Ministry of Health (Digital Health Division) Opportunities

Opportunity Background


Digital Health refers to using information and information technology, such as hospital information systems and electronic medical records, as well as innovation platforms and analytics solutions to improve the healthcare system. Technology advances over the last decade open up new uses for information not only to access health information for care, but also big data and artificial intelligence, genomics, population health, precision medicine, and more. The Ministry’s Digital Health Division is designing new business and information strategies to capitalize on these opportunities to transform our citizens’ experience of healthcare and push the boundaries of health innovation. The Division’s role in the Ministry is to lead the development and implementation of digital health strategy and information policy (including modernization of the province’s access and privacy legislation) for the Province of Ontario across all sectors of healthcare.

Like to think about the big picture and ask the question why? Want to wake up in the morning for something more than just the bottom line? Up for working on some of healthcare’s most complex and challenging problems? Then consider this dynamic opportunity to be part of an entrepreneurial team in the Ontario Ministry of Health working on healthcare strategy through digital and data-driven innovation.

We are looking for: Highly motivated self-starters with creative, lateral thinking skills. Ability to learn quickly and adapt. Exceptional ability to both analyze and synthesize information and deconstruct complexity. Excellent research, communication and interpersonal skills.

What we need: Policy research, analysis and stakeholder consultation to be done on topics such as: Data for Good Policy in Healthcare, Responsible Innovation Strategy for Big Data/AI in Healthcare, Intellectual Property and Open Innovation Considerations for Big Data/AI in Healthcare, and Data Stewardship and Governance for Big Data/AI in Healthcare.

What you will get out of this: Build your professional network and work on multiple high-priority information strategy and policy projects relating to data-driven healthcare innovation.

Duration and salary: 6 to 9 month contract positions with possibility of extension, salary commensurate with expertise and experience

Contact: Send resume to: Christine.sham@ontario.ca (Note: We thank you for your interest. Only those selected for further screening or an interview will be contacted)
Sample Projects – Detailed Description

Data for Good Policy in Healthcare: This project will involve policy research, analysis and stakeholder consultation to identify global government stewardship practices pertaining to data and innovation management in healthcare and other industries, and work on developing a provincial approach that demonstrates tangible and intangible health, social, and economic benefits for Ontarians. This will involve exploring the most innovative frameworks used by government to derive maximum value out of the secondary use of health and social data while preserving privacy, security, and public trust in government. This will include identification and consideration of the opportunities and risks associated with different frameworks, solutions, and approaches to determine the 'best fit' based on the context presented.

Responsible Innovation Strategy for Big Data/Al in Healthcare: The Ministry of Health is looking at developing a new framework to enable responsible innovation that relies on the use of digitized health information to develop inventions, products, and services for the benefit of patients, providers, and the health system. These uses will consider different models of public-private partnerships, including use cases that promote the development of software as a medical device, digital medicine, precision medicine, personalized health care, learning health systems, and a health platform economy. Collaborations between the public and private sectors are often controversial where health data is implicated, yet the government relies on businesses to innovate and promote economic prosperity. Furthermore, health care is one of the largest and fastest-growing industries, consuming over 10 percent of gross domestic product of most developed nations. The emergence of big tech, such as Apple, Google, Facebook, and Amazon, in health care presents new challenges for health regulators worldwide. This project will look at the strategic governance framework and operational model needed to contextualize a data-as-a-service platform to support healthcare innovation.

Intellectual Property and Open Innovation Considerations for Big Data/Al in Healthcare: The next frontier of digital medicine brings longstanding economic policy debates into the limelight within the context of health care. Some unique aspects of digital innovations in health care include the sensitivity of personal health information and considerations of data ownership, stewardship, privacy, and security. For these digital innovations that use or consideration personal health information, it becomes necessary to consider intellectual property implications. This project would look at "open" and "closed" approaches to managing innovation ecosystems and explore the merits and limitations of different approaches tailored to the context. Another important consideration will be the trust and benefits realization framework that takes into account transparency, public opinion, and complex stakeholder interests. A current and ongoing initiative related to this is the Ontario Health Data Platform intellectual property policy, which represents a significant milestone and one of the first steps in the government’s commitment to advance efforts in this field.

Data Stewardship and Governance for Big Data/Al in Healthcare: As the use of digitized data continues to transform health care, there’s a new imperative to share health and social data more broadly not only among patients, providers, and healthcare delivery organizations in the public sector, but also to expand this circle to include researchers and innovators, digital health...
companies, and direct-to-consumer service providers in the private sector. With the ever-increasing digitization of health information, new opportunities are arising to share and use information in different ways than previously contemplated (e.g. machine learning, health apps, etc.), and, increasingly, these technologies are becoming foundational to the delivery of contemporary, high-quality care. In recent years, in light of global affairs such as Sidewalk Labs, there has been keen interest in exploring new governance models, such as data trusts, that can improve public transparency by providing a mechanism for bottom-up oversight. Ontario’s health privacy legislation is in the process of undergoing modernization, including two recent sets of legislative amendments announced in the Fall of 2019 and Spring 2020. Further work is required to define the full requirements of a modernized health privacy legislation in the data and digital era. This will include working on conceptual strategy and policy approaches, jurisdictional review and analysis, developing and undertaking a broad public consultation strategy and working with a multitude of stakeholders.