FOCUS ON HEALTHCARE: PRIMARY HEALTHCARE

Data Dictionary

November 2020

The Health Quality Council of Alberta is a provincial agency that pursues opportunities to improve patient safety, person-centred care, and health service quality for Albertans. Our responsibilities are set forth in the *Health Quality Council of Alberta Act.*

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Please contact the Health Quality Council of Alberta for more information: info@hqca.ca, 403.297.8162.

TABLE OF CONTENTS

IDENTIFYING INFORMATION	
Name:	**Completion of selected screening tests**
Short/Other Names:	n/a
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The percentage of eligible patients in Alberta who completed screening tests for lipids (cardiovascular risk profile), diabetes, colorectal cancer, breast cancer, and cervical cancer.
Rationale:	Screening tests are used to determine the approximate risks for certain diseases in healthy adults. Thus, providing screening information will encourage screening activities to identify early onset of these diseases.
Interpretation:	A higher rate implies more eligible patients have been screened.
Target/Benchmark:	No benchmarks have been identified.
INDICATOR CALCULATION	
Calculation:	Screening rate= $\left(\frac{\text{Number of eligible patients who completed screening test}}{\text{Total number of eligible patients in Alberta}}\right)\times 100$ **Type of Measure:** Percentage **Adjustment Applied:** None
Denominator:	**Description** The number of eligible patients in the province of Alberta. **Inclusion Criteria** a) **Lipids:** Patients aged between 40 and 74 years. b) **Diabetes:** Patients 40 years or older. c) **Colorectal cancer:** Patients aged between 50 and 74 years. d) **Breast cancer:** Women aged between 50 and 74 years. e) **Cervical cancer:** Women aged between 25 and 69 years. **Exclusions** ▪ None

Numerator:	**Description** a) **<u>Lipids</u>:** The total number of eligible patients with plasma lipid profile screening within a 5-year period. *Plasma lipid profile identification* (Lab test codes or lab test order code or lab test order name): ▪ LIP (Lipase). ▪ LIPID (Lipid). ▪ LIPID PROFILE (Lipid Profile). ▪ LDL (Low Density Lipoproteins Cholesterol). **Inclusion Criteria** ▪ Patients aged between 40 and 74 years. ▪ Patients with identified plasma lipid profile test records. **Exclusions** ▪ Patients younger than 40 or older than 74. b) **<u>Diabetes</u>:** An eligible patient is an asymptomatic patient screened for diabetes. A patient is eligible if they meet the inclusion criteria outlined below. **Inclusion Criteria** ▪ Patients 40 years or older. Diabetes screening is identified by the following lab test codes, and ICD-9 or ICD-10 diagnostic codes: Lab test codes [Order Test Code]: ▪ HBA1C (Hemoglobin A1c). ▪ GLUF (Glucose fasting). ICD-9 or ICD-10 diagnostic codes: ▪ V77.1 (Screening for Diabetes Mellitus). ▪ Z13.1 (Encounter for Screening for Diabetes Mellitus). **Exclusions** ▪ Diabetic patients identified in the episode specific disease category (EDC) aggregate groups in the HQCA's dynamic proxy disease registry. ▪ Patients aged younger than 40 years.

c) **Colorectal Cancer:**

The total number of asymptomatic patients screened for colorectal cancer.

The number of eligible patients is based on:

- 2 years of past lab data for fecal immunochemical test.
- 10 years of past claims data for colonoscopy.
- 5 years of past claims data for flex sigmoidoscopy.

Colorectal cancer screening identification: (Lab test codes or order test code or order test name)

- Fecal immunochemical test (FIT), lab test codes [Test Code or Order Test Code]:
  - FIT (Fecal Immunochemical Test)
  - FIT1 (Fecal Immunochemical Test 1)
  - FIT2 (Fecal Immunochemical Test 2)
- Colonoscopy is identified by the procedure (billing) codes below:
  - 01.22 (Other non-operative colonoscopy)
  - 01.22A (Other non-operative colonoscopy for screening high risk patients)
  - 01.22B (Other non-operative colonoscopy for screening moderate risk patients)
  - 01.22C (Other non-operative colonoscopy for screening average risk patients)
  - 01.16A (Small bowel capsule endoscopy)
  - 01.16B (Balloon [single or double] enteroscopy, rectal route)
- Flex Sigmoidoscopy is identified by the procedure (billing) codes below:
  - 01.24B (Flexible proctosigmoidoscopy)
  - 01.24BA (Flexible proctosigmoidoscopy for screening of patients considered to be of high risk for colon cancer due to family history)
  - 01.24BB (Flexible proctosigmoidoscopy for screening of patients considered to be of high risk for colon cancer)

Inclusion Criteria

- Patients aged between 50 and 74 years.
- Patients with identified colorectal cancer screening records.

Exclusions

- Patients younger than 50 or older than 74.

d) **Breast Cancer:**

The total number of eligible women who have completed at least one mammogram in a given 30-month period.

Inclusion Criteria

- Women aged between 50 and 74 years.
- Identifying mammography procedure codes:
  - X27 (Mammography – both breast).
  - X27 D (Screening mammography – age 50-74 years inclusive).

Exclusions

- Women younger than 50 years and older than 74 years.

Women with an invasive breast cancer who have had mammograms identified as screening services.

e) **Cervical Cancer:**

The total number of eligible women who have completed at least one Pap test within a 42 month (3.5 year) period.

Pap test identification:

- 13.99BA (Periodic Papanicolaou Smear).
- 13.99BC (Pelvic examination requiring swab and/or sample collection, includes Periodic Papanicolaou Smear).
- 79.29E (Biopsy of cervix).
- V76.2 (Screening for malignant neoplasms of the cervix).
- Z12.4 (Encounter for screening for malignant neoplasm of cervix).

Inclusion Criteria

- Women aged 25 to 69 years.
- Women with identified Pap test records.

Exclusions

- Women younger than 25 or older than 69.
- Women with hysterectomy performed as at April 1, 2005.

