

Appendix 1. Diagnosis code for an avoidable hospital admission for asthma, COPD, CHF, hypertension and diabetes (OECD Health Care Quality Indicators 2018-19)

Indicators in the Avoidable admission indicator set include:

1. Asthma hospital admission
2. Chronic obstructive pulmonary disease (COPD) hospital admission
3. Congestive heart failure (CHF) hospital admission
4. Hypertension hospital admission
5. Diabetes hospital admission

AA1) ASTHMA HOSPITAL ADMISSION

(See Glossary for definitions of italicized terminology)

Coverage: Population aged 15 and older (5 year age groups). All *acute care hospitals*, including public and private hospitals that provide inpatient care.

Numerator: All non-maternal/non-neonatal hospital *admissions* with a *principal diagnosis* code of asthma (see Asthma diagnosis codes below) in a specified year.

Exclude:

- Cases where the patient died in hospital during the admission.
- Cases resulting from a transfer from another acute care institution (*transfers-in*).
- Cases with *MDC 14* or specified pregnancy, childbirth, and puerperium codes in any field – Refer to Annex D (Excel sheet - HCQO 2018_19 Data Collection_Annex A-I)
- Cases with cystic fibrosis and anomalies of the respiratory system diagnosis code in any field (see ICD codes below)
- Cases that are *same day/day only admissions*

Denominator: Population count.

Asthma diagnosis codes:

ICD-9-CM	ICD-10-WHO
49300 EXTRINSIC ASTHMA NOS	J450 PREDOMINANTLY ALLERGIC ASTHMA
49301 EXT ASTHMA W STATUS ASH	J451 NONALLERGIC ASTHMA
49302 EXT ASTHMA W ACUTE EXAC	J458 MIXED ASTHMA
49310 INT ASTHMA W/O STAT ASTH	J459 ASTHMA, UNSPECIFIED
49311 INTRINSIC ASTHMA NOS	J46 STATUS ASTHMATICUS
49312 INT ASTHMA W ACUTE EXAC	
49320 CH OB ASTH NOS	
49321 CH OB ASTHMA W STAT ASTH	
49322 CH OBS ASTH W ACUTE EXAC	
49381 EXERCISE IND BRONCHOSPASM	
49382 COUGH VARIANT ASTHMA	
49390 ASTHMA NOS	
49391 ASTHMA W STATUS ASTHMAT	
49392 ASTHMA W ACUTE EXAC	

Exclude diagnosis codes cystic fibrosis and anomalies of the respiratory system:

