Unlocking Secrets to Well-Rounded Precision Medicine Programs

Dr. Hunt Willard describes key thoughts and considerations for implementing a precision medicine program

Health systems desire to launch genomics-focused precision medicine programs but seldomly know what it takes and how to get there. Dr. Willard, Chief Scientific Officer and Senior VP of medical affairs at Genome Medical, shares his valuable insights with Clinical OMICs on how organizations can build large-scale clinical and research programs in genomics and population screening.

Much attention has been paid to health systems that have launched precision medicine programs around the country. Is it time to incorporate such programs into routine medical practice?

Absolutely! We've known for decades that information encoded in our genomes is relevant to and impacts all parts of clinical medicine. DNA variants influence all medical specialties, so genetics are a logical foundation for thinking about and guiding health care and wellness throughout the life journey.

Although we certainly don't know everything about the potential impact of the millions of variants each of us has in our genome, we do know enough to get started. Clinically meaningful findings can influence disease risk, inform steps to prevention or treatment of disease, and educate other family members about their possible risks.

Our goal is to provide equitable genomics access for all. It's unthinkable to wait until we know "everything," and we can begin with what we know now. Progress will be delayed for everyone if we don't begin to implement programs into routine medical care today.

What's the value proposition for offering a clinical genomics program for precision health, as you describe?

Value can be assessed in many ways, whether it be value to patients, health outcomes, or economic benefits.

There are use cases where the evidence of clinical benefit and cost savings is strong (e.g. genome sequencing for children suspected with genetic disorders in the NICU). Even the CDC has stated that early screening also yields early intervention and that treatment of "tier 1 conditions" provides significant value to all stakeholders.

We know that professional guidelines may still miss up to half of all patients who could benefit from screening. For those patients, the "value" is unquestionable, as each encounter is an opportunity to improve or save a life.

Without a doubt, over time we'll also have more diversified types of evidence, using real-world data to generate a value proposition that can best inform clinical guidelines, improve medical practice, and expand payor coverage. But we should get on with it and begin now.

What can a health system do to prepare itself for the launch of genomic medicine and precision health programs?

Most importantly, health systems need to clearly define what they mean by "precision medicine" or "precision health"—and at what scale. They must have clear goals and milestones in mind. One size does not fit all, and there are many considerations, including staffing, costs, workflows, partners, etc.

But the common denominators are focused strategic planning, broad patient and provider engagement, consensus-building, and institutional buy-in. All successful programs I've seen start with support from inspired and committed health system executives.

What do health systems need to have in place in order to build an effective research or clinical program as you describe, or can they partner with other organizations to achieve their goals?

A common misconception is that institutions have to first make major investments (hire genetic experts, build a new lab, bioinformatics team, etc.). Yet, much of these can be achieved by creative partnerships or simply hiring strategic advisors, especially in the early conceptual planning stages of a new program.

I came to Genome Medical to support and empower health systems. We are already strategically engaged with institutions as varied as a major multi-state health system and a nationwide clinical research organization, advising them on how to start their projects, avoid costly mistakes and delays, and ultimately accelerate the process of bringing genomics and genomic medicine to everyday care.