

SPECIAL ISSUE

Commentary from a commercial laboratory: The unexpected benefits of a more virtual world during the COVID-19 pandemic

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Progenity, Inc., a commercial genetic testing laboratory specializing in women's health, employed several adaptations to navigate the disruptions of the COVID-19 pandemic in 2020. Operational changes included implementation of novel genetic counseling services, converting field/sales support to remote means, and facilitating remote genetic counseling graduate student rotations. Additionally, there was a marked rise in participation in Progenity's internal continuing education program from the genetic counseling team. The paradigm shift necessitated by the pandemic spurred creative problem-solving and led to increased connections with patients, healthcare providers, peers, and students. The unanticipated benefits of virtual communication with each of these four groups are summarized below.

Early in the pandemic, there was an increase in requests from OB/GYN healthcare providers for existing services such as mobile phlebotomy and there were unique challenges with reaching providers due to modified staffing and hours in response to the COVID-19 pandemic. We sought to assist healthcare providers by increasing patient access to pre-test information, as the omission or delay of early pregnancy visits could interfere with communication regarding prenatal testing options. Prior to the COVID-19 pandemic, genetic counseling services included post-test positive results disclosure and counseling if requested by the ordering provider. However, in response to the COVID-19 pandemic, healthcare providers were given the opportunity to enroll in the new *enhanced* genetic counseling services, whereby a Progenity laboratory genetic counselor contacts patients to provide information about testing ordered by their provider prior to testing. A Progenity genetic counselor also calls the patient to communicate their positive or negative results and answer their questions. The successful contact rate for the new enhanced genetic counseling services program is ~93%, and the average time to complete patient contact is ~1.5 business days. This facilitates

the offering of appropriate education to patients about the tests their physician orders. Furthermore, clinics can prioritize visits that cannot be performed virtually, while simultaneously reducing potential patient and clinician exposure to COVID-19. The process also expands patient access to a genetic counselor, thereby offering pre- and post-test counseling which increases patient autonomy in decision-making about genetic testing and follow-up options.

Meetings between field genetic counselors and healthcare providers also transitioned to a virtual format. Initial uptake by providers was limited. However, as COVID-19 cases continued to rise Progenity genetic counselors recognized the need for alternative ways to have important clinician education sessions while necessitating less in-person interaction for safety reasons. Within about six weeks from the initial shutdowns, these virtual education sessions were increasingly embraced, and positive feedback was received from both genetic counselors and providers. Progenity's field genetic counselors report the focused nature of the virtual meeting led to more meaningful and less distracted clinical conversations. In addition to one-on-one interactions, field genetic counselors established a series of brief educational webinars designed to address key concerns and frequently asked questions about genetic testing. Prior to the COVID-19 pandemic, interactions would typically be between a field genetic counselor and single provider group. In contrast, these webinars reach multiple providers within a geographical region simultaneously. This created efficient professional development opportunities while also encouraging provider-to-provider dialogue among professionals who do not routinely interact with each other.

Scientific meeting attendance changed drastically in 2020, affecting the way our genetic counselors obtained continuing education units (CEUs). Progenity has an existing Case Conference and Journal Club series that is approved for Category 1 CEUs by the

National Society of Genetic Counselors (NSGC). Having this program available allows our genetic counselors to access CEUs in a convenient format and obtain the credits needed for national certification and state licensure maintenance. There was a significant increase in the number of contact hours obtained by each attendee, with the average number of hours rising from 11.0 out of 18.0 available hours claimed in 2019 to 14.1 out of 16.5 available hours in 2020 ($p < .01$). Increased participation in the program facilitated interaction and fostered dialogue among our peers. Having more of our genetic counselors gain exposure to, and benefit from, this program in 2020, we anticipate this will continue in future years.

Finally, the Progenity genetic counselor team and affiliated genetic counseling graduate training programs have experienced multiple benefits of transitioning to virtual student rotations. The pandemic created an increase in requests for Progenity to accommodate student rotations from programs across the United States, which led to the implementation of a virtual rotation experience. The conversion of student rotation activities to a virtual format allows for scalability—both in the number of students and the participating graduate training programs. In 2019, eleven students from three programs participated in Progenity's industry rotation; this increased to twenty-one students from five programs in 2020. For 2021, two additional programs have requested a virtual industry rotation experience for their students. The virtual format has diversified the educational opportunities available to student trainees as well. For example, the transition of field genetic counselor interactions with clients to remote formats allowed for student involvement in these meetings. We are also able to provide student interaction with professionals in multiple departments, including laboratory directors, marketing, variant classification, and operations. Progenity has confirmed its commitment to genetic counselor education by doubling the number of genetic counselors who coordinate student rotations, meaning we are facilitating more student interactions, with a more varied group of genetic counselors. This novel rotation environment provided experiences as an introduction to a remote working environment including phone counseling, setting up video calls with supervisors in different time zones, and accessing online content. These skills are in demand given the COVID-19 pandemic and may continue to be in demand in a post-COVID world. Indeed, the 2021 NSGC Professional Status Survey reported 91% of respondents worked remotely in some capacity, compared with 40% the previous year. Creation of these virtual rotations and associated

materials will be an asset for future years and will allow Progenity to maintain its commitment to genetic counseling graduate student engagement.

In response to the COVID-19 pandemic, Progenity has instituted multiple adaptations to facilitate enhanced support for patients, healthcare providers, peers, and students while adhering to state and federal restrictions and safety measures. In particular, Progenity used virtual methods for patient counseling, healthcare provider education, genetic counselor continuing education, and student training. Of these adaptations, the most likely to be permanent are increased student training capacity and the use of virtual provider meetings, as the benefits for our team and the groups supported appear to be substantial enough to continue beyond the COVID-19 pandemic. Areas of future investigation include studying the efficacy of virtual methods for clinical genetic counseling, student education and rotations, educational conferences, and genetic counseling continuing education.

CONFLICT OF INTEREST

Matthew L. Tschirgi is a full-time employee and shareholder at Progenity; the Founder and Managing Director of Genetix Consulting, LLC; and affiliate faculty at Boise State University. Katherine Hill-Harfe is a full-time employee and shareholder at Progenity. Victoria Haverbusch is a full-time employee and shareholder at Progenity. Nicole Truitt is a full-time employee and shareholder at Progenity. Kathleen Collett is a full-time employee and shareholder at Progenity. Tessa J. Niemchak is a full-time employee and shareholder at Progenity.

REFERENCE

NSGC. (2021). *National Society of Genetic Counselors: NSGC. Professional Status Survey*. Retrieved 5/04/2021, from <https://www.nsgc.org/Policy-Research-and-Publications/Professional-Status-Survey>

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