

Diabetes Identification

OntarioMD i4C Dashboard Indicator

For more information regarding OntarioMD Indicators or the EMR i4C Dashboard Specification, please refer to:

<https://www.ontariomd.ca/emr-certification/emr-specification/ontariomd-indicator-library>

1. VERSION HISTORY

INDICATOR VERSION	PUBLICATION DATE	REMARKS
1.0	2019-02-18	<ul style="list-style-type: none"> Initial release
2.0	2019-07-09	<ul style="list-style-type: none"> Added Indicator ID, Indicator Segment ID and Display Indicator Segment properties Changed format and content of Indicator User Help Changed format of Source property Indicator Segment IDs re-sequenced to provide consistency across indicators Indicator Segment Query Criteria clarifies that query result from a segment should produce a count of patients

2. INDICATOR DEFINITION

2.1 Indicator Properties

PROPERTY	VALUE
Indicator ID	CDM-DIAB-001
Indicator Name	Diabetes Identification
Indicator Version	2.0
Date Published	2019-07-09
Description	<p>Purpose:</p> <p>This indicator is used to identify patients with Diabetes.</p> <p>Base Population:</p> <p>All patients with an Active demographic status recorded in the EMR who have a confirmed diabetes diagnosis or who may be considered for diabetes diagnosis based on other EMR data.</p> <p>Indicator Segments:</p> <p>Indicator segments provide the following patient summaries:</p> <ul style="list-style-type: none"> • Count of patients confirmed with diabetes diagnosis through the entry of appropriate diagnosis code; • Count of patients without a confirmed diabetes diagnosis but who may be considered for diagnosis based on the text entered in the cumulative patient profile; • Count of patients without a confirmed diabetes diagnosis but who may be considered for diagnosis based on two or more bills with a diabetes diagnosis attached; • Count of patients without a confirmed diabetes diagnosis but who may be considered for diagnosis based on an HbA1c > 6.5% documented in the last two years; • Count of patients without a confirmed diabetes diagnosis but who may be considered for diagnosis based on a current prescription for a diabetes medication;

PROPERTY	VALUE
	<ul style="list-style-type: none"> • Unique count of patients without a confirmed diabetes diagnosis but who may be considered for diagnosis; • Count of patients without a confirmed diabetes diagnosis who shouldn't be considered for diagnosis based on pre-diabetes documented as a diagnosis or text; • Count of patients without a confirmed diabetes diagnosis who shouldn't be considered for diagnosis based on other conditions documented as a diagnosis or text; • Count of patients without a confirmed diabetes diagnosis who are excluded from consideration for a diabetes diagnosis. <p>Suggested Indicator Use:</p> <p>Physician or Practice use of this indicator is to review charts in the consider segments and add the appropriate diagnosis code to the patient chart.</p> <p>Measurements of Interest:</p> <p>Percentage of patients with a confirmed diabetes diagnosis out of all patients who either have a confirmed diabetes diagnosis or who may be considered for diagnosis.</p>
Source	OntarioMD
Source Description	
Status	Active
Category	CDM
Subcategory	Diabetes
Indicator Order	1
Indicator Graphic Type	Table
Indicator Graphic Notes	