DATA DETAILS	
Data Sources:	Alberta Health Physician claims Alberta Health Care Insurance Plan (AHCIP) Registry AHS Laboratory Data
Available Data Years:	**Type of Year:** Fiscal year [starts April 1, ends March 31] **First Available Year:** 2014/15 **Last Available Year:** 2018/19
Geographic Coverage:	The province of Alberta excluding the military and prisoners.
Reporting Levels:	Province
QUALITY STATEMENT	
Limitations and Technical Notes:	▪ PCN assignment is based on which physician a patient is assigned to by the HQCA algorithm. ▪ Not all physicians belong to a PCN; as a result not all patients are assigned to PCNs. ▪ All calculations include only patients who are currently listed as '**Active**' in the Alberta Health Care Insurance Plan (AHCIP) Registry database. This may lead to underestimation of the calculated measure above. ▪ Each patient is counted once regardless of the number of tests performed in a given time period. ▪ Only Alberta data is available. As such, any visits by Alberta patients to labs or facilities outside of the province are not included.

IDENTIFYING INFORMATION	
Name:	**Lipids (cardiovascular risk) screening**
Short/Other Names:	n/a
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The percentage of eligible patients in the zone or PCN who completed a lipid screening test.
Rationale:	Lipid profile screening is used to determine the approximate risks for cardiovascular disease in healthy adults. Thus, providing screening information to PCNs will encourage them in their screening activities to identify early onset of cardiovascular disease.
Interpretation:	A higher rate implies more eligible patients in a zone or PCN have been screened.
Target/Benchmark:	No benchmarks have been identified.
INDICATOR CALCULATION	
Calculation:	Screening rate = $\left(\frac{\text{Number of eligible patients who completed plasma lipid screening}}{\text{Total number of eligible patients in zone or PCN}}\right) \times 100$ **Type of Measure:** Percentage **Adjustment Applied:** None
Denominator:	**Description** The number of eligible patients in a zone or PCN. **Inclusion Criteria** ▪ Patients aged between 40 and 74 years. ▪ For PCN-level data, patients assigned to the PCN by the HQCA algorithm. **Exclusions** ▪ None

Numerator:	**Description** The total number of eligible patients with plasma lipid profile screening within a 5-year period. *Plasma lipid profile identification* (Lab test codes or lab test order code or lab test order name): ▪ LIP (Lipase). ▪ LIPID (Lipid). ▪ LIPID PROFILE (Lipid Profile). ▪ LDL (Low Density Lipoproteins Cholesterol). **Inclusion Criteria** ▪ Patients aged between 40 and 74 years. ▪ Patients with identified plasma lipid profile test records. **Exclusions** ▪ Patients younger than 40 or older than 74.
DATA DETAILS	
Data Sources:	Alberta Health Physician claims Alberta Health Care Insurance Plan (AHCIP) Registry AHS Laboratory Data
Available Data Years:	**Type of Year:** Fiscal year [starts April 1, ends March 31] **First Available Year:** 2014/15 **Last Available Year:** 2018/19
Geographic Coverage:	The province of Alberta excluding the military and prisoners.
Reporting Levels:	Zone, PCN

QUALITY STATEMENT	
Limitations and Technical Notes:	▪ PCN assignment is based on which physician a patient is assigned to by the HQCA algorithm. ▪ Not all physicians belong to a PCN; as a result not all patients are assigned to PCNs. ▪ All calculations include only patients who are currently listed as '**Active**' in the Alberta Health Care Insurance Plan (AHCIP) Registry database. This may lead to underestimation of the calculated measure above. ▪ Each patient is counted once regardless of the number of tests performed in a given time period. ▪ Only Alberta data is available. As such, any visits by Alberta patients to labs or facilities outside of the province are not included.

IDENTIFYING INFORMATION	
Name:	**Diabetes screening**
Short/Other Names:	n/a
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The percentage of non-diabetic patients in the physician panel who completed a diabetes screening test.
Rationale:	Diabetes is a health problem that imposes significant burden on the population and health system. It is expected that treatment after early detection will yield benefits superior to those obtained when treatment is delayed. Thus, providing asymptomatic screening information to physicians will encourage them to screen individuals who are likely to have diabetes. The presentation of screening rates might also serve to motivate active screening practices (i.e., encourage physicians to take more direct steps in screening patients).
Interpretation:	A higher rate implies more eligible patients in a zone or PCN have been screened.
Target/Benchmark:	No benchmarks have been identified.
INDICATOR CALCULATION	
Calculation:	Screening rate = $\left(\frac{\text{Number of eligible patients with a diabetes screening test}}{\text{Total number of eligible patients in zone or PCN}}\right) \times 100$ **Type of Measure:** Percentage **Adjustment Applied:** None
Denominator:	**Description** The number of eligible patients in a zone or PCN. **Inclusion Criteria** ▪ Patients 40 years or older. ▪ For PCN-level data, patients assigned to the PCN by the HQCA algorithm. **Exclusions** ▪ Patients aged younger than 40 years. ▪ Diabetic patients identified in the episode specific disease category (EDC) aggregate groups in the HQCA's dynamic proxy disease registry.

<table>
<tr><td>Numerator:</td><td>Description

An eligible patient is an asymptomatic patient screened for diabetes. A patient is eligible if they meet the inclusion criteria outlined below.

Inclusion Criteria

▪ Patients 40 years or older.

Diabetes screening is identified by the following lab test codes, and ICD-9 or ICD-10 diagnostic codes:

Lab test codes [Order Test Code]:

▪ HBA1C (Hemoglobin A1c).

▪ GLUF (Glucose fasting).

ICD-9 or ICD-10 diagnostic codes:

▪ V77.1 (Screening for Diabetes Mellitus).

▪ Z13.1 (Encounter for Screening for Diabetes Mellitus).

Exclusions

▪ Diabetic patients identified in the episode specific disease category (EDC) aggregate groups in the HQCA’s dynamic proxy disease registry.

