Precision Medicine
Shaping the Future of Health and Healthcare

Moving Genomics to the Clinic

Accelerating our ability to integrate genetic testing and screening into standard clinical care in order to realize population-level precision medicine.

Context

The promise of precision medicine hinges on our ability to use highly personal data about individuals and populations to prevent, screen, diagnose, or treat patients with disease.

Healthcare providers are increasingly using genetic information as a routine part of prenatal, pediatric, and cardiovascular care. The use of genetic information is even more common in the areas of rare disease, oncology, and pharmacogenomics (looking at how genes affect a person’s response to drugs).

Beyond these more specialized disciplines, population screening for actionable hereditary health risks is of interest to many healthcare organizations. The explosion in popularity of direct to consumer genetic testing is allowing many members of the public to learn more about their predisposition to certain health conditions like cancer and heart disease. Patients and the general public want to consider this information in health and healthcare decisions, and researchers, along with innovators in the genetic testing and support services industry, are increasingly advocating for its inclusion in clinical practice.

The Challenge

Many experts and innovators argue that genetic testing should become a routine part of clinical care as a means to identify and treat diseases. It would enable a more proactive approach to identifying risks and establishing management strategies for a population-wide precision medicine experience.

Most healthcare organizations and physicians are not incorporating these tests into routine practice. After an extensive scoping exercise, the Forum’s precision medicine team found that the most significant barrier to moving genetic testing into clinical practice for broader populations is the lack of coverage for genomic testing – i.e., that a physician or healthcare institution will not be reimbursed for the process of ordering and returning the results of a test.

While this is an over simplification of the complexity of the situation, there is general discomfort that the science on which many of today’s genetic and genomic tests are based is still evolving, and thus many physicians and payers are unsure of the utility of genetic testing to drive clinical care decisions in the large, diverse populations they serve.

The Opportunity

We plan to explore, design and test incentives to accelerate building the evidence base for clinical efficacy and utility as a way to increase coverage of genetic testing and screening. Increasing the evidence base serves two purposes: to improve physician comfort with the clinical utility of such tests and to demonstrate to payers that tests do elicit action for the populations that they cover. Increasing the incentives for payers to cover genetic tests would allow clinicians and patients to significantly contribute to building the evidence base for the utility of genetic tests in real world settings. This in turn enables population-wide genetic testing that, over time, will drive our ability to personalize the way we treat, mitigate or manage health risks to patient populations. This project will involve several steps:

- Elucidation and validation of key barriers to population-level genetic screening and testing, considering different models of healthcare delivery, cultural and ethical expectations, and stages of healthcare-system development.
- In-depth analysis of the drivers of coverage determinations for genetic screening and testing. What gaps need to be filled: e.g. knowledge, technology, perceptions
Determination of appropriate genetic testing use case(s) to focus stakeholder dialogues and activities.

- Development of pilot projects to demonstrate clinical efficacy of genetic testing, and/or acceleration of existing projects.
- Identification, design and pressure testing of incentives to address the gaps leading to low or inconsistent levels of coverage.
- Building a consortium of influencers across the healthcare ecosystem that can design and implement incentives

Impact

The project will address a foundational element of precision medicine: our ability to effectively deploy genetic screening and testing into routine clinical care. To do so, healthcare providers must be confident that genetic screening tests provide them with useful and actionable results for the populations that they serve. Payers need to know that tests are clinically actionable, and lead to improved outcomes for patients. This project will focus on the incentives to generate sufficient proof of the utility of population-level screening tests and the efficacy of their use in clinical care, for healthcare providers and the payer community.

How to Engage

Contribute to an Economic Analysis of the Value of Genetic Testing: Suggest international case studies, nominate an expert to write, or serve as a peer reviewer

Send a project fellow: Nominate an individual from your company to work full- or part-time at the Centre to play an integral role in shaping this initiative

Scale up the project: Test and refine policies, toolkits, frameworks, and models through your government, business or community

Contribute expertise: Serve as an adviser on the project and workstreams

Contact

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