



QUICK FACTS

- ▶ Program surveillance efforts have resulted in data that is collected and used locally to produce real time reports
- ▶ Existing registry, based on years of consistent data-gathering, has evolved into a diabetes information management system
- ▶ User interface improvements are based on suggestions from front line providers
- ▶ Web-based, centralized application allows for shared care across sites

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More than a Registry

Making Life Easier...Improving Data Quality... Effecting Practice Change

In keeping with Nova Scotia Health Authority's Innovation value and its vision of healthy people, healthy communities – for generations, the Diabetes Care Program of Nova Scotia (DCPNS) has been responding to and supporting diabetes health care providers who work in or are engaged with 38 Diabetes Centres (DC) from across Nova Scotia and the IWK Health Centre since 1991.

Together with local, provincial and national partners, the DCPNS has worked to improve and standardize diabetes care in Nova Scotia through a collaborative program model. This model has focused on engagement, relationship building, quality improvement, knowledge exchange/transfer and recognition of best and promising practice.

The DCPNS' key activities include:

- Acting in an advisory capacity; recommending service delivery models;
- Providing support, services and resources to diabetes health care providers;
- Establishing standards and guidelines and monitoring their uptake; and
- Conducting diabetes surveillance—collecting, analyzing, interpreting and distributing diabetes data.

The DCPNS is unique to the Canadian health care landscape with its more than 25-year history as a provincial program and in the way that its diabetes surveillance efforts have resulted in data that is collected and used locally to produce real time reports.



We use the DCPNS Registry's "Advanced Clinical Indicator Report" to help inform our program planning and evaluation. It helps us target patient needs and make the changes necessary to provide the best care for our patients.

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Working with front-line diabetes care providers, the DCPNS has evolved its provincial database from a Registry to a Clinical Information System. In addition to guiding/supporting clinical care, providers within the circle of care are able to collect robust data with the support of interfaces with provincial registration and laboratory services and generate real-time reports at the click of a key. These reports describe their patient population, guide program planning, measure the impact of targeted interventions and strengthen communication with referring providers.

Since the earliest days, DCs across the province have used standardized forms to accept referrals from family and specialist physicians, collect daily/monthly visit information and document initial and follow-up patient care using assessment forms, checklists and flow sheets. This standardized approach to care and documentation has been the basis for the development and advancement of the DCPNS Registry. Initiated in 1992, the Registry evolved to more of a diabetes information management system with the addition of dedicated information technology/information management personnel. These individuals developed content and context expertise as well as a responsiveness unparalleled in other systems. Our desire to support our users, work within their business processes and develop and maintain relationships have helped sustain a strong foundation essential for the continued evolution of this information management system.

Front line providers have offered suggestions that have made the Registry more user friendly as well as efficient and faster through interfaces, quick click pop down menus and automated calculations for BMI and other measures. Charting efforts have been reduced with carry forward features that are applied using a rule-based mechanism and narrative notes that are used to populate reports. It is the data requests from front-line providers that have resulted in the development of local reports to meet these information needs.

Our web-based, centralized application allows for shared care across sites on specific patients. Visit type (VT) rules around the type of visit (new or follow-up), type of diabetes and gender improve data quality and alerts and reminders draw attention to clinical practice guidelines that need to be addressed (e.g. time since last eye or foot examination, flu/vaccination, etc.). Dashboard features and graphing capability for lab data and trends provide readily attainable education tools.

Some of our greatest accomplishments are evident in the on-site, local reports, which include:

- **The Physician/Nurse Practitioner Report.** This is generated following the patient visit, enhancing communication with referring providers and providing valued insights into patient progress and treatment plan recommendations.
- **The Physician/Nurse Practitioner Patient List.** This allows the referring provider a high-level view of their active patient population as seen by DC staff, as well as insight into individuals that would benefit from more focused attention/intervention. This type of report, generated in confidence, has been instrumental in enhancing DC team and provider relations and in ultimately improving patient care and outcomes.
- **The Advanced Clinical Indicator Report** allows for the DC staff to select a population with specific characteristics (including diabetes type, age, gender) for a specified period of time (6 months, 1 year, 2 years—including the current date), with an array of indicators (up to 4 at one time) with specific value ranges. For example, this could mean requesting data on all Type 1, male individuals, ages 20-35 years, seen for follow-up during the last 6 months; with A1Cs (the gold standard measure of overall glycemic control) > 9%, and BP >160/90 mm/Hg and eGFR (a marker of kidney function) equal to 30-60 mL/min. The report generates this detail, along with address labels, to allow easy identification of those needing a specific appointment or a planned education/intervention session. The potential for this type of reporting is highly valued as diabetes care providers move toward more case management, shared care and focused engagement. This report has allowed for easy identification of populations with specific educational/treatment needs, such as: transitioning youth; women of childbearing years; over-managed elderly; those with impaired kidney function in the presence of higher than recommended glycemic and blood pressure values and individuals in need of a foot assessment, etc.

We continue to work to enhance the use of the Registry and are currently involved with our E.P.I.I.C! initiative. By working with our users, we aim to make full use of the Registry's reporting capabilities and ensure accurate complete data capture to ultimately improve care delivery and patient outcomes. We will (E) engage and educate, (P) populate, (I) illustrate, (I) innovate and (C) celebrate. We are currently engaging through key informant interviews, survey completion and project bulletins and have started to review Registry training opportunities. The formation of Registry Practice Groups/ Communities of Practice to share successes, foster enthusiasm, encourage innovation and move providers to practice change will be the successful completion of this very important work.

DCPNS MISSION

To improve, through leadership and partnerships, the health of Nova Scotians living with, affected by or at risk of developing diabetes.

For more information, please visit diabetescare.nshealth.ca.



Digital Health Canada connects, inspires, and educates the digital health professionals creating the future of health in Canada. Our members are a diverse community of accomplished, influential professionals working to make a difference in advancing healthcare through information technology. Digital Health Canada fosters network growth and connection; brings together ideas from multiple segments for incubation and advocacy; supports members through professional development at the individual and organizational level; and advocates for the Canadian digital health industry.

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