

Defining a Research Question

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Why is defining a scientific question important for CMS data users?

- **HIPAA allows for health care related data to be released for Research purposes**
 - **Therefore, potential users of CMS need to be able to write their request in the form of a research question**

Research is about...

- **The creation of generalizable knowledge that has value beyond the specific subjects and circumstances**
- **Creating information about the association of variables to each other to answer questions about “the role of”, “association with”**

Research is NOT about...

- **Describing the state of the world at a particular point in time**
- **Developing a tool that is not linked to a particular RESEARCH question**

Consider...

- I want to know whether the patients who came to my diabetes clinic on Thursday got guideline compliant care



NOT A RESEARCH QUESTION

- The patients
- My diabetes clinic on Thursday

- I want to know what predicts receipt of guideline compliant care for diabetics attending family medicine clinics



A RESEARCH QUESTION

- (all) patients
- Family medicine clinics

Consider...

- I want to develop an algorithm to classify admissions as complicated or not



NOT A RESEARCH QUESTION

- No purpose, just a method

- I want to develop an algorithm to classify admissions as complicated or not and then use it to identify predictors of complicated admissions



A RESEARCH QUESTION

- Method being applied for generalizable knowledge

Consider...

- I want to create a book of maps to show how use of procedures vary across geography



NOT A RESEARCH QUESTION

- Just a picture, no theory

- I want to see whether variation in use of procedure X varies geographically by local area income, number of hospital beds, and urban rural status. I'd also like to map use.



A RESEARCH QUESTION

- Study examines predictors of geographic variation with identified variables that you expect to inter-relate

Bottom Line:

FOR SOMETHING TO QUALIFY AS RESEARCH:

- Knowledge must extend beyond the specific patients/admissions/records/providers being studied (generalizable knowledge)
- There must be a hypothesized association among things being measured (you can be wrong).
- Tool development is secondary to the plan to use it for answering a research question (it must be used to support the creation of generalizable knowledge)

Don't Forget:

- **Studies can have multiple goals, it is ok for one goal to be development of a method or creation of maps or graphs as long as one goal is the generalizable knowledge**
- **Whether creating a tool or conducting an analysis the use, inference and knowledge must extend beyond the specific patients/admissions/records/providers being studied**