PROPERTY	VALUE
Indicator User Help	<p>Identification Prospects for Diabetes</p> <p>Purpose:</p> <p>This indicator is used to identify patients with Diabetes.</p> <p>Base Population:</p> <p>All patients with an Active demographic status recorded in the EMR who have a confirmed diabetes diagnosis or who may be considered for diabetes diagnosis based on other EMR data.</p> <p>Indicator Segments:</p> <p>Indicator segments provide the following patient summaries:</p> <ul style="list-style-type: none"> • Count of patients confirmed with diabetes diagnosis through the entry of appropriate diagnosis code; • Count of patients without a confirmed diabetes diagnosis but who may be considered for diagnosis based on the text entered in the cumulative patient profile; • Count of patients without a confirmed diabetes diagnosis but who may be considered for diagnosis based on two or more bills with a diabetes diagnosis attached; • Count of patients without a confirmed diabetes diagnosis but who may be considered for diagnosis based on an HbA1c > 6.5% documented in the last two years; • Count of patients without a confirmed diabetes diagnosis but who may be considered for diagnosis based on a current prescription for a diabetes medication; • Unique count of patients without a confirmed diabetes diagnosis but who may be considered for diagnosis; • Count of patients without a confirmed diabetes diagnosis who shouldn't be considered for diagnosis based on pre-diabetes documented as a diagnosis or text; • Count of patients without a confirmed diabetes diagnosis who shouldn't be considered for diagnosis based on other conditions documented as a diagnosis or text; • Count of patients without a confirmed diabetes diagnosis who are excluded from consideration for a diabetes diagnosis.

PROPERTY	VALUE
	<p>Suggested Indicator Use:</p> <p>Physician or Practice use of this indicator is to review charts in the consider segments and add the appropriate diagnosis code to the patient chart.</p> <p>Measurements of Interest:</p> <p>Percentage of patients with a confirmed diabetes diagnosis out of all patients who either have a confirmed diabetes diagnosis or who may be considered for diagnosis.</p> <p>Metric Criteria:</p> <p><u>Diabetes Coded¹</u>: Patients WITH a Diabetes diagnosis code documented as one of the following:</p> <ul style="list-style-type: none"> • 250 (ICD-9 Coding System) • E10, E11 (ICD-10 Coding System) • DB-610 (SNOMED-RT Coding System) • 46635009, 44054006, 73211009 (SNOMED-CT Coding System)

¹ Optional: Implementer may include EMR-specific information on the workflow for documenting diagnosis codes.

PROPERTY	VALUE
	<p><u>Consider Diabetes²: Documented as text but not coded</u>: Patients WITHOUT Diabetes diagnosis coded, who are NOT excluded AND with Diabetes documented as one of the following text diagnosis or problems: "diabet," "DM" or "t2d."</p> <p><u>Consider Diabetes³: Dx in 2+ bills</u>: Patients WITHOUT Diabetes diagnosis coded, who are NOT excluded, and have two or more bills containing a diagnosis of 250.</p> <p><u>Consider Diabetes⁴: HbA1c > 6.5%</u>: Patients WITHOUT Diabetes diagnosis coded, who are NOT excluded, AND have an HbA1c over 6.5% recorded in the last 2 years.</p> <p><u>Consider Diabetes⁵: Medications present</u>: Patients WITHOUT Diabetes diagnosis coded, who are NOT excluded, AND WITH an active prescription for one or more of: "Acarbose," "Glibenclamide," "Gliclazide," "Glimepiride," "insulin," "Metformin," "Sitagliptin," or "Tolbutamide."</p>

² Optional: Implementer may include EMR-specific information on the workflow for documenting diagnosis text.

³ Optional: Implementer may include EMR-specific information on the workflow for submitting patient bills.

⁴ Optional: Implementer may include EMR-specific information on the workflow for capturing HbA1c results.

⁵ Optional: Implementer may include EMR-specific information on the workflow for entering medications.

PROPERTY	VALUE
	<p><u>Consider Diabetes: Total:</u> Combined list of all patients WITHOUT Diabetes diagnosis coded, who are NOT excluded, who have been identified as potentially having Diabetes by Medications present, HbA1c > 6.5%, Dx in 2+ bills, or by Diabetes documented with a text diagnosis or problem.</p> <p><u>Diabetes Exclusion⁶: Other Conditions:</u> Patients WITHOUT Diabetes diagnosis coded AND with other conditions documented as one of the following text diagnoses or problems: "gest," "PCOS," "polycystic ovar" OR with other condition diagnosis codes documented as one of the following ICD-9 codes:</p> <ul style="list-style-type: none"> • 249: Secondary Diabetes Mellitus • 256.4: Polycystic Ovaries • 648.8: Gestational Diabetes • 775.1: Neonatal Diabetes Mellitus • 790.29: Other Abnormal Glucose <p><u>Diabetes Exclusion: Pre-diabetes:</u> Patients WITHOUT Diabetes diagnosis coded AND with Pre-diabetes documented as one of the following text diagnoses or problems:</p> <ul style="list-style-type: none"> • Pre-diabetes • Pre-diabetic • Prediabetes • Prediabetic • Pre diabetes • Pre diabetic • Borderline diabetes • Borderline diabetic • Impaired Glucose* • Impaired Glucose Tolerance • Impaired Fasting Glucose

