

Health Care Quality and Outcomes (HCQO) 2020-21 Indicator Definitions

1. Indicator Definitions

PRIMARY CARE - AVOIDABLE HOSPITAL ADMISSION (AA) INDICATORS

Indicators in the Avoidable admission indicator set include:

- AA1) Asthma hospital admission
- AA2) Chronic obstructive pulmonary disease (COPD) hospital admission
- AA3) Congestive heart failure (CHF) hospital admission
- AA4) Hypertension hospital admission
- AA5) Diabetes hospital admission

AA6) Diabetes lower extremity amputation: using unlinked data

- AA7) Diabetes lower extremity amputation: using linked data

NOTES

For countries that have multiple admissions within one hospitalisation, they should build a hospital episode (see 2. Glossary) and use the first principle diagnosis from the episode to select cases to calculate avoidable admission indicators.

AA1) Asthma hospital admission

See Glossary (Section 2. for definitions of italicised 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 C (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G)
- 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 49301 EXT ASTHMA W STATUS ASH 49302 EXT ASTHMA W ACUTE EXAC 49310 INT ASTHMA W/O STAT ASTH 49311 INTRINSIC ASTHMA NOS 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 EXERCSE IND BRONCHOSPASM 49382 COUGH VARIANT ASTHMA 49390 ASTHMA NOS 49391 ASTHMA W STATUS ASTHMA 49392 ASTHMA W ACUTE EXAC	J450 PREDOMINANTLY ALLERGIC ASTHMA J451 NONALLERGIC ASTHMA J458 MIXED ASTHMA J459 ASTHMA, UNSPECIFIED J46 STATUS ASTHMATICUS

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

ICD-9-CM	ICD-10-WHO
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	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

	<p>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>
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AA2) Chronic obstructive pulmonary disease (COPD) hospital admission

See Glossary (Section 2.) for definitions of italicised 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 C (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G)
- Cases that are *same day/day only admissions*

Denominator: Population count.

COPD diagnosis codes:

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

AA3) Congestive heart failure (CHF) hospital admission

See Glossary (Section 2.) for definitions of italicised 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 2020_21 Data Collection_Annex A-G)
- Cases with *MDC 14* or specified pregnancy, childbirth, and puerperium codes in any field – Refer to Annex C (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G)
- Cases that are *same day/day only admissions*

Denominator: Population count.

CHF diagnosis codes:

ICD-9-CM	ICD-10-WHO
39891 RHEUMATIC HEART FAILURE 40201 MAL HYPERT HRT DIS W CHF 40211 BENIGN HYP HRT DIS W CHF 40291 HYPERTEN HEART DIS W CHF 40401 MAL HYPER HRT/REN W CHF 40403 MAL HYP HRT/REN W CHF/RF 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	I11.0 HYPERTENSIVE HEART DISEASE WITH (CONGESTIVE) HEART FAILURE I13.0 HYPERTENSIVE HEART AND RENAL DISEASE WITH (CONGESTIVE) HEART FAILURE I13.2 HYPERTENSIVE HEART AND RENAL DISEASE WITH BOTH (CONGESTIVE) HEART FAILURE AND RENAL FAILURE I50.0 CONGESTIVE HEART FAILURE I50.1 LEFT VENTRICULAR FAILURE I50.9 HEART FAILURE, UNSPECIFIED

AA4) Hypertension hospital admission

See Glossary (Section 2.) for definitions of italicised 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 2020_21 Data Collection_Annex A-G)
- Cases with *MDC 14* or specified pregnancy, childbirth, and puerperium codes in any field – Refer to Annex C (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G)
- Cases that are *same day/day only admissions*

Denominator: Population count

Hypertension diagnosis codes:

ICD-9-CM	ICD-10-WHO
4010 MALIGNANT HYPERTENSION 4019 HYPERTENSION NOS 40200 MAL HYPERTEN HRT DIS NOS 40210 BEN HYPERTEN HRT DIS NOS 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	I10 ESSENTIAL (PRIMARY) HYPERTENSION I119 HYPERTENSIVE HEART DISEASE WITHOUT (CONGESTIVE) HEART FAILURE I129 HYPERTENSIVE RENAL DISEASE WITHOUT RENAL FAILURE I139 HYPERTENSIVE HEART AND RENAL DISEASE, UNSPECIFIED