▪ Patients aged younger than 40 years.</td></tr>
<tr><td colspan="2">DATA DETAILS</td></tr>
<tr><td>Data Sources:</td><td>Alberta Health Physician Claims

Alberta Health Care Insurance Plan (AHCIP) Registry

Alberta Breast Cancer Screening Program (ABCSP) Data</td></tr>
<tr><td>Available Data Years:</td><td>Type of Year: Fiscal year [starts April 1, ends March 31]

First Available Year: 2014/15

Last Available Year: 2018/19</td></tr>
<tr><td>Geographic Coverage:</td><td>The province of Alberta excluding the military and prisoners.</td></tr>
<tr><td>Reporting Levels:</td><td>Zone, PCN</td></tr>
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QUALITY STATEMENT	
Limitations and Technical Notes:	▪ PCN assignment is based on which physician a patient is assigned to by the HQCA algorithm. ▪ Not all physicians belong to a PCN; as a result not all patients are assigned to PCNs. ▪ All calculations include only patients who are currently listed as '**Active**' in the Alberta Health Care Insurance Plan (AHCIP) Registry database. This may lead to underestimation of the calculated measure above. ▪ Only Alberta data is available. As such, any visits by Alberta patients to labs or facilities outside of the province are not included.

IDENTIFYING INFORMATION	
Name:	**Colorectal cancer screening**
Short/Other Names:	n/a
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The percentage of eligible patients in the zone or PCN who completed a colorectal cancer screening test.
Rationale:	Providing physician with their colorectal cancer screening rates will encourage them to screen their eligible patients. Research has shown that patients who have regular stool test are more likely to survive colorectal cancer. Early detection may also mean less treatment and less time spent recovering.
Interpretation:	A higher rate implies more eligible patients in a zone or PCN have been screened.
Target/Benchmark:	No benchmarks have been identified.
INDICATOR CALCULATION	
Calculation:	Screening rate = $\left(\frac{\text{Number of eligible patients who completed colorectal cancer screening}}{\text{Total number of eligible patients in zone or PCN}}\right) \times 100$ **Type of Measure:** Percentage **Adjustment Applied:** None
Denominator:	**Description** The number of eligible patients in a zone or PCN. **Inclusion Criteria** ▪ Patients aged between 50 and 74 years. ▪ For PCN-level data, patients assigned to the PCN by the HQCA algorithm. **Exclusions** ▪ None

Numerator:	**Description** The total number of asymptomatic patients screened for colorectal cancer. The number of eligible patients is based on: ▪ 2 years of past lab data for fecal immunochemical test. ▪ 10 years of past claims data for colonoscopy. ▪ 5 years of past claims data for flex sigmoidoscopy. *Colorectal cancer screening identification*: (Lab test codes or order test code or order test name) ▪ Fecal immunochemical test (FIT), lab test codes [Test Code or Order Test Code]: o FIT (Fecal Immunochemical Test) o FIT1 (Fecal Immunochemical Test 1) o FIT2 (Fecal Immunochemical Test 2) ▪ Colonoscopy is identified by the procedure (billing) codes below: o 01.22 (Other non-operative colonoscopy) o 01.22A (Other non-operative colonoscopy for screening high risk patients) o 01.22B (Other non-operative colonoscopy for screening moderate risk patients) o 01.22C (Other non-operative colonoscopy for screening average risk patients) o 01.16A (Small bowel capsule endoscopy) o 01.16B (Balloon [single or double] enteroscopy, rectal route) ▪ Flex Sigmoidoscopy is identified by the procedure (billing) codes below: o 01.24B (Flexible proctosigmoidoscopy) o 01.24BA (Flexible proctosigmoidoscopy for screening of patients considered to be of high risk for colon cancer due to family history) o 01.24BB (Flexible proctosigmoidoscopy for screening of patients considered to be of high risk for colon cancer) **Inclusion Criteria** ▪ Patients aged between 50 and 74 years. ▪ Patients with identified colorectal cancer screening records. **Exclusions** ▪ Patients younger than 50 or older than 74.

DATA DETAILS	
Data Sources:	Alberta Health Physician claims Alberta Health Care Insurance Plan (AHCIP) Registry AHS Laboratory Data
Available Data Years:	**Type of Year:** Fiscal year [starts April 1, ends March 31] **First Available Year:** 2009/10 **Last Available Year:** 2018/19
Geographic Coverage:	The province of Alberta excluding the military and prisoners.
Reporting Levels:	Zone, PCN
QUALITY STATEMENT	
Limitations and Technical Notes:	▪ PCN assignment is based on which physician a patient is assigned to by the HQCA algorithm. ▪ Not all physicians belong to a PCN; as a result not all patients are assigned to PCNs. ▪ All calculations include only patients who are currently listed as '**Active**' in the Alberta Health Care Insurance Plan (AHCIP) Registry database. This may lead to underestimation of the calculated measure above. ▪ Each patient is counted once regardless of the number of tests performed in a given time period. ▪ Only Alberta data is available. As such, any visits by Alberta patients to labs or facilities outside of the province are not included.

IDENTIFYING INFORMATION	
Name:	**Breast cancer screening**
Short/Other Names:	n/a
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The percentage of eligible women in a zone or PCN that completed at least one mammogram screening test within a 30-month period.
Rationale:	Providing screening information to physicians will encourage them in their screening activities to identify early onset of breast cancer. Early detection may also mean less treatment and less time spent recovering. The presentation of screening rates might also serve to motivate active screening practices (i.e., encourage physicians to take more direct steps in screening patients).
Interpretation:	A higher rate implies more eligible patients in a zone or PCN have been screened.
Target/Benchmark:	No benchmarks have been identified.
INDICATOR CALCULATION	
Calculation:	Screening rate = $\left(\frac{\text{Number of eligible women who completed at least one screening mammogram}}{\text{Total number of eligible women in zone or PCN}}\right) \times 100$ **Type of Measure:** Percentage **Adjustment Applied:** None
Denominator:	**Description** The number of eligible women in a zone or PCN. **Inclusion Criteria** ▪ Women aged between 50 and 74 years. ▪ For PCN-level data, patients assigned to the PCN by the HQCA algorithm. **Exclusions** ▪ Women younger than 50 years and older than 74 years.

