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## **TITLE: Strengthening Data Analysis Capacities for Improved Health Outcomes: The AFROHUN Kenya R Virtual Community of Practice.**

**Name:** Samuel Wanjohi

**Affiliation:** Country Manager, AFROHUN Kenya

**Country:** Kenya

**Email ID:** [swanjohi@afrohun.org](mailto:swanjohi@afrohun.org)

### **ABSTRACT**

#### **Background:**

In Kenya, the risk of high disease outbreak frequency, is compounded and exacerbated by other challenges. These include data sharing, utilization of data to inform on policy, and limited data analysis and management expertise among health professionals to address health disparities. Addressing these and other wicked problems requires creative and innovative solutions, including the utilization of appropriate technologies; development of responsive programs for healthcare workforce training and capacity building; and promoting data analysis and use, for evidence informed decision making, improved health outcomes and reducing health inequities.

#### **Methods:**

AFROHUN Kenya, with support from the USAID funded One Health Workforce Next Generation (OHW-NG) initiative, established a virtual community of practice (vCoP) on Analysis of Health Surveys using R Statistical Programming software, as a response to a felt need among various multidisciplinary professionals, alumni, and students. This was a collaboration with an AFROHUN Kenya alumnus.

The Extension for Community Healthcare Outcomes (ECHO) learning model, which emphasises on 'all teach, and all learn, low dose-high frequency' interactions, as well as the willingness to share expertise and knowledge, was used as the framework on which the training program was modelled on. A total of 16 training sessions were developed and held over 10 weeks. To enhance discussions, participants were divided into three groups, each containing individuals with varying levels of R experience.

#### **Results:**

Over 100 participants applied to take part in the online program, with 30 selected to the first cohort. A post training survey administered to 21 participants who took part in the training, showed that majority of the participants (n=17) were male (59%), 65% were postgraduate students, 18% were from the NGO sector and 12% were professionals from the government sector. Human health (53%) had the highest representation, followed by Animal Health and Social Sciences and Humanities at 12% each. The quality and usefulness of the training format and individual activities was rated as excellent (94%), with majority (77%) indicating that their expectations were met, and 59% stating the training improved their understanding of data analysis for preparedness and response to public health emergencies of concern. Participants also indicated that the training would be beneficial in their work and/or studies, as shown qualitatively in the following excerpts:

*"The training will help me in analysing raw data from health records".*

*"I work with health data hence the training was helpful in improving my proficiency in data analysis and interpreting model results".*

#### **Scope**

On conclusion of the program, a multidisciplinary data analysis community had been established. The training highlighted the utility of creativity, innovation, technology, and collaborations, in promoting knowledge exchange and meeting capacity building needs, essential for reducing health disparities and improving health outcomes.



## BIOGRAPHY

Sam has over 20 years experience in the health sector and is passionate about advancing the implementation of the One Health approach and the development of the Next Generation One Health Workforce. He has, and continues to, participate in capacity building efforts for multidisciplinary professionals on various One Health skills sets at various levels within and without the country. He has contributed to the development of various strategic, and technical documents as well as training programs and modules on One Health, including the first One Health ECHO in Kenya. He is the Africa One Health University Network (AFROHUN) Kenya Country Manager, is a member of the AFROHUN Academies Communities of Practice Technical Working Group and has participated in sharing about One Health in various local and international events and conferences. He was recently awarded first prize for an oral abstract presentation in the Policy, Environment and Biosecurity track during the 7th World One Health Congress held from 7th – 11th November 2022 in Singapore.

**Presenter Name:** Samuel Wanjohi<sup>1</sup>  
**Mode of Presentation:** Oral.  
**Contact number:** +254 721 852 268



**Co-authors** – Robert Ofwete<sup>2,4</sup>, John Wainaina<sup>3</sup>, Marianne Odhiambo<sup>4</sup>, Diana Muta<sup>1</sup>

- 1 – Africa One Health University Network (AFROHUN) Kenya
- 2 – Institute of Primate Research
- 3 – Kenya Medical Research Institute Wellcome Trust Research Programme
- 4 - University of Nairobi, Faculty of Health Sciences