⁶ Optional: Implementer may include EMR-specific information on the workflow for documenting diagnosis codes and text.

PROPERTY	VALUE
	<ul style="list-style-type: none"> • IGT • IFG <p>OR with Pre-diabetes documented with one of the following diagnoses codes:</p> <ul style="list-style-type: none"> • 790.2: Abnormal Glucose (ICD-9) • RT 9414007 (SNOMED-RT) • CT - DB-61200 (SNOMED-CT) <p><u>Diabetes Exclusion: Cohort</u>: Patients that have been identified as NOT having Diabetes who have been intentionally excluded (within EMRs that support this functionality). This group should be reviewed periodically to ensure that the exclusion still applies.</p>

2.2 Indicator Segment Properties

PROPERTY	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE
Indicator Segment ID	1	2	3	4	5	6	7	8	9
Indicator Segment Label	Diabetes Coded	Consider Diabetes: Documented as text but not coded	Consider Diabetes: Dx in 2+ bills	Consider Diabetes: HbA1c > 6.5%	Consider Diabetes: Medications present	Consider Diabetes: Total	Diabetes Exclusion: Other Conditions	Diabetes Exclusion: Pre-Diabetes	Diabetes Exclusion Cohort
Display Indicator Segment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Indicator Segment Query Criteria	COUNT OF: Active patients WITH a coded diagnosis of Diabetes	COUNT OF: Active patients WITHOUT a coded diagnosis of Diabetes AND WITHOUT Pre-diabetes exclusion AND WITHOUT Other Conditions exclusion AND WITHOUT	COUNT OF: Active patients WITHOUT a coded diagnosis of Diabetes AND WITHOUT Pre-diabetes exclusion AND WITHOUT Other Conditions exclusion AND WITHOUT	COUNT OF: Active patients WITHOUT a coded diagnosis of Diabetes AND WITHOUT Pre-diabetes exclusion AND WITHOUT Other Conditions exclusion AND WITHOUT	COUNT OF: Active patients WITHOUT a coded diagnosis of Diabetes AND WITHOUT Pre-diabetes exclusion AND WITHOUT Other Conditions exclusion AND WITHOUT	COUNT OF: Active patients WITHOUT a coded diagnosis of Diabetes AND WITHOUT Pre-diabetes exclusion AND WITHOUT Other Conditions exclusion AND WITHOUT	COUNT OF: Active patients WITHOUT a coded diagnosis of Diabetes AND WITH Other Conditions exclusion	COUNT OF: Active patients WITHOUT a coded diagnosis of Diabetes AND WITH Pre-Diabetes exclusion	COUNT OF: Active patients WITHOUT a coded diagnosis of Diabetes AND WITH Diabetes Patient Cohort exclusion

PROPERTY	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE
		Diabetes Patient Cohort exclusion AND WITH Diabetes document- ed as text diagnosis or problem	Diabetes Patient Cohort exclusion AND WITH two or more bills containing a Diabetes diagnosis	Diabetes Patient Cohort exclusion AND WITH at least one document- ed HbA1c value > 6.5% in the last 2 years	Diabetes Patient Cohort exclusion AND WITH one or more Current Diabetes Medication	Diabetes Patient Cohort exclusion AND WITH one or more Current Diabetes Medications AND WITH (Diabetes document- ed as text diagnosis or problem OR 2 or more bills containing a Diabetes diagnosis OR at least one document- ed HbA1c value > 6.5% in the last 2 years OR one or more Current			