ICD-9-CM	ICD-10-WHO
<p>27700 CYSTIC FIBROS W/O ILEUS 27701 CYSTIC FIBROS W ILEUS 27702 CYSTIC FIBROS W PUL MAN 27703 CYSTIC FIBROSIS W GI MAN 27709 CYSTIC FIBROSIS NEC 74721 ANOMALIES OF AORTIC ARCH 7483 LARYNGOTRACH ANOMALY NEC 7484 CONGENITAL CYSTIC LUNG 7485 AGENESIS OF LUNG 74860 LUNG ANOMALY NOS 74861 CONGEN BRONCHIECTASIS 74869 LUNG ANOMALY NEC 7488 RESPIRATORY ANOMALY NEC 7489 RESPIRATORY ANOMALY NOS 7503 CONG ESOPH FISTULA/ATRES 7593 SITUS INVERSUS 7707 PERINATAL CHR RESP DIS</p>	<p>E840 CYSTIC FIBROSIS WITH PULMONARY MANIFESTATIONS E841 CYSTIC FIBROSIS WITH INTESTINAL MANIFESTATIONS E848 CYSTIC FIBROSIS WITH OTHER MANIFESTATIONS E849 CYSTIC FIBROSIS, UNSPECIFIED P27.0 WILSON-MIKITY SYNDROME P27.1 BRONCHOPULMONARY DYSPLASIA ORIGINATING IN THE PERINATAL PERIOD P27.8 OTHER CHRONIC RESPIRATORY DISEASES ORIGINATING IN THE PERINATAL PERIOD P27.9 UNSPECIFIED CHRONIC RESP DISEASE ORIGINATING IN THE PERINATAL PERIOD Q25.4 OTHER CONGENITAL MALFORMATIONS OF AORTA Q31.1 CONGENITAL SUBGLOTTIC STENOSIS Q31.2 LARYNGEAL HYPOPLASIA Q31.3 LARYNGOCELE Q31.5 CONGENITAL LARYNGOMALACIA Q31.8 OTHER CONGENITAL MALFORMATIONS OF LARYNX Q31.9 CONGENITAL MALFORMATION OF LARYNX, UNSPECIFIED Q32.0 CONGENITAL TRACHEOMALACIA Q32.1 OTHER CONGENITAL MALFORMATIONS OF TRACHEA Q32.2 CONGENITAL BRONCHOMALACIA Q32.3 CONGENITAL STENOSIS OF BRONCHUS Q32.4 OTHER CONGENITAL MALFORMATIONS OF BRONCHUS Q33.0 CONGENITAL CYSTIC LUNG Q33.1 ACCESSORY LOBE OF LUNG Q33.2 SEQUESTRATION OF LUNG Q33.3 AGENESIS OF LUNG Q33.4 CONGENITAL BRONCHIECTASIS Q33.5 ECTOPIC TISSUE IN LUNG Q33.6 HYPOPLASIA AND DYSPLASIA OF LUNG Q33.8 OTHER CONGENITAL MALFORMATIONS OF LUNG Q33.9 CONGENITAL MALFORMATION OF LUNG, UNSPECIFIED Q34.0 ANOMALY OF PLEURA Q34.1 CONGENITAL CYST OF MEDIASTINUM Q34.8 OTHER SPECIFIED CONGENITAL MALFORMATIONS OF RESPIRATORY SYSTEM Q34.9 CONGENITAL MALFORMATION OF RESPIRATORY SYSTEM, UNSPECIFIED Q39.0 ATRESIA OF OESOPHAGUS WITHOUT FISTULA Q39.1 ATRESIA OF OESOPHAGUS WITH TRACHEO-OESOPHAGEAL FISTULA Q39.2 CONGENITAL TRACHEO-OESOPHAGEAL FISTULA WITHOUT ATRESIA Q39.3 CONGENITAL STENOSIS AND STRICTURE OF OESOPHAGUS Q39.4 OESOPHAGEAL WEB Q39.8 OTHER CONGENITAL MALFORMATIONS OF OESOPHAGUS Q89.3 SITUS INVERSUS</p>

AA2) CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) HOSPITAL ADMISSION

(See Glossary for definitions of italicized terminology)

Coverage: Population aged 15 and older (5 year age groups). All *acute care hospitals*, including public and private hospitals that provide inpatient care.

Numerator: All non-maternal/non-neonatal hospital *admissions* with a *principal diagnosis* code of Chronic Obstructive Pulmonary Disease (See COPD diagnosis codes below) in a specified year.

Exclude:

- Cases where the patient died in hospital during the admission.
- Cases resulting from a transfer from another acute care institution (*transfers-in*).
- Cases with *MDC 14* or specified pregnancy, childbirth, and puerperium codes in any field – Refer to Annex D (Excel sheet - HCQO 2018_19 Data Collection_Annex A-I)
- Cases that are *same day/day only admissions*

Denominator: Population count.

COPD diagnosis codes:

ICD-9-CM	ICD-10-WHO
490 BRONCHITIS NOS*	J40 BRONCHITIS*
4660 AC BRONCHITIS*	J410 SIMPLE CHRONIC BRONCHITIS
4910 SIMPLE CHR BRONCHITIS	J411 MUCOPURULENT CHRONIC BRONCHITIS
4911 MUCOPURUL CHR BRONCHITIS	J418 MIXED SIMPLE AND MUCOPURULENT CHRONIC BRONCHITIS
49120 OBS CHR BRNC W/O ACT EXA	J42 UNSPECIFIED CHRONIC BRONCHITIS
49121 OBS CHR BRNC W ACT EXA	J430 MACLEOD'S SYNDROME
4918 CHRONIC BRONCHITIS NEC	J431 PANLOBULAR EMPHYSEMA
4919 CHRONIC BRONCHITIS NOS	J432 CENTRILOBULAR EMPHYSEMA
4920 EMPHYSEMATOUS BLEB	J438 OTHER EMPHYSEMA
4928 EMPHYSEMA NEC	J439 EMPHYSEMA, UNSPECIFIED
494 BRONCHIECTASIS	J440 COPD WITH ACUTE LOWER RESPIRATORY INFECTION
4940 BRONCHIECTAS W/O AC EXAC	J441 COPD WITH ACUTE EXACERBATION, UNSPECIFIED
4941 BRONCHIECTASIS W AC EXAC	J448 OTHER SPECIFIED CHRONIC OBSTRUCTIVE PULMONARY DISEASE
496 CHR AIRWAY OBSTRUCT NEC	J449 CHRONIC OBSTRUCTIVE PULMONARY DISEASE, UNSPECIFIED
* Qualifies only if accompanied by secondary diagnosis of 491.xx, 492.x, 494.x or 496 (i.e., any other code on this list).	J47 BRONCHIECTASIS
	* Qualifies only if accompanied by secondary diagnosis of J41, J43, J44, J47

