

## 2.1 Practical Questions

- Questions derived from <u>clinical practice</u>, <u>community</u>
   <u>observations</u>, and <u>personal experience</u> often point toward an
   unmet demand for needs assessments, program evaluations,
   and clinical effectiveness studies.
- A good research question ends in a question mark and is testable.

# 2.2 Brainstorming & Concept Mapping

- Use brainstorming to create a long list of possible research topics.
- Use concept mapping to identify central themes that might be worth exploring.

FIGURE 2-	1 Brain	storming	Questions
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Area	Questions	
Values	<ul> <li>What are my interests and personal values?</li> <li>What research topics are personally meaningful?</li> <li>Have some understudied conditions that I could explore significantly affected me, my family, my friends, or my patients/clients?</li> <li>Have certain health issues sparked my passion because they reflect what I consider to be an injustice?</li> </ul>	
Skills	<ul> <li>What knowledge and skills do I already have?</li> </ul>	
Personal growth	<ul> <li>What new skills do I want to develop?</li> </ul>	
Connections	<ul> <li>What source populations and/or data sources might be available to me through professors, supervisors, colleagues, and other personal and professional contacts?</li> </ul>	
Job and/or course requirements	<ul> <li>What does my supervisor or professor want me to study?</li> </ul>	
Gaps in the literature	<ul> <li>What information is not currently available that would make a contribution to the discipline and/ or to improving health practices or policies?</li> </ul>	

# 2.3 Keywords

- Use the MeSH database (Medical Subject Headings) to identify related ideas and to expand or narrow a theme.
- The MeSH dictionary is available from PubMed.org.

# 2.4 Exposure, Disease, Population (EDP)

The "EDPs" form the basis for many research questions:
 "Is [exposure] related to [disease/outcome] in [population]?"

#### FIGURE 2-2 Examples of Types of Exposures

Socioeconomic	Health-Related	Health Status	Environmental
Status	Behaviors		Exposures
<ul> <li>Income</li> <li>Wealth</li> <li>Educational level</li> <li>Occupation</li> <li>Age</li> <li>Sex/gender</li> <li>Race/ethnicity</li> <li>Nationality</li> <li>Immigration status</li> <li>Marital status</li> </ul>	<ul> <li>Dietary practices</li> <li>Exercise habits</li> <li>Alcohol use</li> <li>Tobacco use</li> <li>Sexual practices</li> <li>Contraceptive use</li> <li>Hygiene practices</li> <li>Religious practices</li> <li>Use of health care services</li> </ul>	<ul> <li>Nutritional status</li> <li>Immune status</li> <li>Genetics</li> <li>Stress</li> <li>Anatomy and anatomical defects</li> <li>Reproductive history</li> <li>Comorbidities (existing health problems)</li> </ul>	<ul> <li>Drinking water</li> <li>Pollution</li> <li>Radiation</li> <li>Noise</li> <li>Altitude</li> <li>Humidity</li> <li>Season</li> <li>Natural disasters</li> <li>Population density</li> <li>Travel</li> </ul>

#### FIGURE 2-3 **Examples of Types of Diseases**

#### Infectious and Parasitic Diseases

#### Noncommunicable Diseases (NCDs)

#### Neuropsychiatric **Disorders**

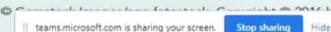
### **Injuries**

- Candidiasis
- Cholera
- Escherichia coli
- Hookworm
- Malaria
- Syphilis
- **Tuberculosis**

- Asthma
- Breast cancer
- Cataracts
- Diabetes
- Hypertension
- Osteoporosis
- Stroke

- Alzheimer's disease and other dementias
- Autism
- Depressive disorders
- Posttraumatic stress disorder
- Schizophrenia

- Bone fractures
- Burns
- Crush injuries
- Frostbite
- Gunshot wounds
- Near drownings
- Poisonings



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### FIGURE 2-4 Examples of Types of Populations

- · Australian children younger than 5 years old
- · Women living in rural Ontario
- · Adults with diabetes
- Teachers with at least 10 years of classroom experience
- Individuals newly diagnosed with influenza at St. Mary's Hospital in Newcastle
- Nongovernmental organizations working on issues related to HIV/AIDS in Uganda

### 2.5 PICOT

- "PICOT" is often used for clinical research
  - Patient/Population
  - Intervention
  - Comparison
  - Outcome
  - Timeframe