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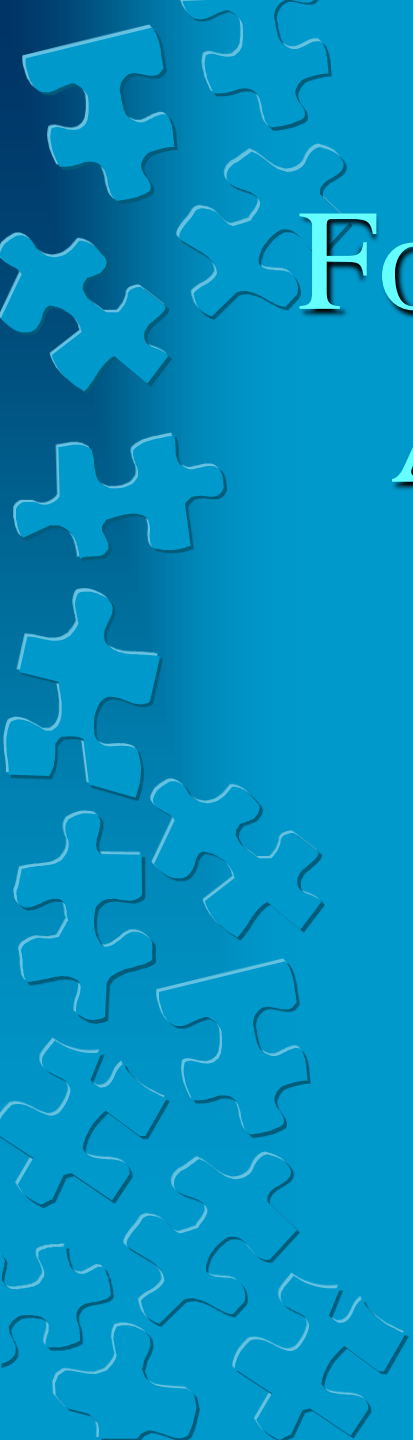
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## **MPH Principles of Public Health: PowerPoint: Question Formulation**

Jonathan Eldredge

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# Formulating & Refining Answerable Research Questions

Jonathan Eldredge, PhD

University of New Mexico

MPH Principles of Public Health

File: MPH Principles Session One Question Formulation 2012

Monday September 2012. 6:00-7:30pm Med 2 Classroom

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# Opening Question

Why do you think that formulating answerable questions will be important for your individual MPH degree education and for your career? (Handout)

1.

2.

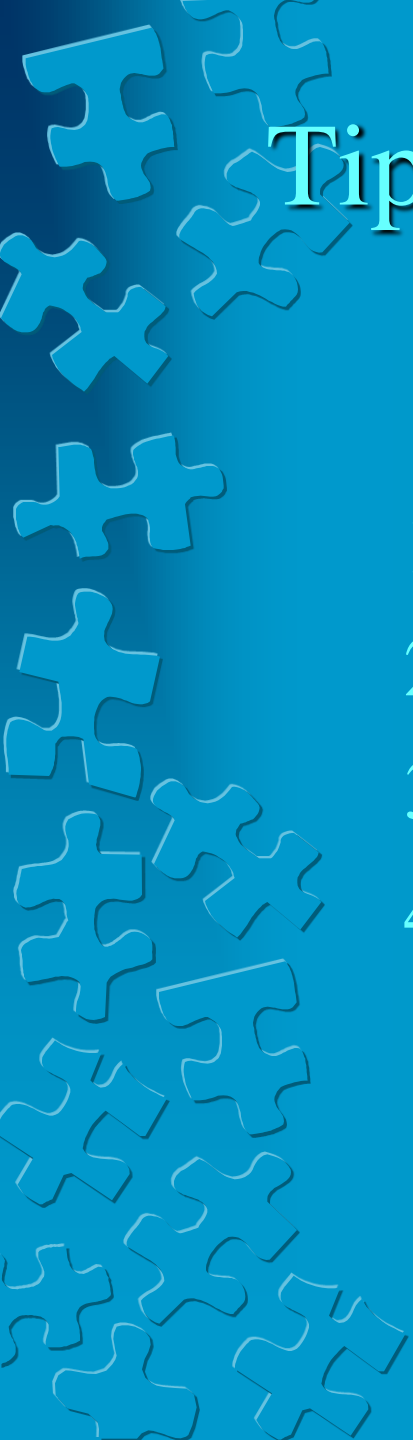
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# The Handout



# Realistic Scenario

- You are walking around your community, trying to think of a Principles of Public Health research project
- You overhear discussions among groups of:
  - Teenagers
  - Elderly
- Both groups are discussing the problems related to their diabetes



