

MPH Foundational Competencies

These competencies are informed by the traditional public health core knowledge areas, (biostatistics, epidemiology, social and behavioral sciences, health services administration and environmental health sciences), as well as cross-cutting and emerging public health areas.

Evidence-based Approaches to Public Health

1. Apply epidemiological methods to the breadth of settings and situations in public health practice
2. Select quantitative and qualitative data collection methods appropriate for a given public health context
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
4. Interpret results of data analysis for public health research, policy or practice

Public Health & Health Care Systems

5. Compare the organization, structure and function of health care, public health and regulatory system across national and international settings.
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels

Planning & Management to Promote Health

7. Assess population needs, assets and capacities that affect communities' health
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
9. Design a population-based policy, program, project or intervention
10. Explain basic principles and tools of budget and resource management
11. Select methods to evaluate public health programs

Policy in Public Health

12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes.
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations
15. Evaluate policies for their impact on public health and health equity

Leadership

16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making
17. Apply negotiation and mediation skills to address organizational or community challenges

Communication

18. Select communication strategies for different audiences and sectors
19. Communicate audience-appropriate public health content, both in writing and through oral presentation
20. Describe the importance of cultural competence in communicating public health content

Interprofessional Practice

21. Perform effectively on interprofessional teams

Systems Thinking

22. Apply system thinking tools to a public health issue

MPH Concentration Competencies

Students focusing in each MPH concentration will achieve the below listed student learning outcomes specific to their concentration.

MPH-Biostatistics Concentration Competencies

1. Construct a public health and biomedical research question and convert it into a mathematically sound and statistically testable hypothesis.
2. Analyze and interpret data from various studies including clinical trials, observational studies and public health surveys.
3. Apply various statistical models to address various types of data structures and outcome measures.
4. Adaptively utilize different strength of statistical packages in computation.
5. Interpret statistical results and findings appropriately and accurately.
6. Develop written and oral presentations to communicate complicated statistical concepts and results to medical and public health researchers and practitioners, community partners and

MPH-Environmental Public Health Concentration Competencies

1. Describe direct and indirect human, ecological and safety effects of major environmental and occupational agents.
2. Explain the general mechanisms of toxicity resulting from various occupational and environmental exposures.
3. Describe genetic, physiologic, physical, and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards.
4. Identify major international, federal and state regulatory programs, guidelines and authorities that control environmental health issues.
5. Explain approaches for assessing, preventing, controlling, and communicating environmental and occupational hazards that pose risks to human health and safety.

MPH-Epidemiology Concentration Competencies

1. Utilize epidemiologic data and methods for outbreak investigation, infectious disease and chronic disease surveillance, determination of risk factors, disease prevention trials and evaluation of screening tests.
2. Define, calculate, and interpret measures of disease frequency and measures of association between risk factors and diseases.
3. Demonstrate the ability to effectively communicate the scientific, ethical, and public health implications of epidemiology to lay and professional audiences.
4. Effectively use epidemiologic terminology and conduct basic epidemiologic analyses using multiple linear, logistic, Cox and Poisson regression.
5. Demonstrate the ability to understand epidemiologic inference in the context of causal networks and the ability to consider bias, confounding, effect modification.
6. Critically review the scientific literature, integrate the findings across studies, and make appropriate public health recommendations.
7. Design and conduct epidemiological studies to address public health priorities and advance current knowledge.
8. Recognize potential ethical and legal issues in epidemiologic studies.
9. Discuss concepts and applications of multi-faceted methods related to the field of epidemiology.

MPH-Global Health Concentration Competencies

1. Understand global health priorities and factors that influence the health of populations around the world.
2. Analyze key issues in global health; and describe how global health policy, research, and programs are formulated and directed at local, national, and international levels.
3. Design, implement, and evaluate research studies and/or evidence-based programs and interventions to improve the health of individuals, communities, and populations.
4. Understand the relevant models for health service delivery and develop strategies to assure health program sustainability in different international contexts.
5. Demonstrate competency in fundamental ethical, moral, and legal principles pertaining to public health practices in diverse cultural settings.
6. Collaborate with a range of international stakeholders and effectively communicate global health information to diverse audiences.

MPH-Health Education & Promotion Concentration Competencies

1. Assess individual and community needs for health education.
2. Plan health education strategies, interventions and programs.
3. Implement health education strategies, interventions and programs.
4. Conduct evaluation and research related to health education.
5. Administer health education strategies, interventions and programs.
6. Serve as a health education resource person.
7. Communicate and advocate for health and health education.

Health Services Management Concentration Competencies

1. Demonstrate the ability to incorporate systems thinking into public health practice and policy.
2. Identify strategies to address internal and external problems that impact the delivery and assurance of essential public health services.
3. Define and demonstrate effective leadership practices required to lead public health and health care systems and to build partnerships.
4. Apply strategic management skills in the areas of administration, personnel, ethics, and finance related to public health practice and policy.
5. Identify national and international determinants of access and delivery of health services for global health, disease, and vulnerable populations and the political and legal implications for public health systems.
6. Develop and effectively communicate health systems policies and programs to both lay and professional audiences with cultural.
7. Articulate how to design and conduct studies of effectiveness, efficiency, and outcomes of health services programs, interventions, and policies.

MPH-Occupational Public Health Concentration Competencies

1. Define strategies for related to prevention and treatment of occupational injury and disease and the minimization of disability.
2. Define and implement strategies to improve workplace safety.
3. Define how ergonomics principles can be implemented in jobsites to prevent disease and improve productivity.
4. Demonstrate how risk reduction, hazard control and risk communication can be implemented within workplace and public health settings.
5. Demonstrate an understanding of occupational health management and administration.
6. Demonstrate an understanding of the primary tenants of industrial hygiene methods in practice-based settings.
7. Exhibit the ability to work as part of an interdisciplinary public health/healthcare team.
8. Articulate and demonstrate an understanding of the environmental determinants of disease including; occupationally acquired illnesses and disease.