



# Saskatchewan Promotes Quality Chronic Disease Management Care

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In the 21st century, chronic disease management (CDM) is receiving serious attention within the health care system. Chronic illnesses are associated with high morbidity and mortality in Canada. A number of provinces and regional health authorities have followed British Columbia's and the United Kingdom's lead and launched primary care initiatives to improve the management of chronic disease and increasingly involve consumers in self-management. These initiatives offer huge potential savings for the health system as well as improved quality of life and longevity for patients with chronic diseases.

## Saskatchewan Chronic Disease Management Improvement Initiative

Saskatchewan is moving ahead with a large province-wide quality improvement initiative. The driving goal behind this initiative is to improve the care and health of individuals with coronary artery disease (CAD) and/or diabetes and increase access to physician practices for Saskatchewan patients. Preliminary findings suggest the Saskatchewan Chronic Disease Management (SK CDM) Collaborative is already helping to improve care and achieve better outcomes in people with chronic, complex conditions (see key findings below). The Collaborative is also investigating technological innovations that will provide improved access to health information and services for providers and patients. As a result, Collaborative participants are using an electronic patient registry, adapted from British Columbia, called the CDM Toolkit. The Toolkit was designed for use in paper-based offices but can import information from select EMRs, including CLINICARE (smartcharts).

This Collaborative is the largest quality improvement initiative in Saskatchewan's history, with \$1.25 million funding annually from Saskatchewan Health. Approximately 28% of the province's family physicians are now participating in the program. Each geographic health region now houses an inter-professional Regional Improvement Team – the regional health authorities provide support to these teams by providing team members and housing the position of the Collaborative Facilitator. These teams include family physicians/

general practitioners and their office staff, as well as other health care providers (such as dietitians, nurses, pharmacists, diabetes/cardiac educators, First Nations/Métis program staff), and others. Approximately 125 family doctors (20% of the province's family practitioners) and 400 health care professionals treating about 8,000 patients with diabetes and/or heart disease were organized into 13 Regional Improvement Teams in Wave 1 of the initiative (November 2005-February 2008). Teams meet four times annually to share their success stories and discuss ways to better address challenges in improving CDM. Doctors track their patients' outcomes and reported on their progress to a web-based support "CDM Tool Kit". They receive access to regional standards in achieving quality care for this chronic disease population and feedback on how they were meeting these standards in their practices. They are able to compare how they are doing with their colleagues. Wave 2, involving 41 new family practices treating an additional 6,000 patients, started in November 2006 and will run until March 2009.

## Saskatchewan Health Quality Council

The Saskatchewan Health Quality Council, an independent provincial agency that works to improve the quality of Saskatchewan's health care system, is leading and sponsoring the SK CDM Collaborative. The Council measures and reports on quality of care, and works with health care partners to improve care ([www.hqc.sk.ca](http://www.hqc.sk.ca)). In February 2007, the Council reported that the SK CDM improvement project has improved care and health outcomes for nearly 8,000 people with diabetes and CAD. Also more patients are receiving the recommended drugs, tests, and services needed for managing their conditions and patients are experiencing improved access to family physician appointments.

The Council is unique, points out Bonnie Brossart, the council's interim CEO, "We not only measure and report on the quality of care. We implement strategies to improve quality of care."

The SK CDM raises awareness about screening, early detection and secondary prevention of diabetes and



*Bonnie Brossart, Interim CEO,  
Saskatchewan Health Quality Council*

coronary artery disease, as well as providing comparative data on rates of improvement in achieving key targets, explained Brossart. “The fundamental idea is that the Collaborative provides an opportunity for care providers to share best practice information.” While the Health Quality Council provides some remuneration to participating practices as well as making available Mainpro C credits for continuing medical education, practices also incur some costs to participate.

“The CDM Toolkit is invaluable tool for practice as it helps physicians become more literate and aware of their patient population,” suggested Brossart. “It’s a useful tool because it offers clinical support during the one-on-one patient visit. At the population level, the information it offers helps physicians and health care professionals to provide proactive, quality care. The patient education reports assist patients with self-management. It’s exciting that physicians can see improvements at so many levels, as well as their individual improvement in relation to their peers.”