AA5) Diabetes hospital admission

See Glossary (Section 2.) for definitions of italicised 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 C (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G)
- 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 UNCONTROL	E10.4 INSULIN-DEPENDENT DIABETES MELLITUS WITH NEUROLOGICAL COMPLICATIONS
25013 DMI KETOACD UNCONTROL	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 HPROSLR UNCONTROL	E10.8 INSULIN-DEPENDENT DIABETES MELLITUS WITH UNSPECIFIED COMPLICATIONS
25023 DMI HPROSLR UNCONTROL	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 UNCONTROL	E11.2 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH RENAL COMPLICATIONS
25033 DMI OTH COMA UNCONTROL	E11.3 NON-INSULIN-DEPENDENT DM WITH OPHTHALMIC COMPLICATIONS
25040 DMII RENL NT ST UNCNRDL	E11.4 NON-INSULIN-DEPENDENT DM WITH NEUROLOGICAL COMPLICATIONS
25041 DMI RENL NT ST UNCNRDL	E11.5 NON-INSULIN-DEPENDENT DM WITH PERIPHERAL CIRCULATORY COMPLICATIONS
25042 DMII RENAL UNCNRDL	E11.6 NON-INSULIN-DEPENDENT DM WITH OTHER SPECIFIED COMPLICATIONS
25043 DMI RENAL UNCNRDL	
25050 DMII OPTH NT ST UNCNRDL	
25051 DMI OPTH NT ST UNCNRDL	
25052 DMII OPTH UNCNRDL	
25053 DMI OPTH UNCNRDL	
25060 DMII NEURO NT ST UNCNRDL	
25061 DMI NEURO NT ST UNCNRDL	
25062 DMII NEURO UNCNRDL	
25063 DMI NEURO UNCNRDL	
25070 DMII CIRC NT ST UNCNRDL	
25071 DMI CIRC NT ST UNCNRDL	
25072 DMII CIRC UNCNRDL	
25073 DMI CIRC UNCNRDL	
25080 DMII OTH NT ST UNCNRDL	
25081 DMI OTH NT ST UNCNRDL	
25082 DMII OTH UNCNRDL	
25083 DMI OTH UNCNRDL	

25090 DMII UNSPF NT ST UNCNTL	E11.7 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH MULTIPLE COMPLICATIONS
25091 DMI UNSPF NT ST UNCNTRLD	E11.8 NON-INSULIN-DEPENDENT DM WITH UNSPECIFIED COMPLICATIONS
25092 DMII UNSPF UNCNTRLD	E11.9 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITHOUT COMPLICATIONS
25093 DMI UNSPF UNCNTRLD	E13.0 OTHER SPECIFIED DIABETES MELLITUS WITH COMA
	E13.1 OTHER SPECIFIED DIABETES MELLITUS WITH KETOACIDOSIS
	E13.2 OTHER SPECIFIED DIABETES MELLITUS WITH RENAL COMPLICATIONS
	E13.3 OTHER SPECIFIED DIABETES MELLITUS WITH OPHTHALMIC COMPLICATIONS
	E13.4 OTHER SPECIFIED DIABETES MELLITUS WITH NEUROLOGICAL COMPLICATIONS
	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

AA6) Diabetes lower extremity amputation: using unlinked data

See Glossary (Section 2.) for definitions of italicised terminology.

Coverage: Population aged 15 and older. All *acute care hospitals*, including public and private hospitals that provide inpatient care.

Numerator: All non-maternal/non-neonatal *admissions* with a procedure code of major lower extremity amputation in any field and a diagnosis code of diabetes in any field (see Diabetes major lower extremity amputation and diabetes diagnosis codes below) in a specified year.

Exclude:

- 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 C (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G)
- Cases with trauma diagnosis code (see Trauma diagnosis codes below) in any field
- Cases with tumour-related peripheral amputation code (ICD-9-CM 1707 and 1708/ICD-10-WHO C40.2 and C40.3) in any field
- Cases that are *same day/day only admissions*

Denominator 1: Population count.

Denominator 2: Estimated population with diabetes

Countries are requested to provide the diabetes prevalence (%) estimates for each age cohort. It is recognised that countries may not have prevalence estimates for the specified age cohorts, in which case, countries may apply the average or a linear estimate across the cohorts.

The population with diabetes will be calculated by applying the estimated proportion (%) of the general population in each age cohort that has diabetes.

