

# MPH 2021-2022 Competencies Office of Field Education (OFE)

## Foundational Competencies

1. Apply epidemiological methods to the breadth of settings and situations in public health.
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.
5. Compare the organization, structure and function of health care, public health and regulatory systems 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.
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.
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.
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.
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.
21. Perform effectively on interprofessional teams.
22. Apply systems thinking tools to a public health issue.

**Generalist Competencies (Students choose competencies based on their curriculum plan that may include competencies across specializations)**

## **Epidemiology/Biostatistics**

1. Describe preferred methodological alternatives to commonly used statistical methods when assumptions are not met.
2. Apply and interpret common statistical methods for inference (e.g., ANOVA, linear and logistic regression, survival analysis) found in public health studies.
3. Explain the principles of study design for identifying risk factors for outcomes (e.g, sampling strategies, data collection, study design trade-offs).
4. Describe principles and the application of key concepts from probability and inference (e.g., random variation, measurement error, confounding bias, effect modification) to colleagues without extensive statistical training.
5. Demonstrate an understanding of systematic biases (selection and information biases) that affect observational, quasi-experimental, and experimental studies.
6. Demonstrate an understanding of the components of reproducible research.
7. Select and perform (with computer packages) appropriate descriptive statistics and tests for differences in continuous and categorical variables.
8. Develop written and oral presentations on epidemiologic and biostatistical analyses for public health professionals and educated lay audiences.

## **Global Health**

1. Describe the basic biology and epidemiology of major infectious diseases and health conditions in global health [infectious diseases (diarrhea, HIV/AIDS, NTDs, malaria, etc.); mental health; malnutrition; and chronic diseases (diabetes, cardiovascular disease, etc.)].
2. Evaluate risk factors including socio-cultural, political, economic, and environmental determinants underlying major global health conditions.
3. Develop population-based policy, program, or intervention strategies to address health equity and social justice challenges in local and global health settings.
4. Apply ethical approaches in global health research, program evaluation, and implementation.
5. Analyze the roles, relationships, and resources of the entities influencing global health.

## **Health Policy Analysis**

1. Demonstrate core understanding of the wide-ranging issues that dominate the modern health policy debate at all levels of government.
2. Understand the policy process and the principles, values, and pressures that guide public health policy making.
3. Analyze the effects of political, social, and economic policies on public health systems at the local, state, national and international level using a transdisciplinary approach (i.e. apply paradigms from economics, sociology, political science and theory, and law).
4. Learn how to employ methods pertaining to policy analysis, analysis of health systems, and application of economics and evaluation techniques in the health/public health sector to conduct and the design original policy analysis and research.
5. Demonstrate an ability to synthesize complex information for a decision maker, addressing the issues of costs, benefits, distribution, effectiveness, efficiency, administrative ease, legality, equity, and political acceptability and make and support recommendations affecting health policy and practice.

6. Understand the effects of markets and political processes on the allocation of resources to health services and public health programs.

### **Mental and Behavioral Health**

1. Describe the burden of mental illness and substance use disorders on the health of individuals, families, communities, and society and why mental health is integral to public health.
2. Explain dominant and alternative theories of/perspectives on mental illnesses and substance use disorders, including their characteristics, multi-level risk factors, course, correlates, prognosis and outcomes.
3. Explain the nature and efficacy of the various treatment modalities/interventions available to address mental health and substance use disorders.
4. Analyze mental and behavioral health policies including treatment options, financing mechanisms, access and delivery.
5. Demonstrate skills for the planning, implementation, and evaluation of group/population-level prevention/intervention programs targeting mental health and substance use disorders across global contexts.
6. Understand the nature of the global mental health treatment gap and proposed strategies to address it.
7. Appraise the ways in which sociocultural contexts influence the understanding and expression of mental and substance use disorders, as well as, help seeking behaviors and response to treatments.

### **Urban Design**

1. Understand, discuss, and contextualize public health and urban design history including important advancements, challenges, and theories at the nexus between the two.
2. Identify contemporary features of urban design that are associated with human health.
3. Explain how systematic differences in urban design across populations – such as access (i.e., presence and proximity), affordances, amenities, attributes, and accessibility (i.e., universal design and American with Disabilities Act) – contribute to health disparities.
4. Employ essential methodologies, including Geographic Information Systems and Health Impact Assessments, to enumerate and address current public health challenges and inequities associated with urban design.
5. Find, select, and apply appropriate evidence based programs and policies that support healthy environments and ameliorate urban inequalities.
6. Integrate current perspectives, evidence, and methodologies from a variety of academic and professional fields beyond the traditional boundaries of public health and urban design.