Genetics and Public Health – Why Does Oklahoma Need a State Genetics Plan?

The Agency for Health Care Policy and Research, Centers for Disease Control and Prevention (CDC), Health Resources and Services Administration (HRSA), and the National Institutes of Health (NIH) best describe the importance of a public health genetics program:

> Advances in genetics are rapidly increasing opportunities for understanding and promoting health, preventing disease, and lowering mortality and morbidity. It is anticipated that the growing array of laboratory procedures will allow us to screen for a variety of conditions with a genetic component and, in many cases promote health and well-being. New genetic information will be utilized to develop innovative therapeutic measures. In turn, new genetic knowledge will provide unprecedented opportunities for individuals to learn about their genetic make-up and discuss this information with their health care providers in the context of health promotion and disease prevention. Integration of genetic knowledge and technology into health policy, research, and practice represents enormous challenges and opportunities for public health leadership. New policy constructs are needed to assure the safety and effectiveness of genetic tests and their appropriate use in clinical and public health practice. Health services research is required to evaluate the clinical utility of genetic testing in populations to develop evidence for recommendations and standards of practice. Additional policies are needed to protect the confidentiality of genetic information and to prevent it from being used to discriminate or stigmatize. There is also a need to educate health professionals and policy makers about genetic technologies and information and to enhance public understanding of the benefits, risks, and limitations of genetic testing, and the meaning and implications of genetic information (Agency 1).[1]

The Genomics and Disease Prevention book (a collaborative effort between the CDC, National Human Genome Research Institute, and University of Washington) expresses a need for public health leadership:

> How to use knowledge from genetics research to promote health and prevent disease - the fundamental mission of public health - is now being explored. However, population-based information is lacking about the distribution of genotypes in different populations, the benefits and risks of genetic testing, and the efficacy of early interventions. Moreover, the complex issues that have emerged (e.g., rapid commercialization of genetic tests, quality of laboratory testing, availability of and access to interventions, and potential discrimination against and stigmatization of individuals and groups) call for public health leadership (Khoury 2).[30]

National leaders recognize the impact that genetics will have for the promotion of health and the potential problems of discrimination. Through public health core functions of assessment, policy development and assurance, state public health agencies must ensure genetic services are integrated into the health care system, incorporated into public health practice, and are accessible and utilized to benefit the health outcomes of citizens. The *State Genetics Plan* will provide a guide to ensure Oklahomans benefit from genetic advances through the establishment of a comprehensive public health program to assure that an infrastructure exists to plan, implement, monitor and evaluate genetics in Oklahoma.

The *State Genetics Plan* is organized with three goals that address the issues of (1) genetic education for health care providers and the public, (2) development of a sustainable public health genetics infrastructure to assess, implement, monitor, and evaluate genetics in Oklahoma, and (3) screening and genetic testing. Each goal has an introductory segment reviewing the literature that supports the need for public health action. Each goal has objectives and measurable action steps that were developed and prioritized in collaboration with the Oklahoma Genetics Advisory Council (OGAC) and its committees. OGAC will provide oversight during the implementation process with specific action steps being assigned to committees for action.

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[1] *Agency for Health Care…*

[30] *Genetic and Public Health in the 21st Century…*