Diabetes major lower extremity amputation and diabetes diagnosis codes:

ICD-9-CM	ICD-10-WHO
Procedure codes for major lower-extremity amputation 8413 DISARTICULATION OF ANKLE 8414 AMPUTAT THROUGH MALLEOLI 8415 BELOW KNEE AMPUTAT NEC 8416 DISARTICULATION OF KNEE 8417 ABOVE KNEE AMPUTATION 8418 DISARTICULATION OF HIP 8419 HINDQUARTER AMPUTATION Diagnosis Codes For Diabetes: 25000 DMII WO CMP NT ST UNCNTR 25001 DMI WO CMP NT ST UNCNTRL 25002 DMII WO CMP UNCNTRLD 25003 DMI WO CMP UNCNTRLD 25010 DMII KETO NT ST UNCNTRLD 25011 DMI KETO NT ST UNCNTRLD 25012 DMII KETOACD UNCONTROLD 25013 DMI KETOACD UNCONTROLD 25020 DMII HPRSM NT ST UNCNTRL 25021 DMI HPRSM NT ST UNCNTRLD 25022 DMII HPROSMR UNCONTROLD 25023 DMI HPROSMR UNCONTROLD 25030 DMII O CM NT ST UNCNTRLD 25031 DMI O CM NT ST UNCNTRL 25032 DMII OTH COMA UNCONTROLD 25033 DMI OTH COMA UNCONTROLD 25040 DMII RENL NT ST UNCNTRLD 25041 DMI RENL NT ST UNCNTRLD 25042 DMII RENAL UNCNTRLD 25043 DMI RENAL UNCNTRLD 25050 DMII OPTH NT ST UNCNTRL 25051 DMI OPTH NT ST UNCNTRLD 25052 DMII OPTH UNCNTRLD 25053 DMI OPTH UNCNTRLD 25060 DMII NEURO NT ST UNCNTRL 25061 DMI NEURO NT ST UNCNTRLD 25062 DMII NEURO UNCNTRLD 25063 DMI NEURO UNCNTRLD 25070 DMII CIRC NT ST UNCNTRLD 25071 DMI CIRC NT ST UNCNTRLD 25072 DMII CIRC UNCNTRLD 25073 DMI CIRC UNCNTRLD 25080 DMII OTH NT ST UNCNTRLD 25081 DMI OTH NT ST UNCNTRLD 25082 DMII OTH UNCNTRLD 25083 DMI OTH UNCNTRLD 25090 DMII UNSPF NT ST UNCNTRL 25091 DMI UNSPF NT ST UNCNTRLD 25092 DMII UNSPF UNCNTRLD 25093 DMI UNSPF UNCNTRLD	Procedure codes for major lower-extremity amputation NOT SPECIFIED Diagnosis codes for diabetes: E10.0 INSULIN-DEPENDENT DIABETES MELLITUS WITH COMA E10.1 INSULIN-DEPENDENT DIABETES MELLITUS WITH KETOACIDOSIS E10.2 INSULIN-DEPENDENT DIABETES MELLITUS WITH RENAL COMPLICATIONS E10.3 INSULIN-DEPENDENT DIABETES MELLITUS WITH OPHTHALMIC COMPLICATIONS E10.4 INSULIN-DEPENDENT DIABETES MELLITUS WITH NEUROLOGICAL COMPLICATIONS E10.5 INSULIN-DEPENDENT DM WITH PERIPHERAL CIRCULATORY COMPLICATIONS E10.6 INSULIN-DEPENDENT DM WITH OTHER SPECIFIED COMPLICATIONS E10.7 INSULIN-DEPENDENT DIABETES MELLITUS WITH MULTIPLE COMPLICATIONS E10.8 INSULIN-DEPENDENT DIABETES MELLITUS WITH UNSPECIFIED COMPLICATIONS E10.9 INSULIN-DEPENDENT DIABETES MELLITUS WITHOUT COMPLICATIONS E11.0 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH COMA E11.1 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH KETOACIDOSIS E11.2 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH RENAL COMPLICATIONS E11.3 NON-INSULIN-DEPENDENT DM WITH OPHTHALMIC COMPLICATIONS E11.4 NON-INSULIN-DEPENDENT DM WITH NEUROLOGICAL COMPLICATIONS E11.5 NON-INSULIN-DEPENDENT DM WITH PERIPHERAL CIRCULATORY COMPLICATIONS E11.6 NON-INSULIN-DEPENDENT DM WITH OTHER SPECIFIED COMPLICATIONS E11.7 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH MULTIPLE COMPLICATIONS E11.8 NON-INSULIN-DEPENDENT DM WITH UNSPECIFIED COMPLICATIONS E11.9 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITHOUT COMPLICATIONS E13.0 OTHER SPECIFIED DIABETES MELLITUS WITH COMA E13.1 OTHER SPECIFIED DIABETES MELLITUS WITH KETOACIDOSIS

