

BASELINE COMPETENCIES At a minimum, each health-care professional should be able to:

- a. examine one's competence of practice on a regular basis, identifying areas of strength and areas where professional development related to genetics and genomics would be beneficial.**
- b. understand that health-related genetic information can have important social and psychological implications for individuals and families.**
- c. know how and when to make a referral to a genetics professional.**

1. KNOWLEDGE

All health professionals should understand:

- 1.1 basic human genetics terminology, including: gene, mutation, allele, polymorphism, single nucleotide polymorphism (SNP), genotype, phenotype, pleiotropy, expressivity, penetrance, genotype-phenotype correlation, locus heterogeneity, and variant of unknown significance.
- 1.2 the basic patterns of biological inheritance and variation, both within families and within populations, including dominant, recessive, X-linked, and mitochondrial.
- 1.3 how identification of disease-associated genetic variations facilitates development of prevention, diagnosis, and treatment options.
- 1.4 the importance of family history (minimum three generations) in assessing predisposition to disease.
- 1.5 the interaction of genetic, environmental, and behavioral factors in predisposition to disease, onset of disease, response to treatment, and maintenance of health.
- 1.6 the difference between clinical diagnosis of disease and identification of genetic predisposition to disease (genetic variation is not strictly correlated with disease manifestation).
- 1.7 the various factors that influence the client's ability to use genetic information and services, for example, ethnicity, culture, related health beliefs, ability to pay, and health literacy.
- 1.8 the potential physical and/or psychosocial benefits, limitations, and risks of genetic information for individuals, family members, and communities.
- 1.9 the resources available to assist clients seeking genetic information or services, including the types of genetics professionals available and their diverse responsibilities
- 1.10 the ethical, legal and social issues related to genetic testing and recording of genetic information (e.g., privacy, the potential for genetic discrimination in health insurance and employment, genetic testing of adults with IDD, presymptomatic testing of minors and adults, and the disclosure of incidental findings).
- 1.11 one's professional role in the referral to or provision of genetics services, and in follow-up for those services.

2. SKILLS

All health professionals should be able to:

- 2.1 gather genetic family history information, including at minimum a three-generation history.
- 2.2 identify and refer clients who might benefit from genetic services or from consultation with other professionals for management of issues related to a genetic diagnosis.
- 2.3 explain effectively the reasons for and benefits of genetic services as well as the limitations of such testing.

2.4 use information technology to obtain credible, current information about genetics, including a working knowledge of two important clinical genetics websites and databases, Online Mendelian Inheritance in Man (OMIM) and GeneReviews.

2.5 assure that the informed-consent process for genetic testing includes appropriate information about the potential risks, benefits, and limitations of the test in question as well as posttest genetic counseling for genetic testing.

3. ATTITUDES

All health professionals should:

3.1 appreciate the sensitivity of genetic information and the need for privacy and confidentiality.

3.2 seek coordination and collaboration with an interdisciplinary team of health professionals.