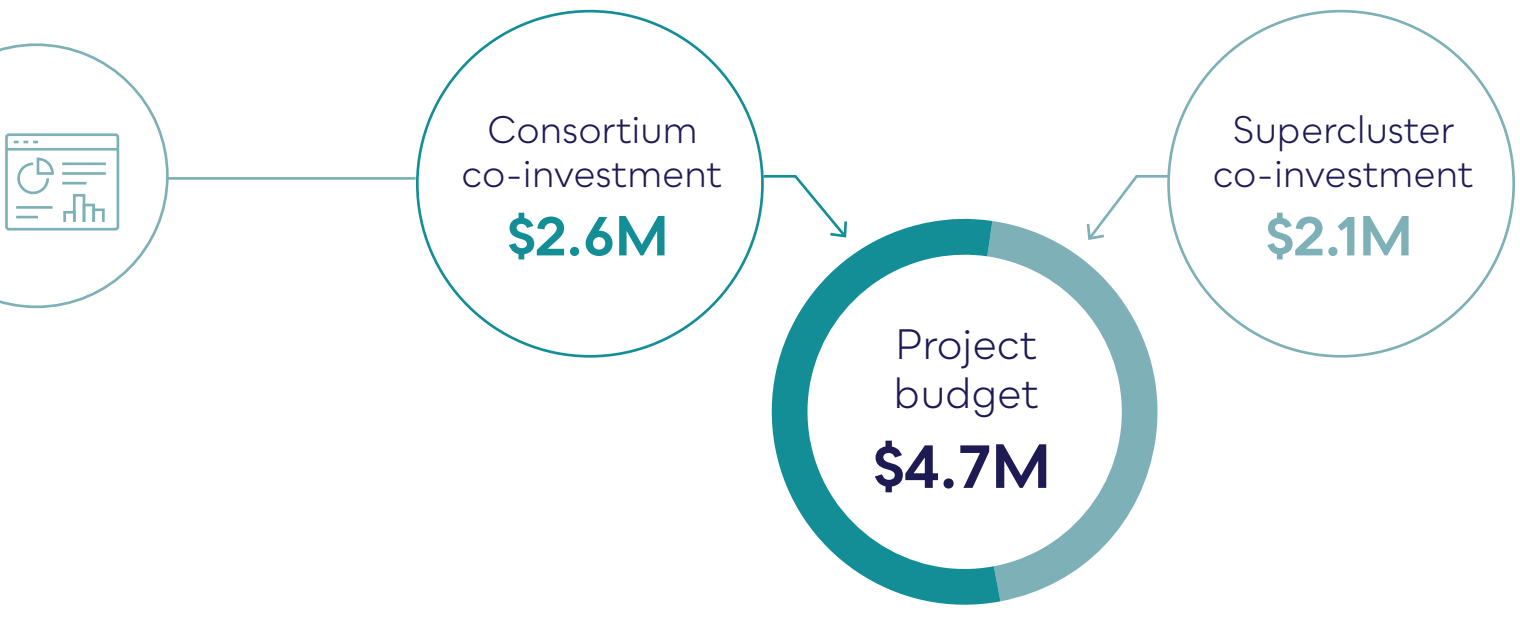
CANADA'S DIGITAL TECHNOLOGY SUPERCLUSTER

Tailored Health – Pharmacogenetics

An integrated approach to prescribing medication based on a patient's genetics.



Project Overview

Pharmacogenetics (PGx) is the study of how genes affect a person's response to drugs. Inappropriate medication prescribing is associated with adverse drug reactions, hospital admissions and mortality which can all be reduced due to recent advances in genetic testing and translational technology.

Adverse reactions to medications account for up to 12% of emergency department visits, 5% of hospital admissions and are estimated to claim 10,000 to 22,000 lives per year in Canada alone.

This is exacerbated by the approximately 20% of Canadians that currently take three or more medications (polypharmacy). As the Canadian population ages the proportion of polypharmacy patients is expected to increase and cause additional stress on healthcare budgets.

Led by TELUS Health and in partnership with GenXys, LifeLabs, and Genome BC, the PGx project will create a pharmacogenetics ecosystem by digitally connecting testing labs and medication decision support software with primary care and pharmacy management systems. Enabled by a digitally-integrated solution, this PGx project will link two pharmacogenetic solutions combining an individual's genetic makeup with their biophysical, drug, and medical history, integrating clinically useful medication options into the clinical workflow through Electronic Medical Records (EMRs) and Pharmacy Management Systems (PMSs).

This project will enable estimating an individual's population-based drug risk, integrated pharmacogenetic testing, enhanced prescribing effectiveness, and the delivery of better health outcomes for Canadians. With patients and their clinicians using this solution, adverse drug reactions will be reduced, and the standard of care in Canada will be improved. The PGx project will help to realize the ultimate goal of providing "the right drug to the right person at the right time."

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