

Slide 3

Significance section

Magnitude of the problem

- Number of individuals afflicted, cost to society

What is Known?

- Previous studies, consensus panels, expert recommendations

What is Not Known? (Controversial)

- Previous studies, experts

How to contribute by answering what is not known?

Slide 4

Origins of research question

- Build on Experience
 - Prior studies, Apprentice with an experienced researcher
- New ideas
 - Conferences and CMEs
 - Speaking to other researchers
 - New technologies
 - Observation of patients

Developing a research question: Ask yourself

- Do I know the field and literature well?
- What are the important questions in this field?
- Has this study been done before? If so, can there be some improvement?
- Can my study fill a gap?
- Is this the right time to answer this question?
- Is it a 'hot topic'?
- Are the results likely to be useful and applicable?

Slide 6 & 7. Some examples of research question and how to hypothesize.

Slide 8- Qualities of research question FINERS. (Usually for descriptive & analytical studies)

Feasible- *Is it Practical?*

- Number of Subjects
- Adequate Technical expertise, resources
- Affordable in time and money
- Manageable in Scope
 - Narrow the question, strategies for sample size reduction, research training, mentors

Interesting

- To the investigators
- To others
- Consult with mentors, change the question

Novel

- Will it contribute new information
- Challenge old dogma
- Review the literature "become an expert"- Consult with mentors.
- For previously done studies- Can study be replicated in a different population?
 - Improved methodology, research techniques?
 - Extends previous findings
 - Provides new findings

Ethical

- Does the study pose unacceptable risk? Risk to privacy? - Consult with IRB
- Understand
 - Nuremberg code (Informed consent process)
 - Helsinki declaration (Institutional Ethics committee)
 - Belmont report (Respect for persons, Beneficence)
 - Justice, "Primum non nocere" (do no harm)

Relevant

- How may the outcomes effect?
 - Clinical practice
 - Health Policy
 - Future Research

Scalable

- Scalability - ability of a health intervention efficacious on a small scale and/or under controlled conditions to be expanded under real world conditions to reach a greater proportion of the eligible population while retaining effectiveness.
- To benefit more people and foster policy and program development on a lasting basis eg. Vaccination.

Slide 9. Usually for interventional studies.

Slides 10-18 are self-explanatory.