Alberta Project Validates First Synthetic Health Dataset in Province - **Project Increases Data Accessibility While Maintaining Patient Privacy**

EDMONTON, Alberta, Oct. 21, 2020 -- The health innovation community has one more approach towards increasing the timely and safe utilization of health data thanks to a research project co-sponsored by Health City and the Institute of Health Economics (IHE) in partnership with Alberta Innovates, Replica Analytics, and University of Alberta. Unique in Canada, this project was initiated to provide insight into the value and validity of synthetic (simulated) data in health services research. The promising results have been submitted for publication.

Health City and its partners identified synthetic data generation as one approach to leverage the region's capacity and partnerships in data, artificial intelligence, and machine learning to fuel health system innovation. Synthetic data accurately simulates patient-derived datasets and, although generated from real world data, is not linked to the individuals from whom the data were derived. Because synthetic data contains no real patient health information, the datasets have the potential to be shared freely among investigators or those in industry without raising patient privacy concerns or contravening the Alberta *Health Information Act*. The project engaged the Office of the Information and Privacy Commissioner of Alberta to ensure synthetic data can be used in a way that respects the privacy of citizens.

"It was important we demonstrate not only that we protect the data privacy of Alberta," said Mark Diner, Director at Alberta Innovates, "but that the OIPC understands how the process works as well. Albertans must have confidence in game-changing, data-driven innovation."

"Alberta has the largest regional health authority in Canada, and the opportunity to use data to drive improved health outcomes is immense. Complex healthcare datasets can support research, policy development, and quality improvement projects across the province, but we need advanced tools like synthetic data to make use of these data sets safely. Due to its complexity, the notion that synthetic data would be able to sufficiently capture and simulate real world data in Alberta was unlikely," said Dr. Dean Eurich, Professor at University of Alberta. "Remarkably, I was somewhat shocked to observe the research results could be replicated with a fairly high level of precision within synthetic data. These synthetic datasets will be extremely beneficial for researchers to share data across jurisdictions. They will also allow academics and students easier access to health data and support more efficient training of the next generation of health data scientists."

Demonstrating the viability of synthetic datasets creates further opportunities for innovators to work alongside the health system while preserving patient privacy. Creating further opportunities for health innovation to occur in Alberta is a component to driving economic development for the province.

"Better data analysis techniques lead to better healthcare. Synthetic data provides a safe way for talented data scientists from community, academia, and industry to work alongside the health system to drive improved health and validate novel solutions developed in Alberta for Albertans," said Reg Joseph, CEO, Health City.

"Alberta has a rich repository of health data that can provide important insights to support improvements in health care and improved use of health care resources," stated Dr. Chris McCabe, CEO of IHE. "Synthetic data is a promising way to address the challenges of using personal health data directly. We look forward to testing this out and providing lessons on how we can use it for improved health and economic benefit for Alberta."

About Health City

Health City is a Canadian not-for-profit Corporation that works with clinicians, innovators, philanthropic organizations, and companies to develop new pathways of care that can drive better health outcomes and economic development in the health sector. Our focus is on transforming innovations from our health sector into solutions that have commercial application and global relevance, adopting them for impact locally and scaling them for export to global markets.

For more information, visit **www.edmontonhealthcity.ca**.

About Institute of Health Economics

Institute of Health Economics (IHE) is a not-for-profit health research organization providing expertise to provincial and national stakeholders from the public and private sectors in evidence production, synthesis and application; economic analysis; and policy engagement. It was founded in 1995 on the belief that the best solutions to healthcare problems are the result of a collaborative approach, with all stakeholders at the table sharing insights and information in support of improved health outcomes and a thriving economy.

For more information, visit **www.ihe.ca**

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