LETTERS

Open access epidemiologic data and an interactive dashboard to monitor the COVID-19 outbreak in Canada

A recent publication in *CMAJ*[1] highlights the critical need for timely, accurate and accessible epidemiologic data for the ongoing coronavirus disease 2019 (COVID-19) outbreak to inform public health response efforts. In Canada, the first case was reported on Jan. 25, 2020, in a returning traveller. As of Mar. 30, 2020 there have been 7448 reported cases and 89 reported deaths across the country.

Individual-level case data are particularly valuable during outbreaks but are seldom made available in real time. Interactive data visualizations are also needed to contextualize this information and provide a pan-Canadian summary. These tools engage not only the public health and research communities but also the general public whose cooperation is essential to effectuate response efforts.

We developed an individual-level data set of confirmed and presumptive positive cases of COVID-19 in Canada (https://github .com/ishaberry/Covid19Canada), including demographic characteristics, location, report date, travel history and exposure source. Time series of deaths, recoveries and testing are also recorded. This data set feeds into an interactive dashboard (https:// art-bd.shinyapps.io/covid19canada/), which enables users to view the data and follow the outbreak. All data are openly accessible and updated daily.

Data are collated from government health authorities as well as news media. Data are entered manually and coordinated by a team at the University of Toronto. Our data set aligns with the Public Health Agency of Canada's COVID-19 outbreak updates[2] and is more detailed, timely and amenable to analysis than the federally reported aggregate data.

Given the high engagement with this data set to date, we plan to continue updating it to provide a robust epidemiological picture of the COVID-19 outbreak in Canada. We hope these data are used to inform epidemiologic and modelling analyses during this outbreak. Data sharing, standardization and visualization will continue to be crucial for supporting evidence-based control strategies and directing public health response efforts in Canada.[3]

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