MED-U Kevin Joy December 20, 2017 6:00 AM

What It Takes to Become a Genetic Counselor

Advances and public interest in genetic testing have surged, leading to increased demand for genetic counselors. Learn how U-M's robust training program reviews applicants.

When Beverly Yashar, M.S., Ph.D., completed her master's degree in genetic counseling at the University of Michigan in 1987, she was told it might be tough to launch a career if she stayed locally.

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Today, as director of U-M's Genetic Counseling Program, Yashar says her graduates have the opposite problem: a tough decision on which job offer to accept, let alone where to move.

"It's not uncommon for students to have their job secured by January of their second year, or to have multiple interviews or offers," says Yashar. "They're in exceedingly high demand nationwide."

A 2016 survey by the National Society of Genetic Counselors tallied more than 4,000 certified genetic counselors working in the United States — an 88 percent increase compared to a decade earlier.

As the field continues to grow — a movement bolstered by technological advancements, high-profile advocates such as Angelina Jolie and direct-to-consumer testing kits such as 23andMe — the need for more trained clinicians to interpret the complex data is crucial.

"People want to understand why things are the way they are," Yashar says.

The specialization requires a sharp scientific mind but also a deep sense of empathy and objectivity to help patients comprehend (and perhaps respond to) an inherited health risk that could predict the onset of heart and neurological diseases and cancer, among other things.

Both sides of the coin are covered in the two-year graduate program, housed within the U-M medical school's human genetics department. The program attracts students with prior science education and related work experience.

It's a tough one to get into, too: Nine students are in the current first-year class out of 158 who applied for admission.

"We're not looking for someone who thinks maybe they want to be a genetic counselor," says Yashar, who reviews all applications (the deadline for the fall 2018 semester is Jan. 4). "They have to really know and be grounded."

She spoke more about the merits of the job and what prospective students should know:

What qualities or backgrounds are you looking for?

Yashar: All Michigan applicants have a strong background in biology and biochemistry. A large percentage often have some types of research experience. They also must have a love of working with patients who are in a challenging situation.

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It's critical that they are communicators; the ability to help people make sense of why they either have a disease or are at risk is a key part of genetic counseling.

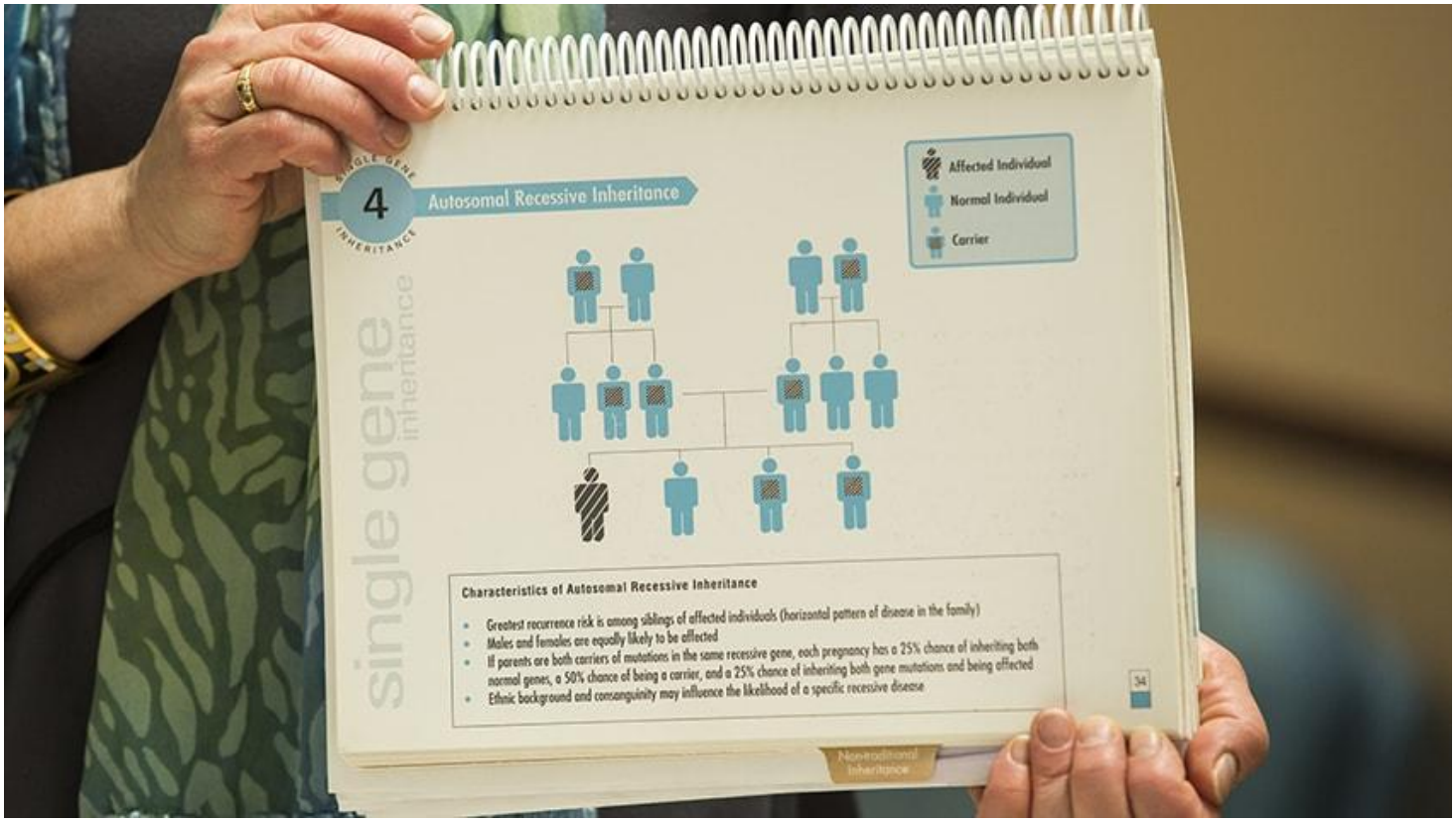
Lastly, we're looking for a passion for genetics and a sense that they know where they're going as a professional. Our training is quite intense, so we need students who are aggressive and independent learners. You have to really prepare yourself with a very specific set of experiences, just like applying to medical school.