AA3) CONGESTIVE HEART FAILURE (CHF) HOSPITAL ADMISSION

(See Glossary for definitions of italicized terminology)

Coverage: Population aged 15 and older (5 year age groups). All *acute care hospitals*, including public and private hospitals that provide inpatient care.

Numerator: All non-maternal/non-neonatal hospital *admissions* with *principal diagnosis* code of Congestive Heart Failure (See CHF diagnosis codes below) in a specified year.

Exclude:

- Cases where the patient died in hospital during the admission.
- Cases resulting from a transfer from another acute care institution (*transfers-in*).
- Cases with cardiac procedure codes in any field – Refer to Annex A (Excel sheet - HCQO 2018_19 Data Collection_Annex A-I)
- Cases with *MDC 14* or specified pregnancy, childbirth, and puerperium codes in any field – Refer to Annex D (Excel sheet - HCQO 2018_19 Data Collection_Annex A-I)
- Cases that are *same day/day only admissions*

Denominator: Population count.

CHF diagnosis codes:

ICD-9-CM	ICD-10-WHO
39891 RHEUMATIC HEART FAILURE	I11.0 HYPERTENSIVE HEART DISEASE WITH (CONGESTIVE) HEART FAILURE
40201 MAL HYPERT HRT DIS W CHF	I13.0 HYPERTENSIVE HEART AND RENAL DISEASE WITH (CONGESTIVE) HEART FAILURE
40211 BENIGN HYP HRT DIS W CHF	I13.2 HYPERTENSIVE HEART AND RENAL DISEASE WITH BOTH (CONGESTIVE) HEART FAILURE AND RENAL FAILURE
40291 HYPERTEN HEART DIS W CHF	I50.0 CONGESTIVE HEART FAILURE
40401 MAL HYPER HRT/REN W CHF	I50.1 LEFT VENTRICULAR FAILURE
40403 MAL HYP HRT/REN W CHF/RF	I50.9 HEART FAILURE, UNSPECIFIED
40411 BEN HYPER HRT/REN W CHF	
40413 BEN HYP HRT/REN W CHF/RF	
40491 HYPER HRT/REN NOS W CHF	
40493 HYP HT/REN NOS W CHF/RF	
4280 CONGESTIVE HEART FAILURE	
4281 LEFT HEART FAILURE	
42820 SYSTOLIC HRT FAILURE NOS	
42821 AC SYSTOLIC HRT FAILURE	
42822 CHR SYSTOLIC HRT FAILURE	
42823 AC ON CHR SYST HRT FAIL	
42830 DIASTOLC HRT FAILURE NOS	
42831 AC DIASTOLIC HRT FAILURE	
42832 CHR DIASTOLIC HRT FAIL	

42833 AC ON CHR DIAST HRT FAIL 42840 SYST/DIAST HRT FAIL NOS 42841 AC SYST/DIASTOL HRT FAIL 42842 CHR SYST/DIASTL HRT FAIL 42843 AC/CHR SYST/DIA HRT FAIL 4289 HEART FAILURE NOS	
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AA4) HYPERTENSION HOSPITAL ADMISSION*(See Glossary for definitions of italicized terminology)*

Coverage: Population aged 15 and older (5 year age groups). All *acute care hospitals*, including public and private hospitals that provide inpatient care.

Numerator: All non-maternal/non-neonatal hospital *admissions* with *principal diagnosis* code of Hypertension (see Hypertension diagnosis codes below) in a specified year.

