Technical Specifications of Pediatric Ambulatory Care Sensitive Condition Hospitalizations

Source: The Canadian Institute for Health Information

Database(s):
- Discharge Abstract Database (DAD)

Level(s) of Care (facility type):
- Acute Care (excluding Quebec)

Fiscal Year(s):
- 2014/15 and 2015/16 (combined)

Scope:
- All acute paediatric inpatient records, including deaths submitted to the DAD for fiscal years 2014/15 and 2015/16.

Groupings:
- Neighbourhood Income Quintile of patient postal code
- Cases from the Yukon, Northwest Territories and Nunavut will be grouped, due to the low number of facilities in these provinces / territories.

1. **ASTHMA**
   Numerator:
   Inclusions:
   - Analytical Institution Type = Acute Inpatient **AND**
   - Submitting Province/Territory = All (excluding Quebec) **AND**
   - Fiscal Years = 2014/15 and 2015/16 **AND**
   - Patients age 2-17 (inclusive, including deaths) years old only **AND**
   - Canadian residents only (include homeless and unknown) **AND**
   - Most Responsible Diagnosis (MRDx) code of Asthma (J45.-)

   Exclusions:
   - Newborns, Stillbirths, and Cadaveric Donations **AND**
   - Obstetrical records with the following diagnosis codes in any position:
     - O00 – O99 (inclusive) - Pregnancy, Childbirth and the Puerperium
     - Z37.^ - Outcome of Delivery
     - A34 - Obstetrical Tetanus
     - P96.4 - Termination of pregnancy, affecting fetus and newborn **AND**
   - Patients with any of the following diagnosis codes (in any diagnosis code location) on the abstract:
     - E84.^ - Cystic fibrosis
     - J98.4 - Other disorders of the lung
     - P27.^ - Chronic respiratory disease orig. in the perinatal period
     - P28.^ - Other respiratory disease orig. in the perinatal period
     - Q30-Q34 - Congenital malformations of the respiratory system
     - Q25.4 - Other congenital malformation of aorta
     - Q39.3 - Congenital stenosis and stricture of oesophagus

- Q39.4 - Oesophageal web
- Q89.3 - Situs inversus

Denominator:

Inclusions:

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- Submitting Province/Territory = All (excluding Quebec) **AND**
- Fiscal Years = 2014/15 and 2015/16 **AND**
- Patients age 2-17 (inclusive, including deaths) years old only **AND**
- Canadian residents only (include homeless and unknown) **AND**
- Most Responsible Diagnosis (MRDx) code = any diagnosis code

Exclusions:

- Newborns, Stillbirths, and Cadaveric Donations **AND**
- Obstetrical records with the following diagnosis codes in any position:
  - O00 – O99 (inclusive) Pregnancy, Childbirth and the Puerperium
  - Z37.^ - Outcome of Delivery
  - A34 - Obstetrical Tetanus
  - P96.4 - Termination of pregnancy, affecting fetus and newborn

NOTES:

- Include all acute hospitalizations where the MRDx is the indicator of interest, including multiple occurrences within the two (2) year study period.
- Include all records for the receiving Acute Care facilities where the patient was transferred from an Emergency Department to the receiving Acute Care facility and the MRDx is the indicator of interest.
- Exclude all records for the receiving Acute Care facilities where the patient was transferred from one (1) Acute Care facility to the receiving Acute Care facility and the MRDx is the indicator of interest.

2. **DIABETES SHORT TERM COMPLICATIONS**

   Numerator:

   Inclusions:

   - Analytical Institution Type = Acute Inpatient **AND**
   - Submitting Province/Territory = All (excluding Quebec) **AND**
   - Fiscal Years = 2014/15 and 2015/16 **AND**
   - Patients age 6-17 (inclusive, including deaths) years old only **AND**
   - Canadian residents only (include homeless and unknown) **AND**
   - Most Responsible Diagnosis (MRDx) code of Diabetes:
     - E10.0 - Type 1 diabetes mellitus with coma
     - E11.0 - Type 2 diabetes mellitus with coma
     - E13.0 - Other specified diabetes mellitus with coma
     - E14.0 - Unspecified diabetes mellitus with coma
     - E10.10 - Type 1 diabetes mellitus with ketoacidosis
     - E11.10 - Type 2 diabetes mellitus with ketoacidosis
     - E13.10 - Other specified diabetes mellitus with ketoacidosis
     - E14.10 - Unspecified diabetes mellitus with ketoacidosis
     - E10.11 - Type 1 diabetes mellitus with lactic acidosis
     - E11.11 - Type 2 diabetes mellitus with lactic acidosis

