Researchers create digital 'atlas' to support effective planning of pharmacy services

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Researchers at the University of Toronto's Leslie Dan Faculty of Pharmacy have launched an interactive atlas that provides a snapshot of pharmacist services across Ontario.

Among the first of its kind in Canada, the Ontario Pharmacy Evidence Network (OPEN) Interactive Atlas Tool enables regional comparisons, helping policy-makers plan pharmacist services more effectively.

"This tool is arriving at a critical time for decision-makers," said Suzanne Cadarette, an associate professor at the Leslie Dan Faculty of Pharmacy who is the lead scientist and author of the atlas tool.

"It describes the evolution of community pharmacy practice in Ontario, can be used as a guide for the expansion of pharmacist service delivery across Canada, and may help health services delivery pivot in the face of external factors, including the COVID-19 pandemic."

The province began funding several professional pharmacist services in 2007, starting with MedsCheck, a program that remunerates pharmacies for completing medication reviews among patients with diabetes or taking three or more medications for chronic diseases.

Ontario now also funds programs in which pharmacists communicate with prescribers regarding drug therapy-related problems, provide smoking cessation counseling services, administer influenza immunizations and provide COVID-19 testing.

In the initial research brief—published recently in the Canadian Pharmacists Journal—the authors describe how the OPEN Interactive Atlas Tool enables a comprehensive analysis of trends and regional differences in professional pharmacist health services delivery.

Using interactive data visualization software, the researchers display large-scale health care administrative data from 2007 to the most recently available date, then manipulate it based on region, calendar year, sex and age. For example, users can click forward or backward by influenza season to compare influenza immunization delivery over time, or play a video loop of the change in flu vaccine delivery by region.

With these features, the researchers found that more women than men aged 65 or older receive influenza immunizations, yet immunization rates are higher among older men.

Future research briefs for each service are in development that will provide broader context across Canada. Cadarette's research team urges other provinces and territories to consider creating similar descriptive atlases of pharmacy services as
a starting point for discussion, collaboration and education.

"Community pharmacists are one of the most accessible primary health-care professionals, providing a wide variety of evidence-based care. As such, the utility of a pan-Canadian tool would be tremendous," said Ross Tsuyuki, professor and chair of the department of pharmacology in the Faculty of Medicine and Dentistry at the University of Alberta. He is also editor-in-chief of the Canadian Pharmacists Journal.

With additional funding, Cadarette hopes to update the atlas annually. Her team is also working on an initial descriptive analysis of the impact of COVID-19 on the delivery of professional pharmacist services.


Provided by University of Toronto