New Network to Improve Drug Studies

By Jim Oldfield

Cross-country research network pairs with Health Canada to improve drug safety and efficacy studies

An innovative new research network is partnering with Health Canada to speed the evaluation of recently approved medications by linking the health care data of large patient groups across four provinces for fast access and efficient analysis.

The Canadian Drug Safety and Effectiveness Research Network (CDSERN) led by Dr. David Juurlink, a scientist at Sunnybrook Research Institute and the Institute for Clinical Evaluative Sciences, will bring together a team of researchers from British Columbia, Manitoba, Ontario and Quebec.

The establishment of this team means that researchers will be able to catch emerging drug safety concerns at the earliest possible time, and generate practice-changing studies more quickly.

Clinical studies are key to establish safety and effectiveness before a drug is made available to patients, but they have drawbacks. “The clinical trials that often enable a drug’s approval are typically done in people who are healthier than patients in the real world, and trial subjects are followed much more closely,” said Juurlink, an associate professor of medicine and pediatrics at the University of Toronto. “Consequently, drug safety and efficacy data from trials is often different from that seen in real-world practice.” Trials are also expensive and take a long time.

Using the linked health care data of large patient groups, however, scientists can study a drug’s impact faster and more efficiently.

To facilitate those studies, CDSERN has paired with Health Canada’s Marketed Health Products Directorate, responsible for various activities surrounding drugs. Regulatory agencies are among the first to get signals about new drug safety concerns, whereas researchers often don’t do a drug safety study until reports on that drug have cropped up in the literature. By partnering with Health Canada, therefore, the research team will get a “head’s up” on emerging safety issues.

Moreover, in the past, different provincial jurisdictions would often work with data and collaborators from their own province, to capitalize on harmonious patient data holdings and minimize time and expense. As well, Juurlink said, researchers are familiar mostly with their own province’s data, and regional differences exist in data collection and patient reimbursement policies: Quebec has traditionally taken an open approach to funding new medications, while B.C. has been somewhat restrictive, with Ontario and Manitoba in between.

These variations make analyzing data a challenge, but they also provide researchers with an opportunity. “We can contrast the consequences of differential uptake of particular medications among provinces, and draw conclusions about the effect of those medications on the health of Canadians,” said Juurlink. And, linking four provinces means accumulating data more rapidly.

“Hopefully we can answer questions faster than we otherwise would have, toiling away independently in each province. The silo mentality is exactly what we’re trying to avoid.”

The network will be funded by a $1.4-million grant from the Canadian Institutes of Health Research.