- o E13.11 - Other specified diabetes mellitus with lactic acidosis
- o E14.11 - Unspecified diabetes mellitus with lactic acidosis
- o E10.12 - Type 1 diabetes mellitus with ketoacidosis with lactic acidosis
- o E11.12 - Type 2 diabetes mellitus with ketoacidosis with lactic acidosis
- o E13.12 - Other specified diabetes mellitus with ketoacidosis with lactic acidosis
- o E14.12 - Unspecified diabetes mellitus with ketoacidosis with lactic acidosis
- o E10.64 - Type 1 diabetes mellitus with poor control, so described
- o E11.64 - Type 2 diabetes mellitus with poor control, so described
- o E13.64 - Other specified diabetes mellitus with poor control, so described
- o E14.64 - Unspecified diabetes mellitus with poor control, so described

Exclusions:
- Newborns, Stillbirths, and Cadaveric Donations **AND**
- Obstetrical records with the following diagnosis codes in any position:
  - o O00 – O99 (inclusive) - Pregnancy, Childbirth and the Puerperium
  - o Z37.^ - Outcome of Delivery
  - o A34 - Obstetrical Tetanus
  - o P96.4 - Termination of pregnancy, affecting fetus and newborn

Denominator:
Inclusions:
- Analytical Institution Type = Acute Inpatient **AND**
- Submitting Province/Territory = All (excluding Quebec) **AND**
- Fiscal Years = 2014/15 and 2015/16 **AND**
- Patients age 6-17 (inclusive, including deaths) years old only **AND**
- Canadian residents only (include homeless and unknown) **AND**
- Most Responsible Diagnosis (MRDx) code = any diagnosis code

Exclusions:
- Newborns, Stillbirths, and Cadaveric Donations **AND**
- Obstetrical records with the following diagnosis codes in any position:
  - o O00 – O99 (inclusive) - Pregnancy, Childbirth and the Puerperium
  - o Z37.^ - Outcome of Delivery
  - o A34 - Obstetrical Tetanus
  - o P96.4 - Termination of pregnancy, affecting fetus and newborn

NOTES:
- Include all acute hospitalizations where the MRDx is the indicator of interest, including multiple occurrences within the two (2) year study period.
- Include all records for the receiving Acute Care facilities where the patient was transferred from an Emergency Department to the receiving Acute Care facility and the MRDx is the indicator of interest.
- Exclude all records for the receiving Acute Care facilities where the patient was transferred from one (1) Acute Care facility to the receiving Acute Care facility and the MRDx is the indicator of interest.

3. **PERFORATED APPENDIX ADMISSIONS**

Numerator:

Inclusions:
- Analytical Institution Type = Acute Inpatient **AND**
- Submitting Province/Territory = All (excluding Quebec) **AND**
- Fiscal Years = 2014/15 and 2015/16 **AND**
- Patients age 1-17 (inclusive, including deaths) years old only **AND**
- Canadian residents only (include homeless and unknown) **AND**
- Most Responsible Diagnosis (MRDx) code of Acute Appendicitis with Peritonitis:
  - K35.2 - Acute appendicitis with generalized peritonitis
  - K35.3 - Acute appendicitis with localized peritonitis

Exclusions:
- Newborns, Stillbirths, and Cadaveric Donations **AND**
- Obstetrical records with the following diagnosis codes in any position:
  - O00 – O99 (inclusive) - Pregnancy, Childbirth and the Puerperium
  - Z37.^ - Outcome of Delivery
  - A34 - Obstetrical Tetanus
  - P96.4 - Termination of pregnancy, affecting fetus and newborn

Denominator:

Inclusions:
- Analytical Institution Type = Acute Inpatient **AND**
- Submitting Province/Territory = All (excluding Quebec) **AND**
- Fiscal Years = 2014/15 and 2015/16 **AND**
- Patients age 1-17 (inclusive, including deaths) years old only **AND**
- Canadian residents only (include homeless and unknown) **AND**
- Most Responsible Diagnosis (MRDx) code of Appendicitis:
  - K35.2 - Acute appendicitis with generalized peritonitis
  - K35.3 – Acute appendicitis with localized peritonitis
  - K35.8 – Acute appendicitis, other and unspecified
  - K36 - Other appendicitis
  - K37 - Unspecified appendicitis

Exclusions:
- Newborns, Stillbirths, and Cadaveric Donations **AND**
- Obstetrical records with the following diagnosis codes in any position:
  - O00 – O99 (inclusive) - Pregnancy, Childbirth and the Puerperium
  - Z37.^ - Outcome of Delivery
  - A34 - Obstetrical Tetanus
  - P96.4 - Termination of pregnancy, affecting fetus and newborn

NOTES:
- If a patient has multiple hospital admissions with an MRDx of appendicitis or is transferred to another acute facility with an MRDx of appendicitis, only include the first occurrence, for that patient, for that specific indicator in the numerator/denominator. The patient will only be counted once for this indicator.