This Collaborative provides planners, providers and the public with an opportunity to access a vast wealth of information on diabetes and coronary artery disease that is now stored electronically but was previously buried in paper charts, she pointed out.

When a practice signs up to the Collaborative, they become part of a Regional Improvement Team and



*Katherine Stevenson, Collaborative Program Director*

work closely with a Collaborative Facilitator who coaches, mentors and supports the practice, explained Collaborative program director Katherine Stevenson.

Practices are enjoying sharing their success stories, said Stevenson. The Regional Improvement Teams have created a thriving network and a very successful infrastructure for CDM in Saskatchewan province-wide. The teams have strengthened collegial relationships and created new relationships with colleagues outside their geographical area. “Each team is unique, the configuration reflecting the needs of the community” she pointed out. “For instance two Regional Improvement Teams have chosen to include patients on the team”

### **What is the Chronic Disease Management Toolkit?**

Doctors, authorized office staff and health care providers participating in the SK CDM use an online tool, the CDM Toolkit software program, to track their improvement over time in meeting key targets. The CDM Toolkit, modeled and adapted from the BC CDM Toolkit, assists in providing quality care to patients with chronic conditions. For instance, it is used to store and retrieve patient medical information needed to effectively plan and manage the treatment of chronic conditions. It enables doctors to allow other health care providers directly involved in the treatment of the patient with a chronic condition to access the patient’s health information. It also provides recall information for the health care providers who can then generate proactive reminders to patients when they are due for tests (e.g. AIC or cholesterol). CDM Toolkit data is securely stored within the data centre at Saskatchewan Health and provides abundant material for research and education. However, only doctors, authorized office staff and health care providers are able to access personal health information that is entered into the CDM Toolkit. The Health Quality Council CDM Collaborative team only has access to aggregated, de-identified reports (medical and demographic information) stored in the CDM Toolkit.

Regina family physician Dr. Mark Cameron, the clinical lead for coronary artery disease in the SK CDM project, believes the Toolkit is a wonderful aid to physician practices. “The fact that I can take a look at my patient population and see where I’m doing well and where I need to improve is a very useful tool. It gives you a snapshot of where you’re at and where you want to go in an easy way. That’s extremely helpful.”

While some clinical targets are harder to achieve and require the physician, patient and other team members to work together (e.g. a target blood pressure of 130/80 in a diabetic patient), other targets, goals or key measures are easier to meet (e.g. prescribing a statin, ace inhibitor or antiplatelet therapy). The Collaborative’s clinical experts aimed to set the key measures, targets and levels at achievable and practical



*Dr. Mark Cameron  
Clinical lead, coronary arterial disease, CDM Toolkit  
levels, he reported.*

When the patient comes in, if the patient has been entered into the toolkit due to diabetes or CAD, their chart will have been flagged and a diabetes or CAD flowsheet from the toolkit will be printed off for use by the physician or other health care provider during the visit, he explained. The physician works with the patient and enters on the flowsheet what happens during the appointment. Some doctors also choose to share a paper copy of the flowsheet with the patient, to help them be an active partner in their care. The office staff then enters the visit information into the patient's electronic chart. Once a month the clinic runs an extraction process to take all the information on the flagged patients seen that month and uploads the data to the Toolkit. This is a very straightforward and simple procedure, according to Dr. Cameron.

The big challenge initially was that Broad Street Clinic, where Dr. Cameron practices, did not have an interface with the Toolkit. Office staff had to double enter all data (one entry in the patient's chart and one entry for the Toolkit). "In Wave 1 we were the only computerized practice involved.

"Our vendor, CLINICARE has now created a software program for Saskatchewan that allows us to take the information from our charts and upload the pertinent bits to the Toolkit," he explained. "The big benefit of having the interface between our system and the Toolkit is that it cuts down the work tremendously for our staff... It's a 100 times better than when we first started in the Collaborative when we had to do the double entry."