Exclude:

- Cases where the patient died in hospital during the admission.
- Cases resulting from a transfer from another acute care institution (*transfers-in*).
- Cases with cardiac procedure codes in any field – Refer to Annex A (Excel sheet - HCQO 2018_19 Data Collection_Annex A-I)
- Cases with *MDC 14* or specified pregnancy, childbirth, and puerperium codes in any field – Refer to Annex D (Excel sheet - HCQO 2018_19 Data Collection_Annex A-I)
- Cases that are *same day/day only admissions*

Denominator: Population count.

Hypertension diagnosis codes:

ICD-9-CM	ICD-10-WHO
4010 MALIGNANT HYPERTENSION	I10 ESSENTIAL (PRIMARY) HYPERTENSION
4019 HYPERTENSION NOS	I119 HYPERTENSIVE HEART DISEASE WITHOUT (CONGESTIVE) HEART FAILURE
40200 MAL HYPERTEN HRT DIS NOS	I129 HYPERTENSIVE RENAL DISEASE WITHOUT RENAL FAILURE
40210 BEN HYPERTEN HRT DIS NOS	I139 HYPERTENSIVE HEART AND RENAL DISEASE, UNSPECIFIED
40290 HYPERTENSIVE HRT DIS NOS	
40300 MAL HYP REN W/O REN FAIL	
40310 BEN HYP REN W/O REN FAIL	
40390 HYP REN NOS W/O REN FAIL	
40400 MAL HY HT/REN W/O CHF/RF	
40410 BEN HY HT/REN W/O CHF/RF	
40490 HY HT/REN NOS W/O CHF/RF	

AA5) DIABETES HOSPITAL ADMISSION*(See Glossary for definitions of italicized terminology)*

Coverage: Population aged 15 and older (5 year age groups). All *acute care hospitals*, including public and private hospitals that provide inpatient care.

Numerator: All non-maternal/non-neonatal hospital *admissions* with a *principal diagnosis* code of diabetes (see Diabetes diagnosis codes below) in a specified year.

Exclude:

- Cases where the patient died in hospital during the admission.
- Cases resulting from a transfer from another acute care institution (*transfers-in*).
- Cases with *MDC 14* or specified pregnancy, childbirth, and puerperium codes in any field – Refer to Annex D (Excel sheet - HCQO 2018_19 Data Collection_Annex A-I)
- Cases that are *same day/day only admissions*

Denominator: Population count.

Diabetes diagnosis codes

ICD-9-CM	ICD-10-WHO
25002 DMII WO CMP UNCNRDL	E10.0 INSULIN-DEPENDENT DIABETES MELLITUS WITH COMA
25003 DMI WO CMP UNCNRDL	E10.1 INSULIN-DEPENDENT DIABETES MELLITUS WITH KETOACIDOSIS
25010 DMII KETO NT ST UNCNRDL	E10.2 INSULIN-DEPENDENT DIABETES MELLITUS WITH RENAL COMPLICATIONS
25011 DMI KETO NT ST UNCNRDL	E10.3 INSULIN-DEPENDENT DIABETES MELLITUS WITH OPHTHALMIC COMPLICATIONS
25012 DMII KETOACD UNCONTROLD	E10.4 INSULIN-DEPENDENT DIABETES MELLITUS WITH NEUROLOGICAL COMPLICATIONS
25013 DMI KETOACD UNCONTROLD	E10.5 INSULIN-DEPENDENT DM WITH PERIPHERAL CIRCULATORY COMPLICATIONS
25020 DMII HPRSM NT ST UNCNRDL	E10.6 INSULIN-DEPENDENT DM WITH OTHER SPECIFIED COMPLICATIONS
25021 DMI HPRSM NT ST UNCNRDL	E10.7 INSULIN-DEPENDENT DIABETES MELLITUS WITH MULTIPLE COMPLICATIONS
25022 DMII HPROMLR UNCONTROLD	E10.8 INSULIN-DEPENDENT DIABETES MELLITUS WITH UNSPECIFIED COMPLICATIONS
25023 DMI HPROMLR UNCONTROLD	E10.9 INSULIN-DEPENDENT DIABETES MELLITUS WITHOUT COMPLICATIONS
25030 DMII O CM NT ST UNCNRDL	E11.0 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH COMA
25031 DMI O CM NT ST UNCNRDL	E11.1 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH KETOACIDOSIS
25032 DMII OTH COMA UNCONTROLD	
25033 DMI OTH COMA UNCONTROLD	
25040 DMII RENL NT ST UNCNRDL	
25041 DMI RENL NT ST UNCNRDL	
25042 DMII RENAL UNCNRDL	
25043 DMI RENAL UNCNRDL	
25050 DMII OPHTH NT ST UNCNRDL	
25051 DMI OPHTH NT ST UNCNRDL	
25052 DMII OPHTH UNCNRDL	
25053 DMI OPHTH UNCNRDL	
25060 DMII NEURO NT ST UNCNRDL	
25061 DMI NEURO NT ST UNCNRDL	