Numerator:	**Description** The total number of eligible women who have completed at least one mammogram in a given 30-month period. **Inclusion Criteria** ▪ Women aged between 50 and 74 years. ▪ Identifying mammography procedure codes: o X27 (Mammography – both breast). o X27 D (Screening mammography – age 50-74 years inclusive). **Exclusions** ▪ Women younger than 50 years and older than 74 years. ▪ Women with an invasive breast cancer who have had mammograms identified as screening services.
DATA DETAILS	
Data Sources:	Alberta Health Physician Claims Alberta Health Care Insurance Plan (AHCIP) Registry Alberta Breast Cancer Screening Program (ABCSP) Data
Available Data Years:	**Type of Year:** Fiscal year [starts April 1, ends March 31] **First Available Year:** 2014/15 **Last Available Year:** 2018/19
Geographic Coverage:	The province of Alberta excluding the military and prisoners.
Reporting Levels:	Zone, PCN
QUALITY STATEMENT	
Limitations and Technical Notes:	▪ PCN assignment is based on which physician a patient is assigned to by the HQCA algorithm. ▪ Not all physicians belong to a PCN; as a result not all patients are assigned to PCNs. ▪ All calculations include only patients who are currently listed as '**Active**' in the Alberta Health Care Insurance Plan (AHCIP) Registry database. This may lead to underestimation of the calculated measure above. ▪ Only Alberta data is available. As such, any visits by Alberta patients to labs or facilities outside of the province are not included.

IDENTIFYING INFORMATION	
Name:	**Cervical cancer screening**
Short/Other Names:	n/a
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The percentage of eligible women in the zone or PCN who received at least one Pap test in a 42 month (3.5 year) period.
Rationale:	Meant for self-reflection and to encourage physicians to assess their screening activities in order maximize appropriate screening of their patients, and to identify early onset of cervical cancer. Early detection may also mean less treatment and less time spent recovering.
Interpretation:	A higher rate implies more eligible patients in a zone or PCN have been screened.
Target/Benchmark:	No benchmarks have been identified.
INDICATOR CALCULATION	
Calculation:	Screening rate = $\left(\frac{\text{Number of eligible patients who completed at least one Pap test}}{\text{Total number of eligible women in zone or PCN}}\right) \times 100$ **Type of Measure:** Percentage **Adjustment Applied:** None
Denominator:	**Description** The number of eligible women in a zone or PCN. **Inclusion Criteria** ▪ Women aged between 25 and 69 years. ▪ For PCN-level data, patients assigned to the PCN by the HQCA algorithm. **Exclusions** ▪ None

Numerator:	**Description** The total number of eligible women who have completed at least one Pap test within a 42 month (3.5 year) period. *Pap test identification*: ▪ 13.99BA (Periodic Papanicolaou Smear). ▪ 13.99BC (Pelvic examination requiring swab and/or sample collection, includes Periodic Papanicolaou Smear). ▪ 79.29E (Biopsy of cervix). ▪ V76.2 (Screening for malignant neoplasms of the cervix). ▪ Z12.4 (Encounter for screening for malignant neoplasm of cervix). **Inclusion Criteria** ▪ Women aged 25 to 69 years. ▪ Women with identified Pap test records. **Exclusions** ▪ Women younger than 25 or older than 69. ▪ Women with hysterectomy performed as at April 1, 2005.
DATA DETAILS	
Data Sources:	Alberta Health Physician claims Alberta Health Care Insurance Plan (AHCIP) Registry National Ambulatory Care Services (NACRS)
Available Data Years:	**Type of Year:** Fiscal year [starts April 1, ends March 31] **First Available Year:** 2014/15 **Last Available Year:** 2018/19
Geographic Coverage:	The province of Alberta excluding the military and prisoners.
Reporting Levels:	Zone, PCN

QUALITY STATEMENT	
Limitations and Technical Notes:	▪ PCN assignment is based on which physician a patient is assigned to by the HQCA algorithm. ▪ Not all physicians belong to a PCN; as a result not all patients are assigned to PCNs. ▪ All calculations include only patients who are currently listed as '**Active**' in the Alberta Health Care Insurance Plan (AHCIP) Registry database. This may lead to underestimation of the calculated measure above. ▪ Each woman is counted once regardless of the number of tests performed in a given time period. ▪ Only Alberta data is available. As such, any visits by Alberta patients to labs or facilities outside of the province are not included.

IDENTIFYING INFORMATION	
Name:	**Influenza vaccination rates for selected high risk groups**
Short/Other Names:	n/a
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The percentage of Albertans in groups that are high risk of complications from influenza who received the influenza vaccine. High risk groups include: ▪ Children under 6 years of age ▪ Seniors (65 years of age and older) ▪ Persons living with chronic obstructive pulmonary disease (COPD) ▪ Persons living with asthma
Rationale:	Influenza immunization has many benefits to the patient including but not limited to: ▪ reduces the risk of flu-related hospitalizations ▪ acts as an important preventive tool for patients with chronic health conditions ▪ helps protect women during and after pregnancy
Interpretation:	A higher rate implies more eligible patients have been immunized.
Target/Benchmark:	No benchmarks have been identified.
INDICATOR CALCULATION	
Calculation:	Vaccination rate = $\left(\frac{\text{Number of persons immunized against influenza}}{\text{Total number of Albertans in zone or PCN}}\right) \times 100$ **Type of Measure:** Percentage **Adjustment Applied:** None

