SUPPLEMENTS

Program of the Research Methodology training

Date: 1st December 2022

Time	Theme	Objectives
08:00 – 10:0 0 am	**Reception and registration of participants** Facilitators: Merveille Foaleng / Mbunka Muhamed / Victorine Chona **Rapporteurs :** Gabriel Mabou / Andre Pascal Goura	Register participants
8:30-09:30	**Opening ceremony: Prof Anne Bissek (Head, Division of Health Operations Research (DROS), Ministry of Health**	
09:30–10:30 am	**Welcome, introductions, objectives & pre-test** • **Introduction of Leaners and Faculty: Dr Mboh** (CBCHS**) / Dr Ebasone** (CRENC-IeDEA**)** • **Course objectives: Dr Tchounga** (EGPAF), • **Pre-test: Dr Mboh** (CBCHS**) / Dr Ebasone** (CRENC-IeDEA)	To assess learner's problems and introduce learners to faculty members
10:30–13:00 am	**Session I: Research question and designs** **Chairs: Prof F. Thienemann** (UCT, SA) **& Prof Dzudie** (CRENC, CMR)	Will differentiate between a research topic, a goal, and a research question and understand the characteristics of a good research question
10:30–11:00 am	Taking participants' research questions : Dr Ebasone & Dr Mboh	
11:00–11:45 am	How to develop a research question: **Prof F. Thienemann** (UCT, SA)	To understand research designs and their application in HIV research
11:45–12:30 am	Overview of research designs: **Prof Dzudie** (CRENC, CMR)	
12:30–13:00 am	Examples of questions and study designs **Dr Tchendjou** (EGPAF)	
13:00–14:00 pm	**Networking & Lunch break**	
14:00 - 16:00 pm	**Session II: Research Design and Strategy in HIV/AIDS** **Chairs: Prof Bissek** (DROS, CMR**) & Dr Appolinaire Tiam** (EGPAF, USA)	
14:00 - 14:45 pm	**Introduction to clinical trials:** **Prof Thienemann** (UCT, SA)	To understand the research design and methods in clinical trials
14:45 - 15:30 pm	**Stepwise design:** **Dr Appolinaire Tiam** (EGPAF, USA)	
15:30 - 16:15 pm	**What is a research feasibility study? How to conduct it? What are the implications?** **Dr Rogers Ajeh,** CNLS & CRENC-IeDEA	To be able to understand the importance and conduct research feasibility study
16:15 – 16:30 am	**Coffee break & Networking**	
16:30 - 18:30 pm	**Session III: Introduction to statistics and scientific writing** **Chairs: Dr Tchendjou** (EGPAF, CMR**), Dr Rogers Ajeh** (CNLS)	
16:30-17:10 pm	**Descriptive statistics** **Prof Andre Pascal Kengne**, UCT, SA	To understand the basis of data management, statistical analysis and scientific writing
17:10-18:30 pm	**Scientific style and paragraph building following the IMRAD structure:** **Dr Appolinaire Tiam** (EGPAF, USA)	
18:30 - 18:40 pm	**Post-test :** **Dr Mboh** (CBCHS) **/ Dr Ebasone** (CRENC-IeDEA)	
18:30 - 18:40 pm	**Closing remarks of day one** **Prof Anne Bissek & Prof Dzudie**	
18:30	**Welcome cocktail & networking**	

Questionnaire Research methodology training

Part 1: Knowledge assessment

I. Research questions, goals, and objectives

1. What does PICO stand for?
   a) Patient, Intervention, Comparison, Outcome
   b) Pertinent, Informative, Concise, Objective
   c) Precise, Integral, Captive, Operational
   d) Population, Inclusion, Coherence, Operational

2. What is open science?
   a) Open science is about the right to discuss science freely.
   b) Share data, publications, methods, tools with everyone to access, use, and share, without licences, copyright, or patents.
   c) Make research data, publications, and resources available to people of low- and middle-income countries.
   d) None of the above

3. Research objectives are crafted using the "SMART" criteria. The "M" in SMART stands for?
   a) Momentum
   b) Measurable
   c) Memorable
   d) Minimum

II. Research study design

a. Overview of study designs

4. What is the best design to study the incidence of a disease?
   a) Cross-sectional study
   b) Randomized Control Trial
   c) Case-control study
   d) Cohort study

5. Which of the following is not an analytical study?
   a) Cross sectional comparative study
   b) Prevalence study
   c) Case control study
   d) Cohort study

6. The strongest evidence for causality comes from which of the following research methods?
   a) Experimental
   b) Causal comparative
   c) Correlational

d) Ethnography

b. Introduction to clinical trials

7. What is meant by "randomization"? (Select the one best answer)
   a) Selection of subjects at random.
   b) Randomization is a method of allocating treatment such that each subject has an equal chance of receiving any of the possible treatments.
   c) Regression to the mean is a common phenomenon in clinical trials.
   d) Biases introduce random outcomes.

8. According to the principles of ICH GCP, what is the most important consideration when conducting a clinical trial?
   a) Data accuracy
   b) Protection of trial subjects
   c) Process adherence
   d) Statistical quality checks

9. Informed consent is documented by means of a written, signed and dated informed consent form.
   a) True
   b) False

c. Stepped-wedge study design

10. Concerning Stepped-wedge study design, it is a:
    a) It is a type of house steps in a house.
    b) It is used to introduce study.
    c) It is an old study design.
    d) It ia a recent study design

11. Concerning the use of stepped-wedge study design
    a) It is the best study design used to evaluate the introduction of new guidelines.
    b) It is best used for qualitative study.
    c) It cannot be used in Africa because it is too complicated.
    d) All the above

12. Some important points about stepped wedge design
    a) It is a type of cluster-randomized study design.
    b) The clusters serve both as control and intervention sites.
    c) Before you start data collection for the intervention period, it is good practice to allow for a “wash period”.

III. Descriptive statistics

13. A variable that is presumed to cause a change in another variable is called:
    a) Categorical variable
    b) Dependent variable
    c) Independent variable
    d) Intervening variable

IV. Scientific Writing

Please answer True or False

14. A good abstract must have long background with detailed literature to demonstrate that the author is knowledgeable.
15. A good abstract must have nice summary of the methodology so that the reviewer is convinced of the results summary.
16. A good abstract must be only about studies that have positive results.
17. In the abstract, the author should put succinct summary of relevant results that will support the conclusion.
18. Conference abstracts are more important than manuscript because the authors have an opportunity to present their work and interact with the audience**.**

Part 2: Assessment of self-efficacy

Here is a scale from 1 to 5. Choose the response that appropriately corresponds to how you relate with each of the following statements (1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree)

1. I have good skills in formulating an effective research question.
2. From an idea, I can clearly write out a research question, aim, objectives and topic.
3. I have a good understanding of common study designs such as cross-sectional, cohort, case-control, and case reports.
4. I have a good understanding of the design of clinical trials.
5. I have a good understanding of the stepped-wedge study design.
6. From a given research question, I can correctly choose the appropriate study design.
7. I have a good understanding of measures of central tendency and dispersion.
8. I can choose the appropriate statistical test for a descriptive study.
9. I have a good understanding of how to write a scientific piece using the IMRAD (Introduction, Methods, Results and Discussion) structure.