PROPERTY	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE
						Diabetes Medications)			
Indicator Segment Query Notes	<p>Active Patients are patients identified as 'Active' in the <i>Patient Status</i> data element (DE01.016) within <i>Patient Demographics</i>.</p> <p>Diabetes Coded Diagnosis is any of the following codes captured in the <i>Diagnosis/Problem</i> data element (DE06.004) within <i>Ongoing Health</i>:</p> <p>250 (ICD-9 Coding System)</p> <p>E10, E11 (ICD-10 Coding System)</p> <p>DB-610 (SNOMED-RT Coding System)</p> <p>46635009, 44054006, 73211009 (SNOMED-CT Coding System)</p> <p>Diabetes Text Diagnosis or Problem is any of the following text elements captured in the <i>Diagnosis/Problem</i> data elements within <i>Ongoing Health</i> (DE06.004) or <i>Past Medical & Surgical</i> (DE07.004): "diabet," "DM" or "t2d."</p> <p>Bills Containing a Diabetes Diagnosis are any bills submitted for a patient with diagnosis coded 250 attached.</p> <p>Documented HbA1c Value is a value for an HbA1c test result captured in <i>Laboratory Test Results</i> (DE10.007). HbA1c test names may be identified using EMR's proprietary test names, laboratory proprietary test codes or test names, or LOINC codes which cross-reference test names across different EMR and laboratory test names. Test results captured through a lab interface are normally formatted as a decimal value, e.g. .065, but are interpreted as an HbA1c value of 6.5%.</p> <p>Current Diabetes Medication is a patient medication recorded in <i>Medications</i> (DE09) AND is not a <i>Past Medication</i> (DE09.017) ,AND which is identified as a diabetes medication by the presence of any of the following text within the brand or generic medication name: "Acarbose," "Glibenclamide," "Gliclazide," "Glimepiride," "insulin," "Metformin," "Sitagliptin" or "Tolbutamide".</p>								

PROPERTY	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE
	<p>Other Conditions Exclusion is identified as any of the following codes captured in the <i>Diagnosis/Problem</i> data element (DE06.004) within <i>Ongoing Health</i>:</p> <ul style="list-style-type: none"> 249, 256.4, 648.8, 775.1, 90.29 (ICD-9 Coding System) <p>OR any of the following text elements captured in the <i>Diagnosis/Problem</i> data elements within <i>Ongoing Health</i> (DE06.004) or <i>Past Medical & Surgical</i> (DE07.004): "gest," "PCOS," or "polycystic ovar."</p> <p>Pre-diabetes Exclusion is identified as any of the following codes captured in the <i>Diagnosis/Problem</i> data element (DE06.004) within <i>Ongoing Health</i>:</p> <ul style="list-style-type: none"> 790.2 (ICD-9 Coding System) DB-61200 (SNOMED -RT Coding System) 9414007 (SNOMED-CT Coding System) <p>OR any of the following text elements captured in the <i>Diagnosis/Problem</i> data elements within <i>Ongoing Health</i> (DE06.004) or <i>Past Medical & Surgical</i> (DE07.004): "Pre-diabet," "Prediabet," "Pre diabet," "Borderline diabet," "Impaired Glucose," "Impaired Fasting," "IGT" or "IFG."</p> <p>Diabetes Patient Cohort Exclusion are patients who are identified for exclusion from consideration for a Diabetes diagnosis. This can be implemented through the creation and utilization of a population cohort specifically created for the purpose of Diabetes diagnosis exclusion. Adoption of a population cohort for this purpose is optional, and query criteria for Diabetes Patient Cohort exclusion will be bypassed in EMRs where the exclusion cohort is not utilized.</p>								
Patient List Criteria	Mandatory Patient Name Unique Patient Identifier Optional	Mandatory Patient Name Unique Patient Identifier Optional	Mandatory Patient Name Unique Patient Identifier Optional	Mandatory Patient Name Unique Patient Identifier Optional	Mandatory Patient Name Unique Patient Identifier Optional	Mandatory Patient Name Unique Patient Identifier Optional	Mandatory Patient Name Unique Patient Identifier Optional	Mandatory Patient Name Unique Patient Identifier Optional	Mandatory Patient Name Unique Patient Identifier Optional

