CANADIAN
Healthcare Technology

CANADA'S MAGAZINE FOR MANAGERS AND USERS OF INFORMATION SYSTEMS IN HEALTHCARE | VOL. 24, NO. 6 | SEPTEMBER 2019

INSIDE:

DIAGNOSTIC IMAGING
PAGE 12

Advances in home care
Circle of Care, a provider of home care services, has been refining its EasyCare management system and now offers it to other agencies. It has advanced geo-locating, analytics, and more.
Page 4

Emergency alerts
Northern Health, in British Columbia, has implemented a messaging system that effectively sends information to staff across the organization during emergencies.
Page 6

Province-wide cardiology
Nova Scotia has integrated all of its ECG machines, so that data collected across the province flows into a centralized repository. The computerized system enables clinicians to quickly see and analyze results.
Page 12

PHOTO: COURTESY TECHNOLOGY & THE FUTURE OF HEALTH CARE

Dr. Darren Larsen, chief medical officer at OntarioMD and a family physician, explained how the new i4C dashboard works in a presentation to doctors at the recent Technology & the Future of Healthcare Care conference, in Hamilton, Ont. The innovative system can be used with several popular EMRs, and allows doctors to provide better care to their patients and to rate their own performance.

Dashboard enables doctors to analyze EMR data

BY JERRY ZEIDENBERG

TORONTO – Physicians collect an enormous amount of data about patients, and they log much of it into their EMRs each day. Nevertheless, doctors may sometimes forget to record certain items – such as whether a patient is a smoker or is due for diabetes screening.

And if they do chart the data, they might not code correctly – in a way that allows them to bill properly or find and use the information in the future. Finally, even if they get everything right, they might not be actively mining the data, so they know when to prompt their patients for screenings or tests.

"We need to derive more insights from our data," said Dr. Darren Larsen, Chief Medical Officer at OntarioMD and a family doctor. "We need to gain wisdom from it."

Dr. Larsen recently spoke at the IoT Big Data Healthcare conference in Toronto, and at the Technology & the Future of Health Care conference in Hamilton.

"If physicians made greater use of the data in their EMRs", he said, "analyzing it regularly, substantial gains could be made in the quality of care. Patient outcomes would improve, and by making sure they're screen-

> **Doctors can drill down to find out which of their patients need screening or tests.**

ing properly, physicians could claim financial incentives they may otherwise miss."

For these reasons, OntarioMD led the development of an EMR-integrated dashboard tool that shows doctors, at a glance, where there is opportunity to improve and take action – both in the quality of the data they're collecting and the care they're providing to patients.

Called Insights4Care (i4C), the system currently runs on three EMRs – OSCAR, TELUS Med Access and TELUS PS Suite – but more are on the way. OntarioMD provided access to the i4C Dashboard to 500 physician users over the past two years as part of a proof of concept, and the Ministry of Health recently gave the go ahead to implement the tool on a province-wide basis.

The i4C Dashboard is graphics-based, with EMR data presented as bar charts and pie charts that are easily read – much like the dashboard on a car. And while it aggregates patient data, it is the only dashboard tool that gives doctors the ability to drill down to the individual patient level to quickly find out which of their patients need preventive care measures like screening or tests.

"When you show doctors the system, and how to use it, you see improvements [in

OntarioMD led the development of EMR-integrated dashboard tool

their practices] within 90 days," Dr. Larsen said.

Indeed, an assessment of dashboard data, conducted in 2018 near the end of the proof of concept, revealed the following improvements in participating doctors' data quality just 90 days after training:

• Patients with diabetes coded increased by 4.3%
• Patients with smoking status recorded increased by 3.2%
• Patients with colorectal cancer screening up-to-date increased by 2.9%
• Patients with hypertension coded increased by 2.8%
• Patients with BMI recorded increased by 2.8%
• Patients with breast cancer screening up-to-date increased by 2.3%

These improvements in data quality enable proactive care for patients who were not previously identified as needing attention and can make a difference to patient outcomes.

When the dashboard was first launched about a year and a half ago, it started with

17 clinically relevant primary-care indicators. That number was soon boosted to 30.

Examples include:
• Body Mass Index (BMI)
• Breast cancer screening (up to date)
• Coronary artery disease (coded)
• CAD (up to date)
• Cervical cancer screening (up to date)
• Childhood immunizations (up to date)
• Colorectal screening (up to date)
• Diabetes coded and screening up to date
• And more.

"There are 70 more indicators to come," said Dr. Larsen. "We had a total of 200 in mind, but we chose 70 to add in the immediate future, keeping in mind that more measurement is not always better. Better measurement is better."

While most physicians have found the idea of the system to be interesting and useful, some have balked. There are three reasons for this, all of which may true.

"The data is wrong is their first response," said Dr. Larsen. "This may be true, but the data comes from them, so they quickly see the opportunity to make it better."

Next, they say their patients are different, which may also be true – they may

Dr. Darren Larsen explains the benefits of i4C at the recent Tech & the Future of Health Care 2019 conference.

have a high number of high-risk patients or many who shun vaccinations, for instance. This explains variance.

Thirdly, they say that their practice is different. However, "This is a reality for all practices, but when you combine that with practice advice, coaching or peer leadership, positive change can occur."

"If the data is there, you can work with it," asserted Dr. Larsen.

And despite these variations, most patients will require similar treatments. In certain situations, virtually everyone will need blood-work or a tetanus shot, no matter their origins or beliefs.

On the topic of patients who are behind in screening, said Dr. Larsen, "the tool enables you to quickly identify and group them for outreach; they could be invited in for education sessions, to help them understand the history and value of the recommended tests and procedures".

In offices that have already adopted the dashboard, it's not only physicians who are using it. Nurses, administrative staff, clinic managers and executives, and IT staff have also been working with it to gain insights.

Another important aspect of the dashboard is that it allows doctors to compare their performance with their peers who are also using the tool and have opted in to share aggregate data. So, for example, they can see how other physicians are doing when it comes to capturing data correctly or screening for various diseases.

"That, in itself, is a huge nudge for improving quality," said Dr. Larsen. Physicians who might be lagging in one area will usually want to catch up with their colleagues when shown the difference.

"We as doctors are inherently competitive…we want to be the best," said Dr. Larsen. "We should tap into that competitiveness, that spirit of wanting to do better. Better than myself, and better than my peers."

It's this desire to excel that can be harnessed to improve the delivery of care. By sharing information, physicians can get a better idea of their performance and where to improve. And that's just what the dashboard allows them to do.