Denominator:	**Description** The number of Albertans in a zone or PCN. **Inclusion Criteria** ▪ For PCN-level data, patients assigned to the PCN by the HQCA algorithm. **Exclusions** ▪ None
Numerator:	**Description** The total number of Albertans that received a flu (influenza) vaccine from a physician, pharmacist or Alberta Health Services public health. **Inclusion Criteria** ▪ Albertans with influenza immunization records. **Exclusions** ▪ None
DATA DETAILS	
Data Sources:	Alberta Health Physician claims Alberta Health Care Insurance Plan (AHCIP) Registry Alberta Immunization Registry
Available Data Years:	**Type of Year:** Fiscal year [starts April 1, ends March 31] **First Available Year:** 2015/16 **Last Available Year:** 2018/19
Geographic Coverage:	The province of Alberta excluding the military and prisoners.
Reporting Levels:	Zone, PCN
Quality Statement	
Limitations and Technical Notes:	▪ PCN assignment is based on which physician a patient is assigned to by the HQCA algorithm. ▪ Not all physicians belong to a PCN; as a result not all patients are assigned to PCNs. ▪ All calculations include only patients who are currently listed as '**Active**' in the Alberta Health Care Insurance Plan (AHCIP) Registry database. This may lead to underestimation of the calculated measure above.

	▪ Immunizations given by other practitioners is not included as individual data is not provided. ▪ Only Alberta data is available. As such, any visits by Alberta patients to facilities outside of the province are not included.

IDENTIFYING INFORMATION	
Name:	**Consistent use of the same family doctor (doctor continuity)**
Short/Other Names:	n/a
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The percentage of all visits to family doctors that are to the same family doctor.
Rationale:	This measure provides an opportunity to assess the impact of relational continuity on different outcomes and more specifically chronic disease management, and preventive service delivery. Hence, this measure provides a means to understand how patients' continuity to a family doctor may be associated with health service utilization and other measures. Continuity to a family doctor substantially impacts healthcare services utilization, patient outcomes, patient experience with care, and cost. In general, the greater the continuity, the more positive the outcomes.
Interpretation:	A lower value indicates that patients see other family doctors who are not their primary family doctor. A higher value is desirable.
Target/Benchmark:	No benchmarks have been identified.
INDICATOR CALCULATION	
Calculation:	**Description** Sum of all individual patients' continuity to a family doctor, divided by the total number of patients across a zone or PCN. Average Continuity = $\frac{\text{Sum of all individual patients' family doctor continuity}}{\text{Total number of patients in zone or PCN}}$ **Type of Measure:** Average **Adjustment Applied:** None
Denominator:	**Description** The number of patients in a given zone or PCN. Patients are assigned based on attachment to a family physician. **Inclusion Criteria** ▪ Patient list specifically submitted by physician.

	▪ Patients assigned to a physician based on the HQCA algorithm (Proxy panel). **Exclusions** ▪ Duplicate family physician visits based on Patient Health Number (PHN), date, procedure and diagnostic codes, and physician identification are removed. ▪ Patients who were seen by the physician but not assigned to them. **Limitations & Technical Notes** ▪ Panel prediction is most accurate for practices in a single stable location over the past 3 fiscal years and for regular full-time work schedule. ▪ Family physician visits include visits within a 3 fiscal year period.
Numerator:	**Description** Sum of individual patients' physician continuity in a zone or PCN. Individual patients' physician continuity is the percentage of time(s) a patient sees their primary physician compared to other family physician visits. **Inclusion Criteria** ▪ Patient list specifically submitted by physician. ▪ Patients assigned to a physician based on the HQCA algorithm (Proxy panel). **Exclusions** ▪ None **Limitations & Technical Notes** ▪ Physician continuity is most accurate for practices in a single stable location over the past 3 fiscal years and for regular full-time work schedule. ▪ Family physician visits include visits within a 3 fiscal year period.
DATA DETAILS	
Data Sources:	Alberta Health Physician Claims.
Available Data Years:	**Type of Year:** Fiscal year [starts April 1, ends March 31] **First Available Year:** 2013/14 **Last Available Year:** 2018/19
Geographic Coverage:	The province of Alberta excluding the military and prisoners.
Reporting Levels:	Zone, PCN

Quality Statement	
Limitations:	▪ About 18% of Albertans do not visit a General Practitioner in a year. ▪ Patients are excluded in the physician panel assignment if they do not visit a physician in 3 years (the current fiscal year, plus the 2 preceding fiscal years). ▪ The physician claims dataset consists of Fee-for-service and shadow billing. The data submitted based on shadow billing may not be entirely accurate. As a result, this might affect the accuracy of the results of this measure. ▪ Only Alberta data is available. As such, any visits by Alberta patients outside of the province are not included.

IDENTIFYING INFORMATION	
Name:	**Consistent use of the same primary care clinic (clinic continuity)**
Short/Other Names:	n/a
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The percentage of all visits to a primary care clinic that are to the same clinic.
Rationale:	This measure provides an opportunity to assess the impact of relational continuity on different outcomes and more specifically chronic disease management, and preventive service delivery. Hence, this measure provides a means to understand how patients' continuity to a family doctor may be associated with health service utilization and other measures. Continuity to a primary care clinic substantially impacts healthcare services utilization, patient outcomes, patient experience with care, and cost. In general, the greater the continuity, the more positive the outcomes.
Interpretation:	A lower value indicates that patients are seen at locations which are not their primary care clinic. A higher value is desirable.
Target/Benchmark:	No benchmarks have been identified.
INDICATOR CALCULATION	
Calculation:	**Description** Sum of all individual patients' continuity to a primary care clinic, divided by the total number of patients across a zone or PCN. Average Continuity = $\frac{\text{Sum of all individual patients' primary care clinic continuity}}{\text{Total number of patients in zone or PCN}}$ **Type of Measure:** Average **Adjustment Applied:** None
Denominator:	**Description** The number of patients in a given zone or PCN. Patients are assigned based on attachment to a family physician.