4. **DEHYDRATION AND GASTROENTERITIS (COMBINED)**
   Numerator:
   Inclusions:
   - Analytical Institution Type = Acute Inpatient **AND**
   - Submitting Province/Territory = All (excluding Quebec) **AND**
   - Fiscal Years = 2014/15 and 2015/16 **AND**
   - Patients age 3 months -17 (inclusive, including deaths) years old only **AND**
   - Canadian residents only (include homeless and unknown) **AND**
   - Most Responsible Diagnosis (MRDx) code of Gastroenteritis:
     - A08.^ - Viral and other specified intestinal infections
     - A09.^ - Other gastroenteritis and colitis of infectious and unspecified origin
     - K52.9 - Noninfective gastroenteritis and colitis, unspecified
     - K52.8 - Other specified noninfective gastroenteritis and colitis
     OR
   - Combination coding of a Most Responsible Diagnosis (MRDx) code of Dehydration:
     - E86.^ - Volume depletion
     - P74.1 - Dehydration of newborn **AND**
     - Gastroenteritis code with a diagnosis type of 1, 2, W, X, or Y:
       - A08.^ - Viral and other specified intestinal infections
       - A09.^ - Other gastroenteritis and colitis of infectious and unspecified origin
       - K52.9 - Noninfective gastroenteritis and colitis, unspecified
       - K52.8 - Other specified noninfective gastroenteritis and colitis

   Exclusions:
   - Newborns, Stillbirths, and Cadaveric Donations **AND**
   - Obstetrical records with the following diagnosis codes in any position:
     - O00 – O99 (inclusive) - Pregnancy, Childbirth and the Puerperium
     - Z37.^ - Outcome of Delivery
     - A34 - Obstetrical Tetanus
     - P96.4 - Termination of pregnancy, affecting fetus and newborn **AND**
   - Patients with any of the following diagnosis codes (in any diagnosis code location) on the abstract:
     Bacterial or other gastroenteritis
     - A02.^ - Other salmonella infections
     - A03.^ - Shigellosis
     - A04.^ - Other bacterial intestinal infections
     - A05.^ - Other bacterial foodborne intoxications, not elsewhere classified
     - A06.^ - Amoebiasis
     - A07.^ - Other protozoal intestinal diseases
     - B37.81 - Candidal enteritis

     Gastrointestinal abnormalities
     - K50.^ - Crohn's disease [regional enteritis]
     - K51.^ - Ulcerative colitis
     - K52.0 - Gastroenteritis and colitis due to radiation
     - K52.1 - Toxic gastroenteritis and colitis
     - K52.2 - Allergic and dietetic gastroenteritis and colitis
     - K52.3 - Indeterminate colitis

- o K90.^ - Intestinal malabsorption
- o K91.2 - Postsurgical malabsorption, not elsewhere classified
- o K92.80 - Mucositis (ulcerative) of the digestive system

Denominator:
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- Fiscal Years = 2014/15 and 2015/16 **AND**
- Patients age 3 months - 17 (inclusive, including deaths) years old only **AND**
- Canadian residents only (include homeless and unknown) **AND**
- Most Responsible Diagnosis (MRDx) code = any diagnosis code

Exclusions:
- Newborns, Stillbirths, and Cadaveric Donations **AND**
- Obstetrical records with the following diagnosis codes in any position:
  - o O00 – O99 (inclusive) - Pregnancy, Childbirth and the Puerperium
  - o Z37.^ - Outcome of Delivery
  - o A34 - Obstetrical Tetanus
  - o P96.4 - Termination of pregnancy, affecting fetus and newborn

NOTES:
- Include all acute hospitalizations where the MRDx is the indicator of interest, including multiple occurrences within the two (2) year study period.
- Include all records for the receiving Acute Care facilities where the patient was transferred from an Emergency Department to the receiving Acute Care facility and the MRDx is the indicator of interest.
- Exclude all records for the receiving Acute Care facilities where the patient was transferred from one (1) Acute Care facility to the receiving Acute Care facility and the MRDx is the indicator of interest.

