

Component 1: Foundations of Population Health

1. Descriptive Epidemiology: The Health of Populations

Topic areas	Illustrative examples
A. Burden of disease and injury	Morbidity and mortality
B. Course of disease and injury	Incidence, prevalence, case-fatality
C. Determinants of health, disease, and injury	Genetic, behavioral, socioeconomic, environmental, access to health care, quality of health care
D. Distribution of disease and injury	Person, place, time
E. Data sources	County/state/national vital statistics, active and passive public health surveillance

2. Etiology, Benefits and Harms–Health Research Evaluation

Topic areas	Illustrative examples
A. Study designs	Surveys, observational studies, randomized clinical trials
B. Estimation - magnitude of association	Relative risk/odds ratio, attributable risk percentage, number needed to treat, population impact measures
C. Inference	Statistical significance test, confidence intervals
D. Data quality	Accuracy, bias, confounding, error, interaction, precision
E. Data presentation	Interpretation of data; presentation of data in tables and graphs

3. Evidence-Based Practice

Topic areas	Illustrative examples
A. Assessing the quality of the evidence	Types and quality of studies and relevance to target population
B. Assessing the magnitude of the effect	Incorporating benefits, harms, values
C. Nationally recognized guidelines	Standards, methods and grading criteria used for establishing guidelines

4. Implementation of Health Promotion and Disease Prevention Interventions

Topic areas	Illustrative examples
A. Types of prevention	Primary, secondary, tertiary
B. Target audience for direct interventions	Individuals, high risk groups, populations
C. Recognition of the effect of social determinants of health on the receipt of preventive services	Income, education, access to transportation, culture
D. Role of the clinician and interprofessional team in improving the health of populations	Education, incentives for behavior change, the role for genomics in clinical practice, advocacy (laws/policies; engineering/environmental solutions)
E. Practice-based systems to aid with the provision of preventive services	Electronic record reminders for clinicians and patients; outreach to patients using new technologies; home visits by community health/outreach workers; use and limitations of social media
F. Impact of a population health focus on the health of	Community-based approaches to facilitate

individuals and communities	healthy weight and active lifestyles
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5. Determinants of Health

Topic areas	Illustrative examples
A. Impact of social factors on individual behaviors	Educational and employment opportunities, norms and attitudes, income
B. Impact on health of the unaltered environment, altered environment and built environment	Climate change, environmental contamination, built environment and community planning that supports active lifestyles
C. Impact of policy and law as determinants of health and disease	Zoning laws and the proximity of residential areas to sources of pollution, green space, and nutritious food; full-day kindergarten and high school completion programs to support educational attainment; tenant-based rental assistance programs to decrease crime.
D. Importance of health care as a determinant of health	Early detection, prenatal care, chronic disease management
E. Relationship between human health, animal health and ecosystem health and implications for emerging infectious disease and geographic spread of disease	Antibiotic resistance, environmental changes and impact on humans and animals

6. Population Health Informatics

Topic areas	Illustrative examples
A. Collection and utilization of population health data to assess population health, guide the provision of health care services and analyze health outcomes	Shared data standards for information collected in electronic health records and community settings to better inform clinical practices and the community about the health status and needs of populations
B. Timely and accurate documentation and delivery of information about preventive services and reportable diseases to public health agencies	Use of electronic health records to track/report quality outcomes; the provision of preventive health services.

7. Evaluation

Topic areas	Illustrative examples
A. Process and outcome assessments	Measuring outcomes based on population health measures; compliance with legal and ethical principles
B. Decision analyses	Cost-effectiveness, cost-benefit, and cost-utility
C. Quality improvement processes	Patient safety; Plan-Do-Study-Act (PDSA) cycle; clinical practice improvement (CPI); root cause analyses