25062 DMII NEURO UNCNRDL	E11.2 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH RENAL COMPLICATIONS
25063 DMI NEURO UNCNRDL	E11.3 NON-INSULIN-DEPENDENT DMWITH OPHTHALMIC COMPLICATIONS
25070 DMII CIRC NT ST UNCNRDL	E11.4 NON-INSULIN-DEPENDENT DM WITH NEUROLOGICAL COMPLICATIONS
25071 DMI CIRC NT ST UNCNRDL	E11.5 NON-INSULIN-DEPENDENT DM WITH PERIPHERAL CIRCULATORY COMPLICATIONS
25072 DMII CIRC UNCNRDL	E11.6 NON-INSULIN-DEPENDENT DM WITH OTHER SPECIFIED COMPLICATIONS
25073 DMI CIRC UNCNRDL	E11.7 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH MULTIPLE COMPLICATIONS
25080 DMII OTH NT ST UNCNRDL	E11.8 NON-INSULIN-DEPENDENT DM WITH UNSPECIFIED COMPLICATIONS
25081 DMI OTH NT ST UNCNRDL	E11.9 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITHOUT COMPLICATIONS
25082 DMII OTH UNCNRDL	E13.0 OTHER SPECIFIED DIABETES MELLITUS WITH COMA
25083 DMI OTH UNCNRDL	E13.1 OTHER SPECIFIED DIABETES MELLITUS WITH KETOACIDOSIS
25090 DMII UNSPF NT ST UNCNRDL	E13.2 OTHER SPECIFIED DIABETES MELLITUS WITH RENAL COMPLICATIONS
25091 DMI UNSPF NT ST UNCNRDL	E13.3 OTHER SPECIFIED DIABETES MELLITUS WITH OPHTHALMIC COMPLICATIONS
25092 DMII UNSPF UNCNRDL	E13.4 OTHER SPECIFIED DIABETES MELLITUS WITH NEUROLOGICAL COMPLICATIONS
25093 DMI UNSPF UNCNRDL	E13.5 OTHER SPECIFIED DM WITH PERIPHERAL CIRCULATORY COMPLICATIONS
	E13.6 OTHER SPECIFIED DIABETES MELLITUS WITH OTHER SPECIFIED COMPLICATIONS
	E13.7 OTHER SPECIFIED DIABETES MELLITUS WITH MULTIPLE COMPLICATIONS
	E13.8 OTHER SPECIFIED DIABETES MELLITUS WITH UNSPECIFIED COMPLICATIONS
	E13.9 OTHER SPECIFIED DIABETES MELLITUS WITHOUT COMPLICATIONS
	E14.0 UNSPECIFIED DIABETES MELLITUS WITH COMA
	E14.1 UNSPECIFIED DIABETES MELLITUS WITH KETOACIDOSIS
	E14.2 UNSPECIFIED DIABETES MELLITUS WITH RENAL COMPLICATIONS
	E14.3 UNSPECIFIED DIABETES MELLITUS WITH OPHTHALMIC COMPLICATIONS
	E14.4 UNSPECIFIED DIABETES MELLITUS WITH NEUROLOGICAL COMPLICATIONS
	E14.5 UNSPECIFIED DM WITH PERIPHERAL CIRCULATORY COMPLICATIONS
	E14.6 UNSPECIFIED DIABETES MELLITUS WITH OTHER SPECIFIED COMPLICATIONS
	E14.7 UNSPECIFIED DIABETES MELLITUS WITH MULTIPLE COMPLICATIONS
	E14.8 UNSPECIFIED DIABETES MELLITUS WITH UNSPECIFIED COMPLICATIONS
	E14.9 UNSPECIFIED DIABETES MELLITUS WITHOUT COMPLICATIONS