



Ministry of Health and Sports



Developing a good research question

Dr. Myitzu Tin Oung

M.B.,B.S.; MA (Pop. & Repro. Health Research); MPH; PhD (Demography)

Deputy Director/Head

Medical Statistics Division

Department of Medical Research (Pyin Oo Lwin Branch)



Outline

- What?
- Why?
- How?



WHAT?



What is a Research Question?

Uncertainty about something
the investigator wants to resolve





What is a Research Question?

What a researcher would like to know:

What? When? Who? Where?

How? Why?

about a problem



A Research Problem

What is \neq What should be

Reasons for this difference is unclear

More than one possible solution to the problem



A Research Problem

Non-researchable problem

- A discrepancy exists between desired and observed situation
- We know why the discrepancy exists
- We know the best solution

Researchable problem

- A discrepancy exists between desired and observed situation
- We do not know why the discrepancy exists
- Different solutions exist but we do not know the best one



WHY?



A well-developed research question

- help researchers **focus** their research by providing a path through the research process
- helps researcher **avoid** the “all-about” paper





HOW?





Steps in developing research questions

- Step 1: Choose a General Research Area
- Step 2: Find Background Information
- Step 3: Translate Your Interest into a Research Question
- Step 4: Modify Your Research Question





Sources of research questions

Articles

Discuss with
experts

Conferences

Observations

Clinical/ Field
practice

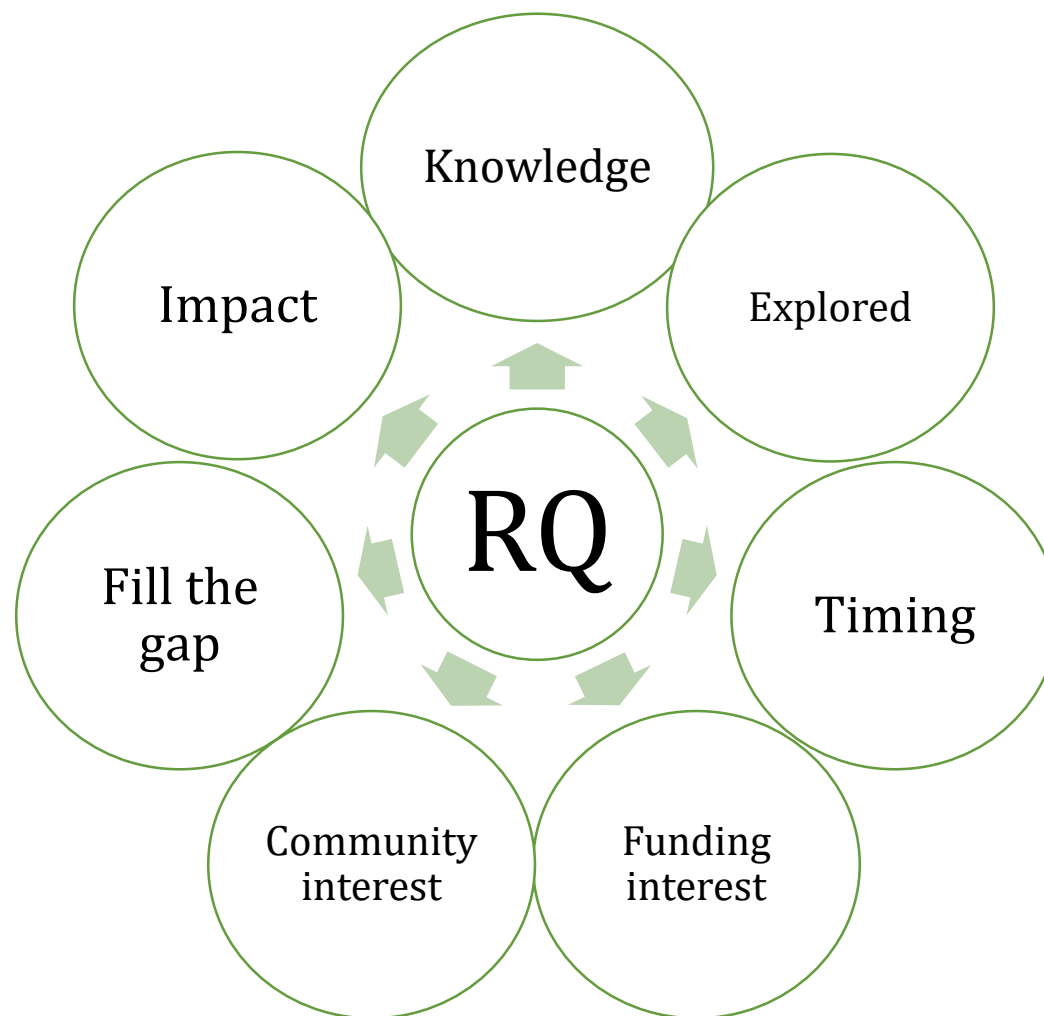
Previous
research

Research
question



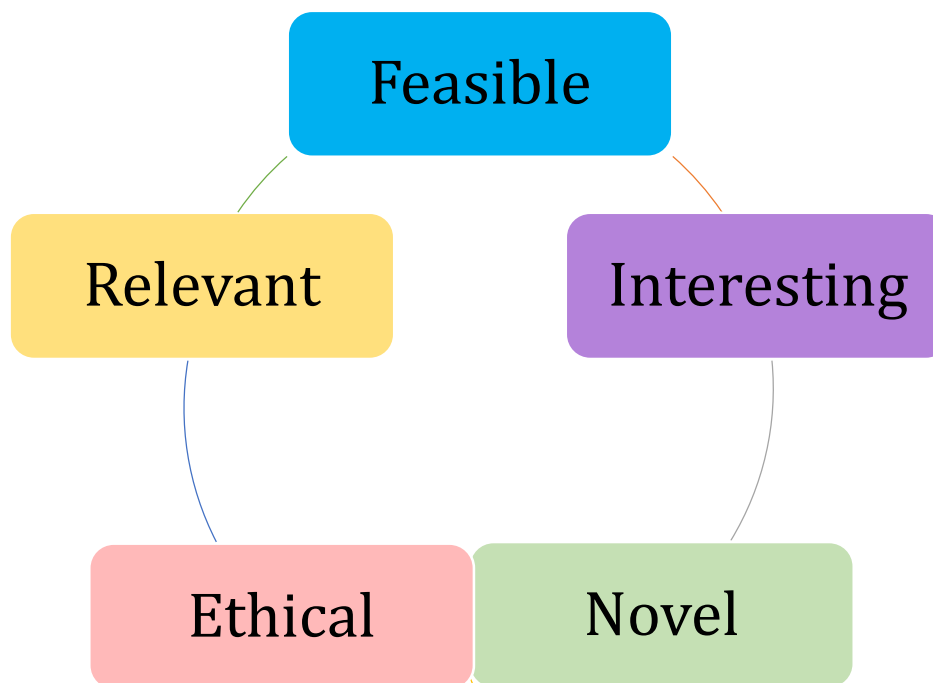


Things to be considered (in developing research questions)





Criteria for a good research question (FINER)





