Responding rapidly to the **COVID-19 pandemic using ICES data and analytics**

Early in 2020, a global pandemic wreaked havoc around the world. COVID-19, an infectious disease caused by a newly discovered novel coronavirus, spread like wildfire. In Canada, the first case was confirmed in Ontario in late January. By March 11, Ontario had reported its first death attributed to COVID-19, and by March 17, a state of emergency had been declared and all non-essential businesses and schools were closed. As of September 9, 2020, the number of confirmed COVID-19 cases in Canada had reached 134,000, with more than 9,000 COVID-related deaths. Globally, the number of cases surpassed 27 million with the death toll at more than 900,000.

Areas of impact:

Makes policy better

Makes health care better

ICES Research

ICES staff and scientists responded to this pressing health issue by rapidly mobilizing cross-departmental resources. This included working with data partners to add to and enhance important core data resources, while also receiving them more rapidly, in order to report real-time information about COVID-19 testing and test recipient characteristics to decision makers at the **Ontario COVID-19 Command Table.** Epidemiologists, data analysts and scientists at ICES along with the leadership team continue to meet multiple times weekly to prioritize and streamline the rapidly expanding number of data sources and lab results to ensure that data quality standards are observed, and that data are promptly made available to knowledge users and researchers.

The first publicly available **report** was developed as part of a multipronged strategy to provide timely and meaningful data on COVID-19 testing in Ontario to decision makers at the Ontario Ministry of Health (MOH) and Public Health Ontario (PHO), as well as clinicians, researchers and others interested in the characteristics of individuals tested and confirmed positive for COVID-19 in Ontario. The second public **report** focused on patterns of testing and test results for immigrants and refugees in Ontario from the initial phases of COVID-19 testing through to June 13, 2020. This was the first analysis of its kind in Canada.

"This was an all-hands-on-deck effort across the entire institute. At the same time as we shifted the entire institute to work from home, our staff and scientists pulled together to respond to a public health emergency in a way ICES had never done before. Our work around COVID-19 shows that we can mobilize rapidly and effectively, and the entire team deserves recognition for their hard work."

Dr. Michael Schull, CEO at ICES

How this work is **having impact**

- Through partnerships at the provincial and national levels, ICES rapidly added near-real-time COVID-19-relevant data sets to its collection of linked health data.
- ICES' response to one of more than 20 COVID-related Applied Health Research Questions (AHRQs) helped inform PHO on which elective procedures could be postponed in order to make ICU beds available for COVID-19 cases.
- More than 40 COVID-19 research projects were launched by ICES scientists.
- ICES built and shared its **code** for mining COVID-19 lab test results under an open source license. This code was developed through a collaborative effort by ICES and the MOH to identify COVID-19 cases in Ontario lab data consistently and accurately.
- COVID-19 testing **dashboards** using multiple comprehensive data sources were published and updated by ICES on a weekly basis.
- ICES was the first organization to report on COVID-19 testing and cases in individual long-term care facilities.
- Daily reports on COVID-19 testing in long-term care and retirement homes were provided to PHO and MOH beginning April 17, 2020.
- Multiple public health units, including those in London, Niagara, Durham, Sudbury and Toronto, use the COVID-19 testing data supplied by ICES in their public facing dashboards.
- ICES is a key partner in the MOH's **Ontario Health Data Platform**. The OHDP will provide researchers with secure access to Ontario health data for COVID-19-related research projects, including on the ICES platform.
- The ICES Indigenous Portfolio reports COVID-19 testing data to various indigenous partners and organizations.