	Inclusion Criteria ▪ Patient list specifically submitted by physician. ▪ Patients assigned to a physician based on the HQCA algorithm (Proxy panel). **Exclusions** ▪ Duplicate family physician visits based on Patient Health Number (PHN), date, procedure and diagnostic codes, and physician identification are removed. ▪ Patients who were seen by the physician but not assigned to them. **Limitations & Technical Notes** ▪ Panel prediction is most accurate for practices in a single stable location over the past 3 fiscal years and for regular full-time work schedule. ▪ Family physician visits include visits within a 3 fiscal year period.
Numerator:	**Description** Sum of individual patients' primary care clinic continuity in a zone or PCN. Individual patients' clinic continuity is the percentage of time(s) a patient sees a family doctor at their primary care clinic compared to other family physician visits. **Inclusion Criteria** ▪ Patient list specifically submitted by physician. ▪ Patients assigned to a physician based on the HQCA algorithm (Proxy panel). **Exclusions** ▪ None **Limitations & Technical Notes** ▪ Physician and clinic continuity are most accurate for practices in a single stable location over the past 3 fiscal years and for regular full-time work schedule. ▪ Family physician visits include visits within a 3 fiscal year period.
DATA DETAILS	
Data Source:	Alberta Health Physician Claims.

Available Data Years:	**Type of Year:** Fiscal year [starts April 1, ends March 31] **First Available Year:** 2013/14 **Last Available Year:** 2018/19
Geographic Coverage:	The province of Alberta excluding the military and prisoners.
Reporting Levels:	Zone, PCN
QUALITY STATEMENT	
Limitations:	▪ About 18% of Albertans do not visit a General Practitioner in a year. ▪ Patients are excluded in the physician panel assignment if they do not visit a physician in 3 years (the current fiscal year, plus the 2 preceding fiscal years). ▪ The physician claims dataset consists of Fee-for-service and shadow billing. The data submitted based on shadow billing may not be entirely accurate. As a result, this might affect the accuracy of the results of this measure. ▪ Only Alberta data is available. As such, any visits by Alberta patients outside of the province are not included.

IDENTIFYING INFORMATION	
Name:	**Family doctor use of various visit types**
Short/Other Names:	n/a
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The percentage of all family doctor visits which took place in-office, at the patient's home, via telephone, e-mail, or video-conference.
Rationale:	The use of home, phone, e-mail or video-conference visit types may provide greater flexibility for family doctors and another access option for patients.
Interpretation:	A higher percentage implies more appointments are being done in the given format.
Target/Benchmark:	No benchmarks have been identified.
INDICATOR CALCULATION	
Calculation:	Percentage of total visits = $\left(\frac{\text{Number of family doctors visits using the selected visit type}}{\text{Total number of family doctor visits}}\right) \times 100$ **Type of Measure:** Percentage **Adjustment Applied:** None
Denominator:	**Description** The total number of family doctor visits billed for in Alberta. **Inclusion Criteria** ▪ Family doctors in Alberta who have submitted at least one physician claim in a given fiscal year. A family doctor visit is any visit to a physician whose specialty is "GP" and the delivery site Functional Centre Type Code is one of the following: ▪ POFF (Practitioners Office) ▪ AMBU (Ambulatory Care Services) ▪ IPSR (In-Patient Services) ▪ LTC (Long Term Care) ▪ Sites with missing codes (field left blank)

	Exclusions ▪ Family doctors who have not submitted any claims in a given fiscal year.
Numerator:	**Description** Total number of family doctor visits done in-office, at home, via telephone, e-mail, or video-conference. **Inclusion Criteria** ▪ All eligible physician claims: o In-office (all visits excluding the four types listed below) o Home (03.03N) o Phone (03.05JR) o Email (03.01S) o Video-conference (03.01T) **Exclusions** ▪ None
DATA DETAILS	
Data Source:	Alberta Health Physician Claims
Available Data Years:	**Type of Year:** Fiscal year [starts April 1, ends March 31] **First Available Year:** 2015/16 **Last Available Year:** 2018/19
Geographic Coverage:	The province of Alberta excluding the military and prisoners.
Reporting Levels:	Province
QUALITY STATEMENT	
Limitations and Technical Notes:	▪ The physician claims dataset consists of fee-for-service and shadow billing. The data submitted based on shadow billing may not be entirely accurate. As a result, this might affect the accuracy of the results of this measure. ▪ An upper limit of 7 billings per week is in place for phone, email and videoconference visits. ▪ Only Alberta data is available. As such, any visits by Alberta patients to physicians outside of the province are not included.

IDENTIFYING INFORMATION	
Name:	**Family doctor use of various visit types (by billing)**
Short/Other Names:	N/A
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The percentage of family doctors who have billed for at least one of the following visit types: home, phone, e-mail, or video-conference.
Rationale:	The use of home, phone, e-mail or video-conference visit formats may provide greater flexibility for family doctors and another access option for patients.
Interpretation:	A higher percentage implies more family doctors are using these new appointment types.
Target/Benchmark:	No benchmarks have been identified.
INDICATOR CALCULATION	
Calculation:	Percentage with at least one billing = $\left(\frac{\text{Number of family doctors with at least one billing claim for visit type}}{\text{Total number of family doctors}}\right) \times 100$ **Type of Measure:** Percentage **Adjustment Applied:** None
Denominator:	**Description** The number of family doctors in Alberta who have submitted at least one physician claim. **Inclusion Criteria** ▪ Family doctors in Alberta who have submitted at least one physician claim in a given fiscal year. **Exclusions** ▪ Family doctors who have not submitted any claims in a given fiscal year.
Numerator:	**Description** Total number of family doctors who have billed for at least one home, phone, e-mail, or video-conference appointment

	Inclusion Criteria ▪ Family doctors who have submitted at least one claim for any of the following visit types (billing code in brackets): o Home (03.03N) o Phone (03.05JR) o Email (03.01S) o Video-conference (03.01T) **Exclusions** ▪ None
DATA DETAILS	
Data Source:	Alberta Health Physician Claims
Available Data Years:	**Type of Year:** Fiscal year [starts April 1, ends March 31] **First Available Year:** 2015/16 **Last Available Year:** 2018/19
Geographic Coverage:	The province of Alberta excluding the military and prisoners.
Reporting Levels:	Province
QUALITY STATEMENT	
Limitations and Technical Notes:	▪ The physician claims dataset consists of Fee-for-service and shadow billing. The data submitted based on shadow billing may not be entirely accurate. As a result, this might affect the accuracy of the results of this measure. ▪ An upper limit of 7 billings per week is in place for phone, email and videoconference visits. ▪ Only Alberta data is available. As such, any visits by Alberta patients to physicians outside of the province are not included.