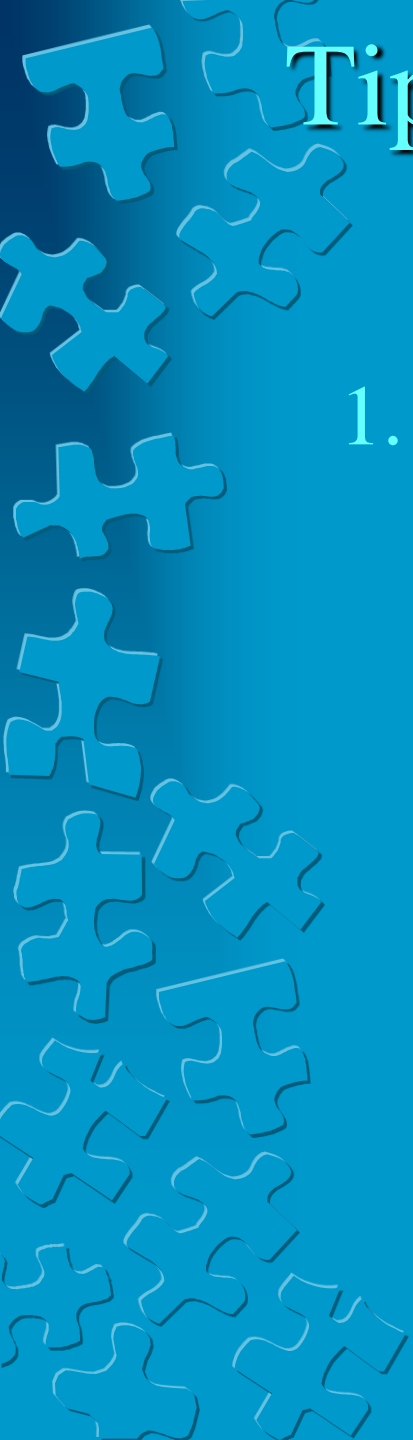
# Tips for Formulating Answerable Questions

1. .

2. .

3. .

4. .



# Tips for Formulating Answerable Questions

1. Identify and focus upon main problem or disease
  - Divide question into either clinical, basic sciences, behavioral, or social dimensions
  - Categorize by subject within these broader divisions
  - This step will aid your subsequent search



## 2. Largely ignore distracting elements

- Remove the “noise” in question
- Amplify the “signal”



### 3. Describe the population:

- Age
- Geography
- Income
- Ethnicity
- Other?



## 4. Purpose of the Question:

a. Descriptive

b. Mechanistic (sometimes called  
“Causal” or “Predictive”)

c. Comparative (or “Correlational”)



# Descriptive Questions

- “How many people have diabetes in my community?”
- “What kinds of problems do people with diabetes have in my community?”



# Mechanistic Questions

- “How does lower socio-economic status lead to higher incidence of diabetes mellitus?”
- “How does a diet high in sugary soft drinks cause diabetes mellitus in susceptible populations?”



# Comparative Questions

- “Do people in my community experience higher rates of incidence for diabetes mellitus compared to other communities?”
- “Do people from lower socio-economic backgrounds experience higher rates of diabetes mellitus than people from upper middle class backgrounds?”



# Realistic Scenario

- Identify and focus upon main problem, or disease **Diabetes Mellitus**
- Largely ignore distracting elements
- Describe the population:
  - Age **Multiple**, although teens and elderly noted
  - Geography **Assigned community**
  - Income **Possible variable**
  - Ethnicity **Possible variable**
- Purpose of the question **(see next screen)**



# Possible Answerable Question

What are the rates of Type 2 Diabetes Mellitus among different age groups in my community, and how do these rates compare to other areas such as Albuquerque, New Mexico, or the US?

# Working Alone

- **Refine and focus the elements of your own tentative research topic on your handout into an answerable question**
  - Divide the question into broad types Categorize the question by subject
  - Largely ignore distractors
  - Describe the population
  - Purpose of the question
- You have only 4 Minutes



# Activity Three

1. Pair up with a neighbor
2. Discuss both of your questions, and coach each other on refining and focusing on the handout
3. Prepare to report on your partner's question
4. You have only **5** minutes



# Paired Question Outcome Reports



## Tip # 5

Working with others makes  
formulating and refining  
questions much easier!

A decorative graphic in the top-left corner of the slide, consisting of several interlocking puzzle pieces. The pieces are arranged in a cluster, with some pieces having a 3D effect, appearing to float or be slightly offset from the others. The pieces are white with blue outlines, set against a solid blue background.

# The Next Steps



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