5. **URINARY TRACT INFECTION**
Numerator:
Inclusions:
- Analytical Institution Type = Acute Inpatient **AND**
- Submitting Province/Territory = All (excluding Quebec) **AND**
- Fiscal Years = 2014/15 and 2015/16 **AND**
- Patients age 3 months -17 (inclusive, including deaths) years old only **AND**
- Canadian residents only (include homeless and unknown) **AND**
- Most Responsible Diagnosis (MRDx) code of Urinary Tract Infection:
  - o N10 - Acute tubule-interstitial nephritis
  - o N15.1 - Renal and perinephric abscess
  - o N30.0 - Acute cystitis
  - o N39.0 - Urinary tract infection, site not specified
  - o N15.9 - Renal tubule-interstitial disease, unspecified
  - o N12 -Tubulo-interstitial nephritis, not specified as acute or chronic
  - o N28.83 - Pyelitis cystica
  - o N28.84 - Pyeloureteritis cystica

- N28.85 - Ureteritis cystica

Exclusions:
- Newborns, Stillbirths, and Cadaveric Donations **AND**
- Obstetrical records with the following diagnosis codes in any position:
  - O00 – O99 (inclusive) - Pregnancy, Childbirth and the Puerperium
  - Z37.^ - Outcome of Delivery
  - A34 - Obstetrical Tetanus
  - P96.4 - Termination of pregnancy, affecting fetus and newborn **AND**
- Patients with any of the following diagnosis codes (in any diagnosis code location) on the abstract:

Immunocompromised
  - B24 - Human immunodeficiency virus [HIV] disease
  - B59 - Pneumocystosis (J17.3*)
  - C81-C96 - Malignant neoplasms of lymphoid, haematopoietic and related tissue
  - D47.^ - Other neoplasms of uncertain or unknown behaviour of lymphoid, haematopoietic and related tissue
  - D57.^ - Sickle-cell disorders
  - D61.^ - Other aplastic anaemias
  - D80.^ - Immunodeficiency with predominantly antibody defects
  - D81.^ - Combined immunodeficiencies
  - D82.^ - Immunodeficiency associated with other major defects
  - D83.^ - Common variable immunodeficiency
  - D84.^ - Other immunodeficiencies
  - D89.^ - Other disorders involving the immune mechanism, not elsewhere classified
  - T86.^ - Failure and rejection of transplanted organs and tissues
  - Z94.^ - Transplanted organ and tissue status
  - B18.^ - Chronic viral hepatitis
  - D73.0 - Hyposplenism
  - D73.1 - Hypersplenism
  - Q89.0 - Congenital malformations of spleen
  - D73.2 - Chronic congestive splenomegaly
  - D73.3 - Abscess of spleen

Kidney/urinary tract abnormalities
  - N11.^ - Chronic tubulo-interstitial nephritis
  - N13.^ - Obstructive and reflux uropathy
  - N14.^ - Drug- and heavy-metal-induced tubulo-interstitial and tubular conditions
  - N15.0 - Balkan nephropathy
  - N15.8 - Other specified renal tubule-interstitial diseases
  - N16.^ - Renal tubulo-interstitial disorders in diseases classified elsewhere
  - N17.^ - Acute renal failure
  - N18.^ - Chronic kidney disease
  - N19 - Unspecified kidney failure
  - N20-N23 - Urolithiasis
  - N25-N29 - Other disorders of kidney and ureter
  - N30.1 - Interstitial cystitis (chronic)
  - N30.2 - Other chronic cystitis
  - N30.3 - Trigonitis
  - N30.4 - Irradiation cystitis
  - N30.8 - Other cystitis- includes abscess of bladder/cystitis cystic glandularis

- o N30.9 - Cystitis, unspecified
- o N31.^ - Neuromuscular dysfunction of bladder, not elsewhere classified
- o N32.0 - Bladder-neck obstruction
- o N33.0 - Tuberculosis cystitis
- o N33.8 - Bladder disorders in other diseases classified elsewhere
- o N34.^ - Urethritis and urethral syndrome
- o N35.^ - Urethral stricture
- o N36.^ - Other disorders of urethra
- o N37.^ - Urethral disorders in diseases classified elsewhere
- o N39.1 - Persistent proteinuria, unspecified
- o N39.8 - Other specified disorders of urinary system
- o N06.^ - Isolated proteinuria with specified morphological lesion
- o Q60-Q64 - Congenital malformations of the urinary system
- o E1*.23 + N08.3^ - Diabetes Mellitus with ESRD

Denominator:
Inclusions:
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- Fiscal Years = 2014/15 and 2015/16 **AND**
- Patients age 3 months - 17 (inclusive, including deaths) years old only **AND**
- Canadian residents only (include homeless and unknown) **AND**
- Most Responsible Diagnosis (MRDx) code = any diagnosis code

Exclusions:
- Newborns, Stillbirths, and Cadaveric Donations **AND**
- Obstetrical records with the following diagnosis codes in any position:
  - o O00 – O99 (inclusive) - Pregnancy, Childbirth and the Puerperium
  - o Z37.^ - Outcome of Delivery
  - o A34 - Obstetrical Tetanus
  - o P96.4 - Termination of pregnancy, affecting fetus and newborn

NOTES:
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- Exclude all records for the receiving Acute Care facilities where the patient was transferred from one (1) Acute Care facility to the receiving Acute Care facility and the MRDx is the indicator of interest.