IDENTIFYING INFORMATION	
Name:	**Emergency department visits for minor conditions**
Short/Other Names:	n/a
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The number of emergency department visits per 1,000 patients for minor conditions which are unlikely to need hospital admission for treatment. These minor emergency department (ED) visits are for a condition (diagnosis) that occurs more than 100 times over the fiscal years 2002/2003 to 2009/10, and has a less than one percent (1%) likelihood of resulting in a patient being admitted as an inpatient. Data is grouped and presented: a) Overall b) By how consistently patients use the same family doctor (doctor continuity over a three year period): ▪ High (80% or greater) ▪ Moderate (50% to 79%) ▪ Low (Less than 50%) c) By day of week/time of day: ▪ Monday to Friday, 7AM to 5PM ▪ Monday to Friday, 5-9PM, and Saturday-Sunday, 7AM-5PM ▪ All other hours (overnight, weekend evenings, stat holidays)
Rationale:	To provide information on how the patient panel utilizes emergency department services for minor conditions that could be treated in a primary care setting. This measure represents an indirect measure of access to primary healthcare.
Interpretation:	A lower rate is desirable.
Target/Benchmark:	No benchmarks have been identified.

INDICATOR CALCULATION	
Calculation:	Number per 1,000 = $\left(\frac{\text{Total number of ED visits classified as minor by patients in a zone or PCN}}{\text{Total number of patients in a zone or PCN}}\right) \times 1000$ **Type of Measure:** Rate per 1,000 patients **Adjustment Applied:** None
Denominator:	**Description** The total number of patients in a zone or PCN. **Inclusion Criteria** ▪ PCN attachment is based on assignment to a physician. **Exclusions** ▪ Patients without valid AHCIP coverage.
Numerator:	**Description** The total number of ED visits classified as minor, among visits with a Canadian Triage Acuity Score (CTAS) of 4 (less urgent) or 5 (non-urgent). **Inclusion Criteria** Emergency department visits are identified by the MIS_CODE 71310 (the first 5 digits of the MIS functional code). A valid ED visit for a minor condition is identified by the first 3 digits of the following ICD-10 diagnostic codes (the DXCODE1 field in the NACRS dataset): ▪ A56, A59, A63, A64 (Infections with a Predominantly Sexual Mode of Transmission) ▪ A74 (Other Diseases Caused by Chlamydiae) ▪ B06, B07, B08, B09 (Viral Infections Characterized by Skin and Mucous Membrane Lesions) ▪ B30 (Other Viral Diseases) ▪ B35, B36, B37, B48 (Mycoses) ▪ B65, B80, B82, B83 (Protozoal Diseases) ▪ B85, B86, B88, B89 (Pediculosis, Acariasis, and Other Infestations) ▪ C44 (Malignant Neoplasms) ▪ D04 (In Situ Neoplasms)

	▪ D16, D17, D22, D23, D24 (Benign Neoplasms) ▪ E29 (Disorders of Other Endocrine Glands) ▪ F17 (Mental and Behavioural Disorders due to Psychoactive Substance use) ▪ F52 (Behavioural Syndromes Associated with Physiological Disturbances and Physical Factors) ▪ G43 (Episodic and Paroxysmal Disorders) ▪ G56 (Nerve, Root and Plexus Disorders) ▪ H00, H01, H04 (Disorders of Eyelid, Lacrimal System and Orbit) ▪ H10, H11 (Disorders of Conjunctiva) ▪ H15, H18 (Disorders of Sclera, Cornea, Iris and Ciliary Body) ▪ H57 (Visual Disturbances and Blindness) ▪ H60, H61 (Diseases of External Ear) ▪ H65, H66, H68, H69, H72, H73, H74 (Diseases of Middle Ear and Mastoid) ▪ H92, H93 (Other Diseases of the Ear) ▪ J00, J01, J02, J06 (Acute Upper Respiratory Infections) ▪ J30, J31, J32, J33 (Other Diseases of Upper Respiratory Tract) ▪ K00, K01, K02, K04, K05, K07, K08, K13 (Diseases of Oral Cavity, Salivary Glands and Jaws) ▪ L01 (Infections of the Skin and Subcutaneous Tissue) ▪ L20, L21, L22, L23, L24, L25, L28, L29, L30 (Dermatitis and Eczema) ▪ L42, L43 (Papulosquamous Disorders) ▪ L50, L55, L56, L57 (Radiation-Related Disorders of the Skin and Subcutaneous Tissue) ▪ L60, L63, L65, L70, L71, L72, L73, L74 (Disorder of Skin Appendages) ▪ L81, L82, L84, L85, L90, L91, L92 (Other Disorders of the Skin and Subcutaneous Tissue) ▪ M18, M20, M22 (Arthoropathies) ▪ M67, M70, M75, M76, M77 (Soft Tissue Disorders) ▪ M92, M94 (Osteopathies and Chondropathies) ▪ N34 (Other Diseases of Urinary System) ▪ N60, N62, N63, N64 (Disorders of Breast) ▪ N77 (Inflammatory Diseases of Female Pelvic Organs) ▪ N91, N94, N97 (Non-inflammatory Disorders of Female Genital Tract)

