# Research Training Needs in Sub Saharan Africa to Help Ensure Adequate Preparation for Response to Disease Outbreaks

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THE GLOBAL HEALTH NETWORK
Enabling research by sharing knowledge

ALERRT
African coaLition for Epidemic Research, Response and Training

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# Background

- The African coaLition for Epidemic Research, Response, and Training (ALERRT) conducted this study to expand understanding on the state of health research capacity in ALERRT countries in SSA in order to identify capacity needs for the conduct of high-quality research in response to epidemics.

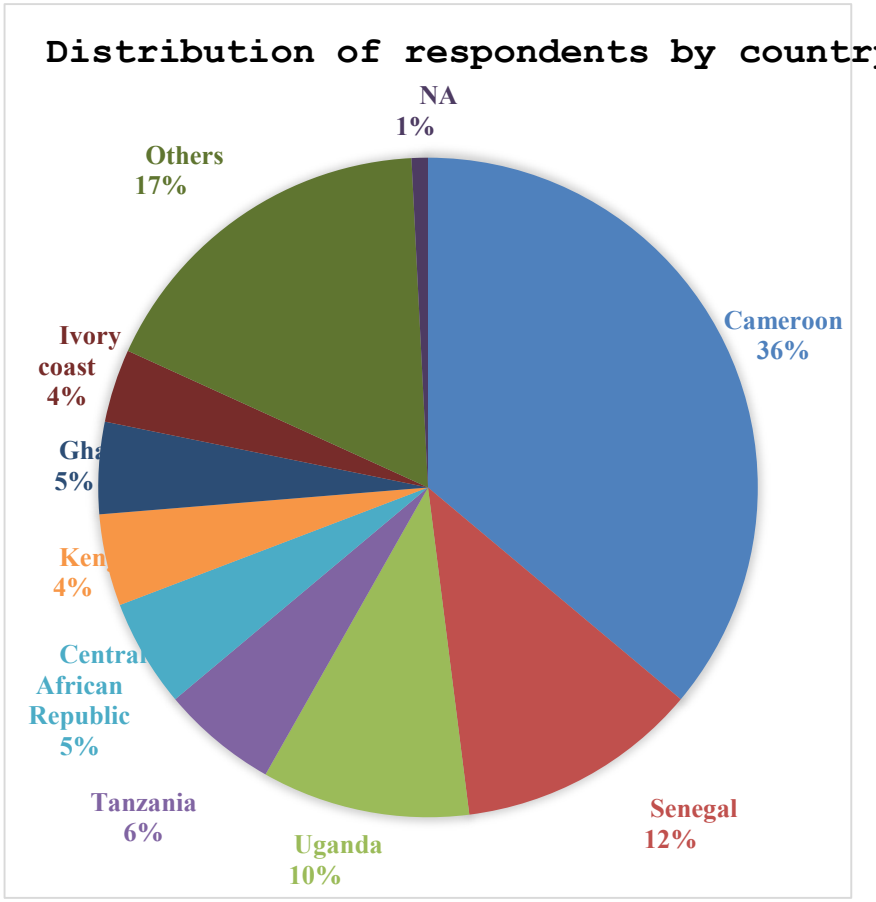
The specific objectives of this analysis were:

1. to identify the attributes and competencies of conduct high quality health research in terms of the ability to conceive, engage the community, conduct, analyze and publish research work;
2. to identify research capacity development opportunities available in ALERRT sites;
3. to determine the key knowledge and skills gaps in health research capacity in undertaking health research;

# Methods

- Participants over 18 years of age who work in clinical/health or laboratory research in the 21 institution partners in ALERRT countries.
- Data was collected through online and paper questionnaires in English and in French. Descriptive analyses were performed using Excel.
- This analysis was based on the TDR Global Competency Framework for Clinical Research which consists of a Competency Wheel and multiple supporting tools.
- Questions were divided into 4 thematic categories
  - Scientific Thinking
  - Ethics
  - Quality & Risk management
  - Study & Site(s) management
  - Research Operations

# Results




| Respondents' position | n | % |
|---|---|---|
| Clinician | 43 | 17.6 |
| Student | 41 | 16.7 |
| Research scientist | 37 | 15.1 |
| Project manager | 27 | 11.0 |
| Laboratory staff | 22 | 9.0 |
| Senior lecturer and lecturer | 11 | 4.5 |
| Quality assurance | 10 | 4.1 |
| Professor/associate professor | 9 | 3.7 |
| Data manager | 7 | 2.9 |
| Others | 38 | 15.5 |
| NA | 2 | 0.8 |