The SK CDM improvement project was designed for paper offices originally as 90% of primary care physicians were running paper charts in Wave 1. CLINICARE has built the integration component so participants with their software can export the data.

Several other vendors are working on new software for use by physicians participating in the Collaborative.

"We are very proud to partner with the Saskatchewan Health Quality Council in this initiative and to introduce the software advancements we have made in the area of chronic disease management in Saskatchewan doctors' practices," said Dennis Niebergal, president and CEO of CLINICARE. "Saskatchewan has a very strong and dynamic chronic disease management initiative for both diabetes and coronary artery disease. Our computerized primary care sites in the province are using EMR. 6.4 software to automatically export their data on their diabetes and coronary artery disease care. They tell us that this saves their office staff considerable time."

"For a number of years, we have had the tools in our EMR to assist in managing patients with chronic diseases. Indeed, we are leaders in the development of CDM tools in EMR. We recognized early that this was going to be a huge issue in the 21st century," added Niebergal.

"We were there right in the beginning, with the congestive heart failure initiative in British Columbia as the first EMR vendor in BC to export data to the province's CDM toolkit. I believe we were the first vendor in Saskatchewan to interface to and populate that province's toolkit. We are proud to be at the forefront building CDM tools in EMR."

Practices with SmartCharts, our EMR technology, submit accurate data to the Toolkit easily, quickly, accurately and securely, he pointed out. The software's export function allows a report to be generated from the SmartCharts' SmartFields for electronic submission to Saskatchewan Health. In return, Saskatchewan Health provides on-line statistical analyses of the uploaded data to participating providers, allowing them to monitor progress on performance measures. Patients benefit because SmartCharts provide the ability to recall patients for regular follow-up tests and appointments.

The SK CDM Toolkit provides physicians with a powerful new tool that not only offers physicians' feedback on their practice and if they are lagging behind their colleagues in any areas but also opportunities to improve their clinical decision making through sharing of information and resources on best evidence, added Niebergal.

### **The future**

Saskatchewan is considering generous financial incentives for physicians' offices using EMR, he reported. The details are being finalized and are still being negotiated but the funding will likely include

funding such as a monthly fee per physician for each patient encounter involving use of EMR, each registration of a chronic disease patient, and submission of data on a specific chronic disease to the Toolkit.

“The Collaborative is a huge effort and we are seeing progress,” said Dr. Cameron. “The fact that so many family physicians are participating in the SK CDM project suggests that primary care doctors are really interested in providing quality care... It’s not simply a financial thing because the funding for the Collaborative overall is relatively low at the physician practice based level. There’s really not a lot of financial incentive to be involved, but these doctors have taken it on themselves to be a part of it, to work towards doing the best they can for their patients.”

“If you can encourage the dialogue and encourage the sharing of ideas, which is what the Collaborative is all about, it really can make matters better for all our patients,” he concluded.

This past summer other conditions (i.e. flowsheets), were added to the Toolkit, including congestive heart failure, COPD, Prevention, Kidney, Hypertension/ CVD/CKD Prevention, Depression, and Hepatitis C. ●

### Key preliminary findings of the Saskatchewan Health Quality Council:

Since the Saskatchewan Chronic Disease Management Collaborative started:

- 1,445 more patients with diabetes received a urine microalbumin screening test (a measure of kidney damage due to diabetes): a 20% (30%?) improvement.
- 603 more patients with diabetes have achieved good control of blood sugar (A1C less than or equal to 7.0%): a 3% improvement.
- 278 patients with coronary artery disease were newly prescribed antiplatelet therapy: a 9% improvement.
- 134 more patients with artery disease have reached a blood pressure level of less than 140/90: a 3% improvement.
- 82% of patients are receiving family practice clinic appointments on the day of their choice.
- Only a handful of patients among the 14,000 in the database have chosen to opt out of the initiative.

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