PROPERTY	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE
	Patient Date of Birth	Patient Date of Birth	Patient Date of Birth	Patient Date of Birth	Patient Date of Birth	Patient Date of Birth	Patient Date of Birth	Patient Date of Birth	Optional Patient Date of Birth
	Patient Age	Patient Age	Patient Age	Patient Age	Patient Age	Patient Age	Patient Age	Patient Age	Patient Age
	Patient Phone Number	Patient Phone Number	Patient Phone Number	Patient Phone Number	Patient Phone Number	Patient Phone Number	Patient Phone Number	Patient Phone Number	Patient Age
	Diabetes Diagnosis Codes	Diabetes Text Diagnoses	Count of Bills WITH Diabetes Diagnosis	Highest HbA1c Screening Value	Diabetes Medications	Diabetes Text Diagnoses Count of Bills WITH Diabetes Diagnosis Highest HbA1c Screening Value Diabetes Medications	Other Conditions Exclusions	Pre-Diabetes Exclusions	Patient Phone Number
Patient List Notes	<p>Patient Name is a combination of First Name (<i>DE01.003</i>) and Last Name (<i>DE01.002</i>) data items from <i>Patient Demographics</i>. Names may be displayed either as separate columns or concatenated into one column.</p> <p>Unique Patient Identifier is any data item from <i>Patient Demographics</i> that can be used by a physician or clinic to uniquely identify a patient when displayed. Examples include <i>Health Card Number (DE01.008)</i> or <i>Chart Number (DE01.012)</i></p> <p>Patient Date of Birth is captured into <i>Patient Demographics</i> as <i>Date of Birth (DE01.007)</i>.</p>								

PROPERTY	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE
	<p>Patient Age is a calculated data item representing the difference between the current date and <i>Date of Birth (DE01.007)</i> from <i>Patient Demographics</i>. Age should be displayed in years.</p> <p>Patient Phone Number is the preferred phone number for contacting a patient and may include <i>Residence Phone (DE02.007)</i>, <i>Cell phone (DE02.008)</i> or <i>Work Phone (DE02.009)</i> from <i>Patient Address</i>.</p> <p>Diabetes Diagnosis codes is a delimited listing of all diagnosis codes for Diabetes that have been captured in the <i>Ongoing Health Diagnosis/Problem</i> data element (<i>DE06.004</i>) for a patient.</p> <p>Diabetes Text Diagnoses is a delimited listing of all text elements for Diabetes that have been captured in <i>Ongoing Health Diagnosis/Problem (DE06.004)</i> or <i>Past Medical & Surgical History Diagnosis/Problem (DE07.004)</i> for a patient.</p> <p>Count of Bills with Diabetes Diagnosis is a count of bills submitted for a patient with a Diabetes diagnosis attached.</p> <p>Highest HbA1c Screening represents the result and/or date for the HbA1c screening documented over the past two years with the highest HbA1c result.</p> <p>Diabetes Medications is a delimited listing of all diabetes medications currently prescribed for a patient.</p> <p>Other Conditions Exclusions is a delimited listing of all diagnosis codes and/or text elements for conditions that would exclude a patient from consideration for a Diabetes diagnosis.</p> <p>Pre-Diabetes Exclusions is a delimited listing of all diagnosis codes and/or text elements for a Pre-Diabetes diagnosis.</p>								