

Table ***. Pharmacy graduates should possess competent knowledge and skills to seek coordination and collaboration of care with an interdisciplinary team of health professionals when assessing genetic information.

Domain	Pharmacist-specific Knowledge
<i>Basic Genetic Concepts ("B")</i>	<ol style="list-style-type: none"> 1 To demonstrate an understanding of the basic genetic/genomic concepts and nomenclature. 2 To recognize and appreciate the role of behavioral, social, and environmental factors (lifestyle, socioeconomic factors, pollutants, etc.) to modify or influence genetics in the manifestation of disease. 3 To identify drug and disease associated genetic variations that facilitate development of prevention, diagnostic and treatment strategies; appreciate differences in testing methodologies and need to explore these differences in drug literature evaluation. 4 To use family history (minimum of three generations) in assessing predisposition to disease and selection of drug treatment.
<i>Genetics and Disease ("G")</i>	<ol style="list-style-type: none"> 1 To understand the role of genetic factors in maintaining health and preventing disease. 2 To assess the difference between clinical diagnosis of disease and identification of genetic predisposition to disease (genetic variation is not strictly correlated with disease manifestation). 3 To appreciate that pharmacogenomic testing may also reveal certain genetic disease predispositions (e.g. Apo E4 polymorphism).
<i>Pharmacogenetics/Pharmacogenomics ("P")</i>	<ol style="list-style-type: none"> 1 To demonstrate an understanding of how genetic variation in a large number of proteins (e.g. drug transporters, metabolizing enzymes, receptor targets) influence pharmacokinetics and pharmacodynamics related to pharmacologic effect and drug response. 2 To understand the influence of ethnicity in genetic polymorphisms and associations of polymorphisms with drug response. 3 Recognize the availability of evidence based guidelines that synthesize information relevant to genomic/pharmacogenomic tests and selection of drug therapy (e.g. Clinical Pharmacogenomics Implementation Consortium).
<i>Ethical, Legal and Social Implications (ELSI) ("E")</i>	<ol style="list-style-type: none"> 1 To understand the potential physical and/or psychosocial benefits, limitations and risk of pharmacogenetic/pharmacogenomic information for individuals, family members and communities, especially with pharmacogenetic/pharmacogenomic tests that may relate to predisposition to disease. 2 To understand the increased liability that accompanies access to detailed genomic patient information and maintain the confidentiality and security. 3 To adopt a culturally sensitive and ethical approach to patient counseling regarding genomic/pharmacogenomic test results. 4 To appreciate the cost, cost-effectiveness, and reimbursement by insurers relevant to genomic or pharmacogenomic tests, for patients and populations. 5 Identifying when to refer a patient to a genetic specialist or genetic counselor.