# Results

| Experience in scientific concepts in clinical research | % respondents | | | | |
|---|---|---|---|---|---|
| | No experience | Minimal experience | Capable of performing task(s | Experienced – regularly perform the task(s) | Highly experienced – able to train and guide others |
| Design an appropriate research study | 15.8 | 25.1 | 32.8 | 15.4 | 21 |
| Ability to write an effective grant application | 26.7 | 29.1 | 23.5 | 14.6 | 4.9 |
| Ability to write a study protocol and implement it | 17 | 23.1 | 26.3 | 18.6 | 11.3 |
| Ability to analyse and interpret research results with appropriate statistical methods | 15.8 | 27.9 | 31.2 | 15 | 9.3 |

| Experience with general operation and management of clinical research | % respondents | | | | |
|---|---|---|---|---|---|
| | No experience | Minimal experience | Capable of performing task | Experienced-regularly perform task | Highly experienced-able to train nd guide others |
| Process for monitoring a study | 15.4 | 23.1 | 29.1 | 17 | 14.6 |
| Data quality assurance systems and Standard Operating Procedures (SOPs) | 14.6 | 19 | 32 | 21.5 | 12.1 |
| Professional guidelines and codes of ethics which apply to the conduct of clinical resea | 14.2 | 21.9 | 22.7 | 24.3 | 16.2 |

# Results

% respondents

| Experience with community and public engagement | No experience | Minimal experience | Capable of performing task | Experienced-regularly perform task | Highly experienced-able to train nd guide others |
|---|---|---|---|---|---|
| Planning community or public engagement activities around research design that involv | 15 | 31.6 | 28.3 | 12.6 | 9.7 |
| Accessing tools and resources to guide the planning of community or public engageme | 19 | 31.6 | 25.1 | 11.7 | 10.9 |
| Reflecting with others in my institution on the guiding principles of community engage | 15 | 28.1 | 31.6 | 13.4 | 10.1 |
| Adapting research design or other institutional practice based on lessons learned from | 19.4 | 27.5 | 27.1 | 13.8 | 9.7 |

% respondents

| Experience with data collection and management | No experience | Minimal experience | Capable of performing task | Experienced-regularly perform task | Highly experienced-able to train nd guide others |
|---|---|---|---|---|---|
| Design a suitable research questionnaire /Case Report Form (CRF) | 8.5 | 25.1 | 32.8 | 20.6 | 12.1 |
| Create and maintain data in a clinical data management system / database e.g. MS Access or other database software | 22.3 | 29.1 | 24.3 | 12.6 | 10.5 |
| Use of database software to find records, sort, review, edit, print, and other data related functions | 17 | 29.1 | 26.1 | 16.2 | 10.1 |
| Set up a document archive system for adequate storage and easy retrieval of research records and documents | 19 | 27.9 | 27.5 | 15.4 | 15.4 |

% respondents

| Experience with disseminating research findings | No experience | Minimal experience | Capable of performing task | Experienced-regularly perform task | Highly experienced-able to train nd guide others |
|---|---|---|---|---|---|
| Reporting the results of research, and of the various dissemination formats available for different audiences | 17.8 | 19.8 | 25.1 | 25.1 | 11.3 |
| Clearly communicate results in speaking to an audience (live or otherwise) | 13.8 | 17.4 | 28.7 | 23.5 | 15.4 |
| Design and prepare a suitable poster for a conference | 19.8 | 18.6 | 22.7 | 22.7 | 16.2 |
| Writing a scientific article for publication | 21.9 | 25.1 | 19.4 | 22.3 | 10.9 |

