising on corrective measures• Routine descriptive reports on key patient characteristics, captured biomarkers of interest to unit scientists• Statistical analysis of peer-reviewed journal publication• Presenting analysis results in working group meetings	
May 2022 – Oct 2022	Data Manager, Kemri	Kisumu
	<ul style="list-style-type: none">• Led the implementation of a secure, cost-effective technology to host a centralized SQL server (MySQL + RedCap)• Designed, programmed, and tested data collection systems based on electronic medical records (CRFs)• Prepared randomization sampling frames for participant enrolment into trial arms• Automated data consistency checks and led quarterly data quality assessment reviews• Developed data validation rules and data cleaning processes using executable R scripts• Implemented study data confidentiality and security through encryption protocols• Oversaw cleaning, backup, logging, reporting, and recovery procedures• Performed training for appropriate users of the clinical data management system, as required• Reviewed and updated CRFs to reflect updates on SOPs• Developed guiding documents such as Standard Operating Procedures (SOPs), data management plans (DMPs), data analysis plans (DAPs), job aids, data dictionaries, and codebooks	

- Authored reports and presentations to the Principal Investigators (PIs) and participating health facility managers

Dec 2018 – Aug 2020 Data Manager, KEMRI-Wellcome Trust Research Programme Nairobi

- Developed study database SQL server (MySQL + PHP + RedCap), putting in place requisite data access and consistency constraints
- Database administrator functions: Designed, tested, and implemented configuration changes and liaised with study management for feedback
- Developed a data pipeline to automatize data retrieval and seamless synchronization of local and central servers to prevent and mitigate data loss
- Led setting up new data collection centers, conducting field testing of database and web-based data collection platforms.
- Developed data management and analysis SOP, aligned to study protocol
- Updated electronic/digital data collection tools to align with changing study needs and SOPs
- Developed data management protocol, ensuring that the unit had a strong data structure adhering to set study protocols
- Responded to and managed user access permissions from study staff; analyzed database logs, tracking access and change to data and troubleshooting any reported bugs or errors
- Designed weekly, monthly, and quarterly reporting templates and study progress dashboards
- Supported the design and strengthening of operational reports and statistics, including the provision of training and user guidance
- Periodically updated data management software, and drafted training manuals to onboard new staff

Feb 2018 – Oct 2018 Data Analyst, Evidence Action Nairobi

- In-depth analysis of survey and program data to better understand and inform program activities/outcomes
- Conducted data quality checks and reconciled inconsistencies with the field team
- Designed KPI dashboards in shiny
- Authored timely monthly and quarterly KPI reports to the management

Jan 2017 – Sep 2017 Intern, Kemri-Wellcome Trust Research Programme Nairobi
(Population Health Unit)

- Systematic review of available literature on civil registration and vital statistics in Africa
- Estimation of death registration coverage in all counties using age-specific data (2014 and 2015) retrieved from Kenya's Civil Registration Service

- Trend analysis of age-specific malaria admissions and deaths from four districts (Kisii, Homa Bay, Busia and Kwale)
- Participated in statistical trainings and journal clubs

EDUCATION

Sep 2020 – Ongoing	Masters of Statistics and Data Science (Biostatistics)	Hasselt University
Jan 2017 – Sep 2017	PGD – Research Methods	Pwani University
Jan 2012 – Dec 2015	BSc. Applied Statistics (with IT)	Maseno University
Jan 2007 – Nov 2010	Kenya Certificate of Secondary Education	Rapogi Boys Sec.

SKILLS

Statistical, Data Management, and Programming:

- Study design, Sample size determination, and Power analysis
- Design and analysis of ANOVA agricultural experiments: Factorial design, completely randomized (CRD), the randomized complete block(RCBD)
- Proven knowledge and experience in data collection and analysis
- Data management
- Web-based data collection tools
- Spatial statistics
- Database design and development
- Relational database management
- Design of electronic case report forms using Research Electronic Data Capture (REDCap), Open Data Kit – ODK and CommCare, Kobo collect
- Statistical Data analysis
- Systematic Literature Review
- Scientific report and manuscript writing

Statistical, programming and GIS languages:

- R
 - EDA tools: tidyverse
 - Dataviz tools: ggplot2
 - Programmatic reporting: RMarkdown
 - Web applications: shiny
 - Spatial: sf, mapview, terra, leaflet
 - ANOVA experimental design: dae
- SAS: macros, proc sql, hash object, arrays
- Python: pandas, numpy, matplotlib, dictionaries, list comprehension, tuples
- SQL: MS server set up, querying, joins
- UNIX: cron jobs, high-performance/cluster computing (SBATCH)
- Q-GIS: GIS mapping

Person Skills

- Analytical, diagnostic skills – effective in undertaking gap analysis
- Effective participant in a team environment with diplomacy and tact
- Ability to engage in a multi-cultural setting with cross-cultural working experience
- Excellent interpersonal skills, including listening, networking, and relationship building
- Excellent communication skills
- Good planning and organizing skills
- Attention to detail and thoroughness, with ability to maintain confidentiality

Licenses and Certifications

1. SAS Certified Professional: Advanced Programming Using SAS 9.4
https://www.credly.com/badges/6fd65535-abb7-42f2-80f9-11d908efb867/public_url
 2. SAS Certified Specialist: Base Programming Using SAS 9.4
https://www.credly.com/badges/0924a185-5915-4e84-8cf8-005792e23ba6/public_url
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PUBLICATIONS

1. Cervical cancer diagnosis and treatment delays in the developing world: Evidence from a hospital-based study in Zambia
<https://doi.org/10.1016/j.gore.2021.100784>
 2. Dataset evaluating the treatment timeliness of cervical cancer in Zambia
<https://doi.org/10.1016/j.dib.2021.107201>
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Awards

VLIR-UOS scholarship to participate in the International Master Programme (ICP) Master of Science in Statistics (Hasselt University)

Referees

Dr. Peter Macharia
Post-doc fellow
KEMRI-Wellcome Trust Research Programme
Email: PMacharia@kemri-wellcome.org

Dr. Christina Seitz
Post-doc
Unit of Integrative Epidemiology (IMM)
Karolinska Institutet
Email: christina.seitz@ki.se

Dr. Chester Kalinda
Research Fellow,
University of Global Health Equity
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