# Diabetes: Case Definition

**Goal:** Identify **prevalent and incident diabetes** in administrative data (Alberta Health and Wellness data April 1, 1994 to March 31, 2009)

**Validated Algorithm:** 1 hospital discharge OR 2 physician claims in 2 years of the ICD codes below 1

**Datasets:** Hospitalization discharge database (all fields) and physician claims (all fields).

**Case Definition:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Diabetes** | **ICD-9-CM Codes** | **ICD-9-CM Description** | **ICD-10-CA Codes** | **ICD-10-CA Description** |
| **Codes** | 250.x | Diabetes mellitus | E10 | Type 1 diabetes mellitus |
|  |  |  | E11 | Type 2 diabetes mellitus |
|  |  |  | E12 | Malnutrition-related diabetes mellitus |
|  |  |  | E13 | Other specified diabetes mellitus |
|  |  |  | E14 | Unspecified diabetes mellitus |

*One* *hospitalization* (ICD-9-CM or ICD-10-CA) excluding gestational diabetes **OR** *Two physician claims* on separate dates with an ICD-9-CM code *within two years*. Diabetes hospitalizations are excluded **prior** to applying the case definition if those hospitalizations are found within 120 days before or 180 days after a gestational hospital record. Any diagnosis type, selected from all available fields, for both diabetes hospitalizations and gestational hospitalizations

Gestational Diabetes Exclusions:

ICD-9: substr(ICD9\_(i), **1**, **2**) in ('65','66') or

substr(ICD9\_(i), **1**, **3**) in ('641','642','643','644','645', '646','647','648','670','671','672','673','674','675','676','V27')

ICD-10: substr(ICD10\_(i), **1**, **2**) in ('O1','O3','O4','O5','O6','O7','O8') or

substr(ICD10\_(i), **1**, **3**) in ('O21','O22','O23','O24','O25','O26', 'O27','O28','O29','O90','O91','O92','O95','O98','O99','Z37')

Records where diabetes event is **120** days before or **180** days after gestational event are excluded.

**Diabetes Onset Date:** the earliest of either the first date of hospitalization for diabetes (excluding gestational diabetes), or the first of the two physician claims for diabetes

**Wash-out Period:** There will be a wash-out period of ***at least*** 3 years. At least one diagnosis of diabetes present during the wash-out period excludes a patient as an incident case. If the date of onset diabetes (by case definition) occurs on or after April 1, 1997, diabetes will be classified as an **incident** case. If the date of onset diabetes (by case definition) occurs between April 1, 1994 and March 31, 1997, there will not be a wash-out period of at least 3 years available. In this case, diabetes will be considered **prevalent**.

**References to cite:**

1. Hux JE, Ivis F, Flintoft V, Bica A. Diabetes in Ontario: Determination of prevalence and incidence using a validated administrative data algorithm. Diab Care 2002; 25(3): 512-16.