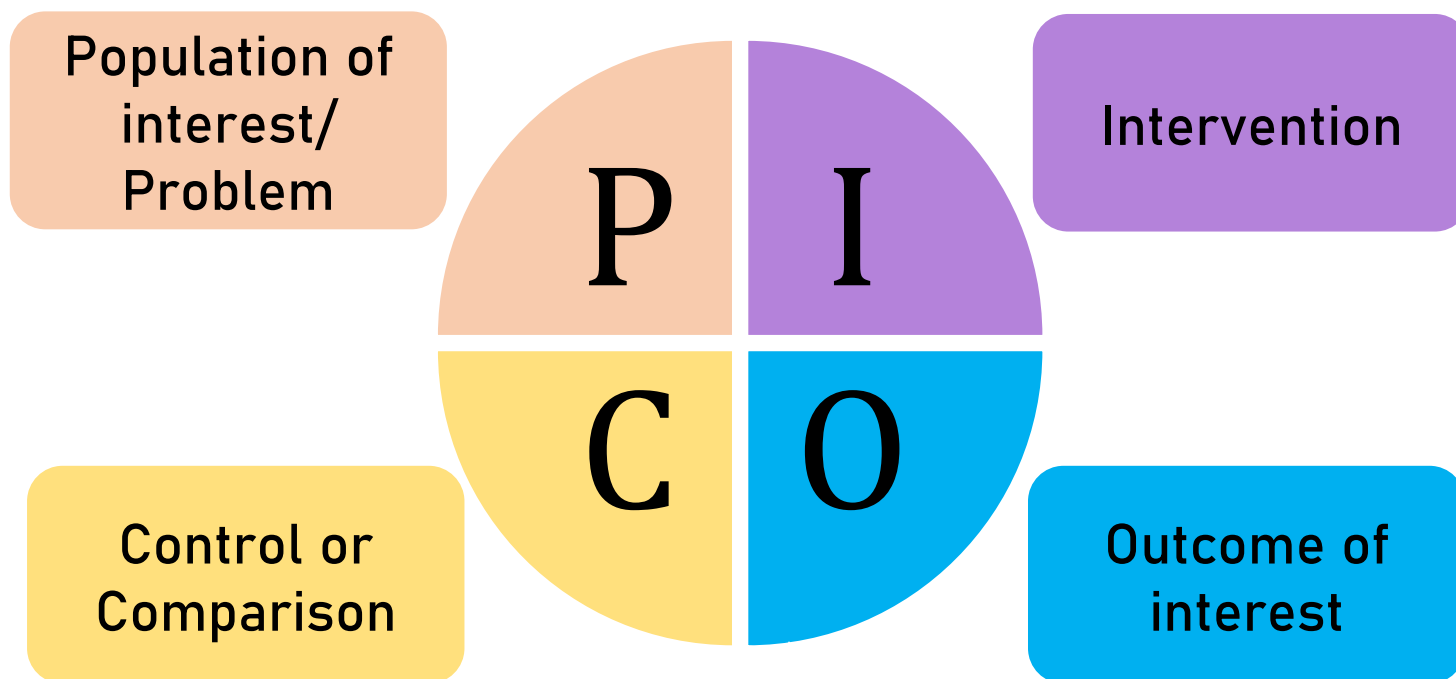
Criteria for a good research question (**FINER**)

1. Immunogenicity and Reactogenicity of a Novel Vaccine for Human Papillomavirus 16: A 2-Year Randomized Controlled Clinical Trial
2. Awareness, perception and vaccination of Japanese Encephalitis vaccine among care givers in Myanmar
3. Acceptability of a COVID-19 vaccine among adults in Myanmar





Components of a good research question (PICO)





Original RQ: Why are parents reluctant to bring their children for MMR vaccination when advised by their GP that it's for the best?

Population: Parents of children who received MMR vaccine education

Intervention: MMR vaccination education

Comparison: Parents of children without MMR vaccine education **Outcome:** MMR vaccination uptake

Revised RQ: Do parents who receive MMR vaccination education with GP change level of MMR vaccination uptake, as compared to parents who do not receive the education intervention?





- How many of children aged 2, 4 and 6 months experience pain after the application of non-pharmacological analgesia methods during vaccination?

Population:

Intervention:

Comparison:

Outcome:





A research question should be

clear	it provides <u>enough specifics</u> that one's audience can easily understand its purpose without needing additional explanation
focused	it is <u>narrow enough</u> that it can be answered
concise	it is expressed in the <u>fewest possible words</u>
complex	it is not answerable with a simple “yes” or “no,” but rather <u>requires synthesis and analysis of ideas</u>
arguable	its potential answers are <u>open to debate</u> rather than accepted facts



What do you think the following RQs?



Questions, comments and suggestion

