

How Are Genetic Counselors Strengthening Lab Utilization Management?

Sara Brown, MS, LCGC, is one of 14 genetic counselors at ARUP Laboratories, where she supports the Molecular Genetics laboratories, including Genetics Sequencing, Fragment Analysis, and Genomics.

ARUP hired its first genetic counselor (GC) in 2002 after recognizing the value genetic counselors could bring to the company by assisting clients with test ordering and interpretation. One of the first tasks these GCs took on was reviewing genetic tests that were very specific and prone to order errors.

“At that time, reviewing tests before they were run was pioneering,” says Brown, who is interested in genetic test-utilization management, laboratory ethics, and process improvement.

In the following Q&A, Brown discusses how GCs can strengthen laboratory services, support client satisfaction, and ensure patients and their medical providers understand test results. She shows how this can impact cost-savings for clients and, in the long run, the laboratory.



Expert Edge

Sara Brown, MS, LCGC
Genetic Counselor

Q: First things first, what is a genetic counselor?

A: GCs are mid-level healthcare professionals typically trained in a master's degree program in both genetics and counseling psychology. In clinical settings, they meet with patients to help them comprehend and cope with genetic information. Such settings may include genetics clinics, maternal-fetal medicine practices, and oncology offices. Increasingly, GCs can be found in a variety of expanding roles.

Q: How are genetic counselors involved in laboratory testing?

A: About 20 percent of GCs are employed in commercial or academic diagnostic laboratories. Driven by rapid growth in genetic testing, the roles of laboratory GCs have expanded to suit the needs of hospital sendout and reference labs, genetic testing companies, and more.

GCs provide genetics expertise to clients, ordering clinicians, and laboratory staff. These counselors are a rich resource for answering client questions related to genetic testing, especially in the areas of molecular genetics, cytogenetics, maternal serum screening, and biochemical genetics. For example: What genetic testing options are available? What's the sensitivity and specificity of a test? What methodologies are utilized? What are a test's limitations?

GCs are available to consult with clients and clinicians regarding optimal testing strategy and results interpretation for genetic tests in general or at a patient-specific level. For example, an OBGYN may wonder which cystic fibrosis test to order for the purpose of carrier screening; the GC can recommend the common variant panel and discourage ordering the comprehensive *CFTR* gene sequencing.

* Miller CE, et al. Genetic counselor review of genetic test orders in a reference laboratory reduces unnecessary testing. *Am J Med Genet* 2014;164(5):1094–1101.

Or, if a clinician wants to know what test to order next after a patient's *BRCA1* and *BRCA2* gene sequencing comes back negative, the GC can evaluate the patient's personal and family history, determining if it warrants further testing by deletion/duplication analysis.

Q: How do ARUP genetic counselors save healthcare dollars?

A: Increasingly, labs are focusing more and more on utilization management, and genetics is no exception. Genetic counselors can review ordered tests to determine if the appropriate test is being ordered. This may involve cancelling a large gene panel and running targeted testing for a known familial mutation instead, or cancelling a genetic test that had already been run on the patient in the past. This can save time and dollars.

In January 2014, ARUP genetic counselors published a paper showing that approximately 26 percent of molecular genetic tests reviewed by a GC at ARUP required a test change, resulting in an average savings of \$48,000 per month for our clients.*

Q: How do ARUP genetic counselors help patients?

A: Although laboratory GCs don't interact with patients directly, they help optimize patient care by ensuring that the right test is ordered at the right time on the right patient.

They answer questions from genetics providers as well as other clinicians who don't have access to genetic services at their own institutions. GCs can help providers understand complex genetic test reports and the implications for the patient and their relatives, plus guide clinicians in ordering necessary follow-up testing for patients or their families.