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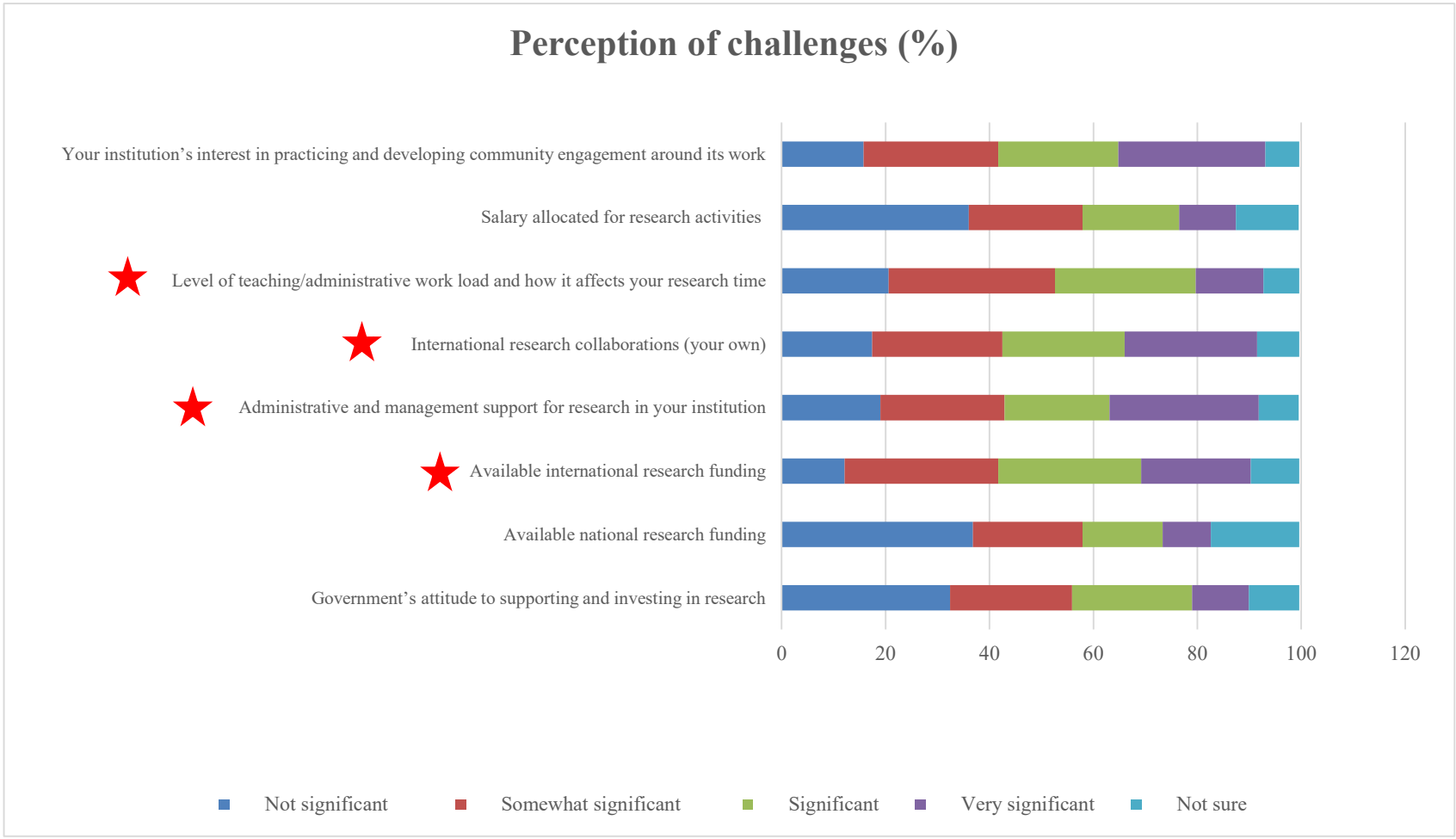
# Challenges

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# Conclusions

- The workforce represented in this study is **young** with clinical research activities only recently became **prevalent in the past decade or two** and with less than 5 five years of research experience.

- Since most research conducted in Africa occurs in Universities (in this con text, academic institutions are primarily public), it also makes sense that practically half of the **respondents are working in public institutions.**

- **Most experience is found are in the later parts of process of the scientific research reinforcing the notion that research concepts do not usually originate from Africans and that researchers in SSA are considered as implementers and not innovators in the clinical research arena.**

- These results thus highlight the importance of **developing skills in creative thinking for research ideas pertinent to the health problems in SSA communities.**

## Acknowledgements

This work is part of a larger program that is being conducted by The Global Health Network (TGHN) at the University of Oxford and the University of Yaoundé (UNIYA) across the ALERRT consortia.

The aim is to develop a network of research sites and build strong partnerships between all the research sites running Re-emerging and Epidemic-Prone Infectious Diseases (REPID) studies in sub-Saharan Africa (SSA) so that they can work together and develop a sustainable platform for research that l effectiv ıture ou

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