How is Michigan's training program structured?

Yashar: Students are grounded heavily in the science of genetics and genomics. They take courses with Ph.D. scientists who are making the discoveries — courses in architecture of the genome, the mutational basis of disease, and how the genome is modified so they can understand why a genetic disease occurs from a variety of perspectives.

Students learn from practicing genetic counselors in both the classroom and in the clinic. This helps them gain skills in communication, risk assessment, patient education and psychosocial assessment and support.

They also take classes in the School of Social Work with social workers, where they think about health at the community level. And there are courses in the School of Public Health focused on both the individual and the health care system. The way the program is structured, you can take courses in any of the associated schools on the Michigan campus.



Beyond covering the science, how do you teach empathy?

Yashar: The counseling elements of training occur both in the classroom and through clinical internships. Interviewing and communication skills are key. You're learning how to support someone in the decision-making process without making the decision for them.

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We don't believe we, as practitioners, know the right answer for a patient — whether you should go ahead and have a prophylactic mastectomy, for example. But we also believe knowledge is power so you can make appropriate decisions about your health.

Students work one-on-one with experienced clinicians in our clinic right away. It's daunting and kind of scary, but it's part of our model — and how we can make what's happening in the classroom have more immediacy. There's a huge amount of mentoring so that a student is ready to take responsibility for clinical cases by their second semester.

What has changed most about genetic counseling over the years?

Yashar: The explosion of our capacity to really interrogate the genome, moving from single gene analysis to looking at multiple genes at once to whole genome sequencing. Genetic counseling is becoming more critical, not just for the ill but also the healthy — trying to anticipate what a patient's future looks like based on their genetic or genomic signature.

Historically, genetic counseling played mostly within the spaces of prenatal and pediatric genetics. Then, cancer became the next growth area. Now, we're moving into cardiology, psychiatric diseases, pretty much anywhere you can think of. There's also been a shift toward more job opportunities in the commercial spaces as well as telehealth and telemedicine.

Why should a prospective genetic counselor consider Michigan?

Yashar: What sets us apart is the fact we are located in the Department of Human Genetics, where scientists are making cutting-edge discoveries and help our students understand how to translate them into clinical practice. We have an incredible breadth of expertise on our campus — with students training in a huge number of clinical disciplines.

Another great thing is that we have alumni all over the country and the world. Students have the opportunity not only to train on campus but to also go out and do an internship outside of Michigan. We really are a passionate community.

For more information about the University of Michigan Genetic Counseling Program, email UMGenetics@umich.edu.

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