

LABORATORY Group (Draft 1) **GENETICS COMPETENCIES in PUBLIC HEALTH**

Notation: (#) = Essential Service

Analysis & Assessment

Perform genetic assays of high quality

Identify and ascertain the strength of scientific evidence from the literature

Demonstrate current knowledge of molecular biology and related lab sciences as they apply to genetics

Utilize computer technology to manage laboratory data

Formulate relevant inferences from lab data

Develop and apply quality assurance criteria for genetic testing

Conduct validation studies of laboratory procedures

Understand basic research methods used in public health and health sciences research

Prepares risk assessment analyses using relevant data sources

Utilize evidence-based and science-based research to adapt emerging technology to public health lab practice

Utilize problem solving skills to identify and correct problems in testing process

Integrate multiple data sources/systems for information management

Apply technical and interpretive skills for confirming tests

Evaluate and compare new test methodologies to improve performance

Communication (Community Relations)

Communicate results of genetic tests to health care providers in appropriate and concise language

Explain test limitations and complexities to health care providers

Utilize common vocabulary of terms for genetics

Communicate issues related to genetic testing to public, policymakers, legislators, media, and health care providers

Build partnerships with public and personal health communities

Build partnerships with academic, research, private and commercial enterprises

Communicates risks based on risk assessment analysis to appropriate stakeholders

Policy Development, Program Planning

Communicates issues related to genetic testing to public, policy makers, legislators, media and health care providers with public and personal health communities (managed care, hospital)

Participate in strategic policy planning and development meetings related to genetic testing

Articulate objective scientific information related to genetic tests and testing

Participate in development of standards for genetic testing

Represent laboratory perspective in policy development

Collect and summarize data relevant to a genetic issue and test its reliability

State the feasibility and expected outcomes of each policy decision

Cultural (Professional) Capabilities

Interact professionally with persons of diverse back grounds

Values social, ethical and religious considerations for genetic testing

Basic Public Health Science

Demonstrate a thorough understanding of fundamentals and recent developments in human genetics

Recognize credible sources of data related to laboratory science

Recognize when demographic data is relevant to test performance

Acknowledge impact of regulations on genetic testing

Determine basic performance characteristics (sensitivity, specificity) of genetic tests

Apply the basic public health sciences, including behavioral and social sciences, biostatistics, epidemiology, informatics, environmental, public health and prevention of chronic diseases for studies of genetic ?

Leadership & Systems Thinking:

Develop and promote external validation studies for larger clinical laboratory community for genetic testing

Serve as focal point for the accumulation, blending and dissemination of scientific information in support of public health programs

Management & Information Systems (Finance)

Perform test cost/benefit analysis for genetic testing

Develop and justify laboratory budget for genetic testing

Perform cost accounting of genetic tests

Develop strategies for developing budget priorities

Prepare proposals for funding from external sources

Select new lab methodologies (to optimize test performance and efficiency in interpretation of program requirements)

Monitor lab performance incorporate cost/benefit evaluation

Adapt genetic competencies to laboratory staffing plans

Develop successful recruitment strategies for lab personnel

Provide training opportunities for laboratory staff

Promote cross-training among lab staff

Develop strategies for establishing workplace teams

Implement reimbursement strategies for recovery of costs from third party insurers, Medicaid and Medicare