

## **Epidemiology Program Competencies**

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### **Epidemiology MPH Competencies**

**EPI-MPH 1:** Describe the historical context of epidemiology.

**EPI-MPH 2:** Describe public health concerns in terms of magnitude, people affected, time, and location.

**EPI-MPH 3:** Apply basic terminology and definitions of epidemiology.

**EPI-MPH 4:** Calculate epidemiology measures and interpret them.

**EPI-MPH 5:** Identify key sources of data and data collection methodologies for epidemiologic purposes.

**EPI-MPH 6:** Explain the importance of epidemiology for informing scientific and ethical Principles of public health concerns.

**EPI-MPH 7:** Explain ethical Principles pertaining to the collection, maintenance, use, and dissemination of epidemiologic data.

**EPI-MPH 8:** Evaluate the strengths and limitations of epidemiologic reports.

**EPI-MPH 9:** Describe the Principles and limitations of public health screening programs.

### **Epidemiology MSPH Applied Competencies**

**EPI-MSPH 1:** Develop a research project that a research committee can review for scientific validity and feasibility.

**EPI-MSPH 2:** Conduct a research project under the guidance of senior investigators.

**EPI-MSPH 3:** Write a manuscript reporting research background, methods, results, discussion, and conclusions to be presented to a research committee.

**EPI-MSPH 4:** Explain the principles of designing intervention studies.

**EPI-MSPH 5:** Demonstrate the ability to manage epidemiologic data.

### **Epidemiology MSPH Clinical & Translational Science Competencies**

**EPI-MSPH 1:** Develop a clinical and translational research project that a research committee can review for scientific validity and feasibility.

**EPI-MSPH 2:** Conduct a clinical and translational research project under the guidance of senior investigators.

**EPI-MSPH 3:** Write a manuscript reporting research background, methods, results, discussion, and conclusions to be presented to a research committee.

**EPI-MSPH 4:** Explain the principles of designing observational studies.

**EPI-MSPH 5:** Demonstrate the ability to analyze epidemiologic data.

## **Epidemiology MSPH Pharmacoepidemiology & Comparative Effectiveness Research Competencies**

**EPI-MSPH 1:** Develop a pharmacoepidemiology & comparative effectiveness research project that a research committee can review for scientific validity and feasibility.

**EPI-MSPH 2:** Conduct a pharmacoepidemiology & comparative effectiveness research project under the guidance of senior investigators.

**EPI-MSPH 3:** Write a manuscript reporting research background, methods, results, discussion, and conclusions to be presented to a research committee.

**EPI-MSPH 4:** Explain the principles of designing observational studies.

**EPI-MSPH 5:** Describe the principles, goals, and conduct of pharmacoepidemiology and comparative effectiveness research.

## **Epidemiology PhD Competencies**

**PhD EPI 1:** Critique epidemiologic studies and reports, with regard to design choice, precision, bias, confounding, and ethical issues.

**PhD EPI 2:** Demonstrate expertise in the statistical basis for the analysis of epidemiologic data.

**PhD EPI 3:** Write the design, methods, and results of an epidemiologic study.

**PhD EPI 4:** Demonstrate ability to teach epidemiologic concepts to master's and undergraduate-level students.

**PhD EPI 5:** Formulate novel and innovative study questions and hypotheses and test them using epidemiological methods.

**PhD EPI 6:** Develop a dissertation research proposal with detailed background, study design, data collection plan and analyses for carrying out an epidemiologic study.

**PhD EPI 7:** Conduct a dissertation research project from design through analysis and interpretation, with oral presentation of results and preparation of a publishable manuscript(s).