	▪ O92 (Complications Predominantly related to the Puerperium) ▪ P37 (Infections Specific to the Perinatal Period) ▪ Q10 (Congenital malformations of Eye, Ear, Face and/or Neck) ▪ Q38 (Other Congenital Malformations of the Digestive System) ▪ Q66 (Congenital Malformations and Deformations of the Musculoskeletal System) ▪ R30, R36 (Symptoms and Signs Involving the Urinary System) ▪ Z02, Z09, Z11, Z12, Z13 (Persons Encountering Health Services for Examination and Investigation) ▪ Z20, Z23, Z24, Z25, Z26, Z27, Z29 (Persons with Potential Health Hazards related to Communicable Diseases) ▪ Z30, Z31, Z32 (Persons Encountering Health Services in Circumstances related to Reproduction) ▪ Z56, Z57, Z64 (Persons with Potential Health Hazards related to Socioeconomic and Psychosocial Circumstances) ▪ Z70, Z71, Z76 (Persons Encountering Health Services in Other Circumstances) ▪ Z92 (Persons with Potential Health Hazards related to Family and Personal History and Certain Conditions Influencing Health Status) **Exclusions** ▪ Visits to urgent care centres or other ambulatory care facilities ▪ Duplicate records ▪ Records with invalid/missing data (e.g. personal health number, discharge date) ▪ Records with a missing time stamp ▪ Visits to the ED that is as a result of injury (i.e. ICD-9 or ICD-10 diagnostic codes beginning with the letter ‘S’ or ‘T’). ▪ Visits to the ED with the first 3 digits of the ICD-9 or ICD-10 diagnostic (DXCDODE1) not in the criteria above.
DATA DETAILS	
Data Sources:	National Ambulatory Care Reporting System (NACRS). Alberta Health Physician Claims. Alberta Health Care Insurance Plan (AHCIP) Registry.

Available Data Years:	**Type of Year:** Fiscal year [starts April 1, ends March 31] **First Available Year:** 2015/16 **Last Available Year:** 2018/19
Geographic Coverage:	The province of Alberta excluding the military and prisoners.
Reporting Levels:	Zone, PCN Also stratified by level of continuity to family doctor
QUALITY STATEMENT	
Limitations and Technical Notes:	▪ This measure is diagnostic post-hoc biased. ▪ All calculations include only patients who are currently listed as '**Active**' in the Alberta Health Care Insurance Plan (AHCIP) Registry database. This may lead to underestimation of the calculated measure above. ▪ Only Alberta data is available. As such, any visits by Alberta patients to physicians outside of the province are not included.

IDENTIFYING INFORMATION	
Name:	**Family doctor visit after a hospital stay for selected chronic conditions**
Short/Other Names:	n/a
BACKGROUND, INTERPRETATION AND BENCHMARKS	
Description:	The percentage of patients who saw any general practitioner within 7 or 30 days of hospital discharge following hospitalization due to high blood pressure, diabetes, chronic obstructive pulmonary disease (COPD), asthma, heart failure, ischaemic health disease, or chronic renal failure.
Rationale:	Appropriate follow-up after hospital discharge may ensure effective care coordination in the community. This measure is also an assessment of informational continuity.
Interpretation:	A higher rate implies that more eligible patients received follow-up after hospital discharge.
Target/Benchmark:	No benchmarks have been identified.
INDICATOR CALCULATION	
Calculation:	Percentage = $\left(\frac{\text{Number of patients who saw a family doctor within 7 or 30 days after leaving hospital}}{\text{Number of patients discharged from hospital}}\right) \times 100$ **Type of Measure:** Percentage **Adjustment Applied:** None
Denominator:	**Description** The total number of patients who were discharged from a hospital in Alberta for visits due to pre-selected conditions. **Inclusion Criteria** ▪ Most responsible diagnosis code (DXCODE1) of: ▪ Hypertension (ICD-10-CA: I10-I13, I15) ▪ Diabetes (ICD-10-CA: E10, E11, E13, E14) ▪ COPD (ICD-10-CA: J41-J44, J47) ▪ Asthma (ICD-10-CA: J45)

	▪ Heart Failure (ICD-10-CA: I50) ▪ Angina or Ischemic Heart Disease (ICD-10-CA: I20, I25) ▪ Chronic Renal Failure (ICD-10-CA: N18) **Exclusions** ▪ Patients without valid AHCIP coverage. ▪ Deaths, transfers to same/other facility (discharge dispositions 01, 02, 03, 07, 08, 09 ▪ Duplicate records ▪ Records with invalid/missing data (e.g. personal health number, discharge date) ▪ Patients re-admitted to hospital (all-causes) during the follow-up period
Numerator:	**Description** The total number of patients who saw a family doctor within the specified follow-up period (7 or 30 days) **Inclusion Criteria** Visits to a family doctor in Alberta within 24 hours and 7/30 days of hospital discharge for pre-selected conditions. **Exclusions** ▪ Duplicate records and/or negated physician claims ▪ Records with invalid/missing data (e.g. personal health number, discharge date)
DATA DETAILS	
Data Sources:	Discharge Abstract Database (DAD). Alberta Health Physician Claims. Alberta Health Care Insurance Plan (AHCIP) Registry.
Available Data Years:	**Type of Year:** Fiscal year [starts April 1, ends March 31] **First Available Year:** 2015/16 **Last Available Year:** 2018/19
Geographic Coverage:	The province of Alberta excluding the military and prisoners.

Reporting Levels:	Zone, PCN Also stratified by level of continuity to family doctor
QUALITY STATEMENT	
Limitations and Technical Notes:	▪ Other types of follow-up (e.g. specialist, nurse practitioner) are not considered. Follow-up many not always be related to a specific hospital discharge or clinical diagnosis. Deaths which take place in the community during the follow-up period cannot be accounted for. This may result in a slight decrease in reported follow-up rates. ▪ Only Alberta data is available. As such, any visits by Alberta patients to physicians outside of the province are not included.

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