Diabetes Care Program of Nova Scotia (DCPNS)
Diabetes Registry (Information Management System) Description

- To help determine the magnitude of diabetes mellitus and its related complications in Nova Scotia.
- To provide useful information to the Diabetes Centre (DC) staff, referring physicians, and NSHA Management Zones/IWK/facility administration. Evidence produced should be used to improve patient/family care and influence program delivery, operations, and diabetes management decisions.
- To allow for limited cross comparisons and an overview of provincial trends and practices in efforts to discover and apply best/better practice approaches.

Time Frame: April 1, 1994 to present.

Owner: NSHA (to 2016, former DHW)

Custodian: NSHA/Diabetes Care Program of Nova Scotia (Steward)

Access:
- Through the DCPNS Data Access Policy and Procedure (under review)
- Written requests to DCPNS Program Manager/System Analysts

Database Format: Re-written in 2012/13 using the CAISIS platform (open source, web-based application) with SQL Database Server.

Unique Identifier: Health card number

Data Source: DCs in Nova Scotia (36 in total)—NSHA and IWK

Consists of three main components:
- DC daily statistics—a count of encounters (numbers seen) by diabetes type, treatment type, visit type, area seen, and age grouping.
- Demographics—from the physician referral form (standard)/Meditech/STAR/IWK Meditech Magic interface.
- Indicators of care—from the standardized flow sheet used in DCs across NS/Meditech interface.

Contains:
- All new referrals to DCs since April 1, 1994.
- Information on follow-up cases prior to 1994 for DCs using the on-site registry.
- Newly diagnosed cases of diabetes in children < age 19 since 1992.
- IWK Health Centre Pregnancy and Diabetes Program data (new referrals from 1995-Mar. 31, 2006) and again starting in Sept. 2015 (new referrals and follow-up).
- Indicators of care data:
  - 15 months of data on 1300 cases with diabetes from 13 DCs– variable collection period 1998-2002.
  - on going collection for those DCs using onsite Registry (from 2002 onward).
- Nova Scotia Insulin Pump Program (NSIPP)—NSIPP module (since 2013)

Completeness: Does not include:
- Information on persons with diabetes not seen by DC staff.
- Eskasoni (First Nations Community) diabetes program data.
- Stadacona (Department of National Defense) other than number of encounters.

Reports: Produces:
- Annual reports and data reports for DCs, NSHA Management Zones, IWK, and the Province (DC statistics).
- Specialized reports from the indicators of care component (Follow-up, Newly Diagnosed, and pediatric populations, and the re-referral population--pending).
- Standardized reports generated on site by DCs—i.e., physician/NP follow-up report, referring physician patient list, summary of visits, active and inactive patient lists, advanced clinical indicator report, unattached patient list, time to first appointment, etc.

Analysis Capabilities: The DCPNS Registry System is a "filter" for the DCPNS database making this data clean, accurate, and reliable for research purposes. Unique identifier allows for linkage with other administrative databases and the data easily transfers to SPSS, SAS, etc., for analysis.

Interfaces: Interface with Meditech and Star is complete and runs on an hourly basis (Phase 1 and 2 complete). Phase 1 interface (registration) with Meditech Magic (IWK) is complete, and lab interface (Phase 2) is still in progress. All interfaces reduce double documentation and capture demographic, visit, and applicable lab data.

Additional comments:

To December 2014, the on-site Registry is now used on-site in all DCs in all NSHA Zones and the IWK. The new CAISIS environment allows for more controlled data collection and completeness of information in terms of continuity of care (shared view across sites being accessed by a specific individual).

DCPNS Registry Information collected:

Demographics:

Health card number	Gender
Date of birth	City, municipality of residence, province, country, and postal code
Date of diagnosis	Co-morbid (complications) conditions at time of referral and ongoing
Date of referral	Date of death

Name, address, phone and hospital ID to be included upon move to central server (for user use) as well as guardian name.

Diabetes Centre: By age grouping, children/youth (< age 19 years) or adults (≥ age 19 years)

Area seen:	Diabetes type:	Treatment	Visit type:
• Inpatient • Outpatient • Satellite site • Phone	• Type 1 • Type 2 • Impaired fasting glucose (IFG) • Impaired glucose tolerance (IGT) • IFG and IGT • Pregnant—preexisting diabetes (date of dx) • Gestational diabetes mellitus (GDM) (date of dx) • Prior to 2018, Impaired glucose tolerance of pregnancy (IGT Preg) • Other	• Lifestyle only • Non-insulin therapies: o Oral agents (OAAs) o Injectables • Insulin • Insulin and non-insulin therapies	• *New referral:* - Newly diagnosed (ND) - Not newly diagnosed - Not newly diagnosed re-referral • Follow-up (FU) visit: As well, sub categories: - *Insulin start* - *Pump start* - *Continuous glucose monitoring (instruct)* - *Pre-pregnancy counseling* - *Postpartum care*

Indicators of Care Component: Information captured on the Flow Sheet

Clinical Indicators	Self-care Indicators
Weight and Height (BMI) Waist circumference Blood Pressure (including medications) Foot assessment risk-rating (L, M, H), including date Blood glucose (including medications): Fasting 2-hr Other (specify) Cap/lab quality assurance check Glycated Hemoglobin (A1C) Lipids (including medications): Total Cholesterol (TC) HDL-C (ratio TC:HDL-C) LDL-C Triglycerides Creatinine (estimated creatinine clearance—CKD Epi) TSH Albumin to creatinine ratio (ACR)	Self-blood glucose monitoring: Frequency of testing, Use of results Appropriate technique Ketone testing (if applicable) Insulin patient self adjustment Hypoglycemia (frequency/appropriate treatment) Carries Diabetes ID Smoking status (y/n/quit) Flu vaccination: Date of last appointment Eye examination: Date of last appointment Dental examination: Date of last appointment Physical Activity (Aerobic and Resistance, Exercise Vital Sign [EVS]) Action Plans (yes/no) Personalized goals for A1C, BP, Lipids, and other
Other	
Date of visit (time) Previous diabetes education Physician name (and code), address, and postal code Family history (diabetes, obesity, hypertension, cardiovascular disease….)	Nutrition therapy Type of treatment (name and dosage), change overtime Pump Therapy: Medical Eligibility Criteria Adverse Glycemic Events (severe hypo, DKA) Discharge/Transition information