Plenary 4: Identifying the Research Question

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Performing research

- Conducting research costs time, money and resources (and ‘emotional energy’…)

- We want to conduct the “best” research we can and give ourselves the best chance of success

- What do we need to consider before starting our research and collecting our data?
Where do ideas come from?

- Our own observations from clinical practice/individual cases
- Discussion with others
- Read, read, read (conferences, published literature)….
- Our previous research studies often generate more questions
Do I have a ‘good’ idea?

• Is the question interesting?
  – Am I only answering a question because the data is easy to access?

• Has the question already been answered?
  – **Completed work:** Literature review of published papers, search for policy documents, etc
  – **Ongoing work:** www.clinicaltrials.gov, study websites, conference proceedings

• What will my research add to the current knowledge?
Feasibility

• Is the study ethical?

• Is it likely I will successfully complete the project?
  – Number of participants required
  – Number of data items to be collected/accessible data source
  – Appropriate laboratory/administrative/statistical support
  – Able to complete in a reasonable time frame

• Are the results of the study likely to be of clinical relevance?
Potential clinical implications

- Could my research result in changes to clinical practice or policy?
- Will it add to the existing “body of evidence” on a research topic?
- Is my patient population such that my results are likely to be generalisable to other clinics/countries/ settings?
- Is the intervention / risk factor I am studying likely to be implementable in other places?
‘Good’ idea to research question

• Once we have decided on an idea, we then need to turn it into an answerable research question

• An appropriate research question needs to be precise, clear and focused

• **PICO[S]** is an approach sometimes used to develop research questions (particularly when conducting systematic reviews)
A focused research question

- What is the **POPULATION** of interest?
- What is the **INTERVENTION**?
- What is the **COMPARISON**?
- What is the **OUTCOME**?
- What is the **STUDY DESIGN**?
A focused research question

• What is the POPULATION of interest?
  *How would I describe a group of patients similar to mine*

• What is the INTERVENTION?

• What is the COMPARISON?

• What is the OUTCOME?

• What is the STUDY DESIGN?
A focused research question

- What is the **POPULATION** of interest?

- What is the **INTERVENTION**?
  
  *Which main intervention(s), risk factor, exposure am I considering*

- What is the **COMPARISON**?

- What is the **OUTCOME**?

- What is the **STUDY DESIGN**?
A focused research question

- What is the **POPULATION** of interest?
- What is the **INTERVENTION**?
- What is the **COMPARISON**?
  
  *What is the main alternative to compare with the intervention*
- What is the **OUTCOME**?
- What is the **STUDY DESIGN**?
A focused research question

• What is the **POPULATION** of interest?

• What is the **INTERVENTION**?

• What is the **COMPARISON**?

• What is the **OUTCOME**?

  *What can I hope to accomplish, measure, improve, or affect*

• What is the **STUDY DESIGN**?
A focused research question

• What is the **POPULATION** of interest?

• What is the **INTERVENTION**?

• What is the **COMPARISON**?

• What is the **OUTCOME**?

• What is the **STUDY DESIGN**?

*What would be the best study design/methodology*
Summary

• The first step in any research is to identify the question that we wish to answer.

• We must also ensure that our research is feasible, and to consider the potential clinical implications of our project.

• A good idea for research must then be turned into an answerable question that is focused and precise.