### Domain 1: General Knowledge
- Describes major national and international public health problems
- Describes risk factors for well established health problems and the evidence in support of these factors
- Understands basic research designs used in health issues
- Understands how epidemiologic evidence informs public health practice and policy.

### Domain 2: Problem Identification / Planning
- Defines a research or health problem by identifying gaps in the knowledge of a health issue
- Identifies steps needed to accurately assess and understand the health status of populations
- Identifies determinants of health and illness, factors contributing to health promotion and disease prevention, and factors influencing the use of health services

### Domain 3: Information Skills
- Retrieves and organizes literature from valid sources of the evidence base
- Judges, critiques, and interprets research findings

### Domain 4: Communication
- Organizes and delivers oral presentations of research findings or health issues in varying professional formats
- Organizes and writes a manuscript suitable for publication in peer-reviewed publications
- Interprets and presents accurate and effective demographic, statistical, and scientific information for professional and lay audiences, adapting and translating public health concepts to individuals and communities
- Teaches epidemiological and/or biostatistical concepts in seminar and discussion groups

### Domain 5: Epidemiologic Consultation
- Advises other public health or clinical professionals on epidemiologic methods and findings
- Conducts peer-review activities including manuscript review and proposal evaluation

### Domain 6: Professional Conduct
- Interacts competently, respectfully, and professionally with persons from diverse backgrounds
- Recognizes and responds appropriately to ethical issues in the conduct of scientific research

### Domain 7: Proposal Preparation
- Writes scientific or program proposals, develops specific aims and appropriate background and describes methods in needed detail
- Develops and presents a budget
- Identifies appropriate collaborators and support personnel to accomplish proposal goals
- Identifies internal and external sources of funding
### MPH Concentration Competencies and Assessment Methods

#### Domain 8: Study Design
- Formulates an appropriate research question
- Identifies an appropriate population and sampling strategy for testing hypotheses
- Selects an appropriate study design for testing hypotheses in specific populations
- Selects and defines measures and variables relevant to defined health problems
- Develops and assesses validity and reliability of data collection instruments (e.g. questionnaires, physical examination, lab assays, etc.)
- Identifies potential sources of bias and implements strategies to control bias
- Performs power calculation to identify adequate sample size
- Identifies steps needed to prepare an acceptable application to an Institutional Review Board

#### Domain 9: Study Conduct
- Develops strategies for monitoring study progress and preparing status reports
- Identifies strategies for recruitment and retention of study participants and how these strategies can be adapted to account for cultural differences
- Identifies issues related to successful administration of various survey instruments

#### Domain 10: Data Management & Quality Assurance
- Develops and maintains an electronic database
- Develops and implements a plan for monitoring data as it is collected, and implements appropriate corrective actions to ensure data quality

#### Domain 11: Data Analysis
- Determines appropriate uses and limitations of data
- Conducts descriptive analyses and tests hypotheses for basic statistical inference
- Recognizes potential sources of bias and applies appropriate analytic techniques to assess and adjust for these biases
- Calculates and interprets fundamental measures of association (OR, RR, AR, etc.)
- Conducts appropriate stratified and multivariate statistical analyses
- Demonstrates a broad familiarity with a variety of analytic statistical software packages
- Identifies issues needing consultation with a biostatistician

#### Domain 12: Data Interpretation
- Evaluates the integrity, comparability of data, and limitations of data
- Makes relevant inferences from data analyses
- Understands and applies the principles of causality
- Identifies areas of further research
## MPH Concentration Competencies and Assessment Methods

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