

## High Level Outline (HLO) for a quantitative manuscript

### Introduction

- Problem
  - Describe the research question to provide context, key terms and concepts so your reader can understand the study.
- Information gap
  - What gap or unanswered question, untested population, or untried method in existing research does your study address?
- Relevance
  - Provide a rationale for your study...the 'so what' question.
  - Tell how the results of your study could be used and by whom (policy makers or implementers?)
- Objectives

### Methods

- Study design
  - Explain the study design.
- Study site and population
  - Describe the setting in which the study was carried out, e.g., urban vs. rural.
  - Describe the study participants, e.g., women, or children <5.
- Operational definitions
- Sample size assumptions and calculation
- Sampling methods
- Data collection
  - Describe the data collection tools and process of collecting data.
  - Describe any special laboratory materials, equipment, or reagents.
- Data analysis
- Ethical considerations
  - How did you protect the ethical rights of humans/animals in your study?

### Results

- Study population's socio-demographic characteristics
- For each intervention or procedure describe what your results were.
  - Support your main results using selected analysis, e.g., odds ratio (OR), confidence intervals (CIs), and p-values, or other statistical analysis.
  - Back up each statement by linking it to data in the tables and figures (Table 1), or mention 'data not shown'.

### Discussion

- Summary statement of overall results linked to your objectives
  - How do the overall results link to your objectives? Don't include any statistics.
- Clearly state each result (e.g., exposure X was related to disease Y) without repeating the same words from the results section
  - Give the specific supporting evidence from your study, but do not include OR, CIs, p-values
  - State possible causes...why you think you got that result (this could be because.....See Error B5)

- Compare with other studies *Use references*
- Contrast with other studies *Use references*
- Limitations
  - Follow Error B 6
- Conclusions
  - Write a summary statement giving the big picture
  - How do your results help us understand a broader topic?
  - What implications do your results have for public health or related policies?
- Recommendations
  - What are the key next steps that are practical and applicable to the context?
  - What specific research question should next be pursued?

## **Acknowledgements**

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- People who helped with the manuscript who are not on the co-author line.

## **References**

## **Tables and figures**