	E13.2 OTHER SPECIFIED DIABETES MELLITUS WITH RENAL COMPLICATIONS E13.3 OTHER SPECIFIED DIABETES MELLITUS WITH OPHTHALMIC COMPLICATIONS E13.4 OTHER SPECIFIED DIABETES MELLITUS WITH NEUROLOGICAL COMPLICATIONS 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
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Exclude trauma diagnosis codes:

ICD-9-CM	ICD-10-WHO
8950 AMPUTATION TOE 8951 AMPUTATION TOE-COMPLICAT 8960 AMPUTATION FOOT, UNILAT 8961 AMPUT FOOT, UNILAT-COMPL 8962 AMPUTATION FOOT, BILAT 8963 AMPUTAT FOOT, BILAT-COMP 8970 AMPUT BELOW KNEE, UNILAT 8971 AMPUTAT BK, UNILAT-COMPL 8972 AMPUT ABOVE KNEE, UNILAT 8973 AMPUT ABV KN, UNIL-COMPL 8974 AMPUTAT LEG, UNILAT NOS 8975 AMPUT LEG, UNIL NOS-COMP 8976 AMPUTATION LEG, BILAT 8977 AMPUTAT LEG, BILAT-COMPL	S78.0 TRAUMATIC AMPUTATION AT HIP JOINT S78.1 TRAUMATIC AMPUTATION AT LEVEL BETWEEN HIP AND KNEE S78.9 TRAUMATIC AMPUTATION OF HIP AND THIGH, LEVEL UNSPECIFIED S88.0 TRAUMATIC AMPUTATION AT KNEE LEVEL S88.1 TRAUMATIC AMPUTATION AT LEVEL BETWEEN KNEE AND ANKLE S88.9 TRAUMATIC AMPUTATION OF LOWER LEG, LEVEL UNSPECIFIED S98.0 TRAUMATIC AMPUTATION OF FOOT AT ANKLE LEVEL S98.1 TRAUMATIC AMPUTATION OF ONE TOE S98.2 TRAUMATIC AMPUTATION OF TWO OR MORE TOES S98.3 TRAUMATIC AMPUTATION OF OTHER PARTS OF FOOT S98.4 TRAUMATIC AMPUTATION OF FOOT, LEVEL UNSPECIFIED T05.3 TRAUMATIC AMPUTATION OF BOTH FEET T05.4 TRAUMATIC AMPUTATION OF 1 FOOT AND

	OTHER LEG [ANY LEVEL, EXCEPT FOOT] T05.5 TRAUMATIC AMPUTATION OF BOTH LEGS [ANY LEVEL] T13.6 TRAUMATIC AMPUTATION OF LOWER LIMB, LEVEL UNSPECIFIED
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AA7) Diabetes lower extremity amputation: using linked data

See Glossary (Section 2.) for definitions of italicised terminology.

Coverage: Population aged 15 and older. All *acute care hospitals*, including public and private hospitals that provide inpatient care.

Numerator: All diabetic patients admitted for a major lower extremity amputation (see Diabetes major lower extremity amputation codes below) in a specified year.

Counting Rules

Only one major lower extremity amputation *admission* is to be counted for each diabetic patient in the specified year. The admission with the most severe amputation is to be selected if more than one admission is identified for a diabetic patient in the specified year.

Diabetic patients are to be identified by using a *unique person identifier (UPI)*. For all patients with an amputation in the specified year, the aim is to search for:

- First, diabetes codes in any field in the hospital administrative dataset (see diabetes diagnosis codes below) **for up to 5 years**, including the specified year and prior years where the *UPI* can be reliably and consistently used, and then
- Second, records indicating diabetes status in any other relevant database (e.g. pharmaceutical, specialist, laboratory data) where the *UPI* can be reliably and consistently used to identify additional patients.

Exclude:

- Cases with Pregnancy, childbirth, and puerperium codes in any field – Refer to Annex C (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G)
- Cases with trauma diagnosis code (see Trauma diagnosis codes below) in any field
- Cases with tumour-related peripheral amputation code (ICD-9-CM 1707 and 1708/ICD-10-WHO C40.2 and C40.3) in any field

Denominator 1: Population count.

Denominator 2: Estimated population with diabetes

Countries are requested to provide the diabetes prevalence (%) estimates for each age cohort. It is recognised that countries may not have prevalence estimates for the specified age cohorts, in which case, countries may apply the average or a linear estimate across the cohorts.

The population with diabetes will be calculated by applying the estimated proportion (%) of the general population in each age cohort that has diabetes.

Diabetes major lower extremity amputation and diabetes diagnosis codes:

ICD-9-CM	ICD-10-WHO
Procedure codes for major lower-extremity amputation 8413 DISARTICULATION OF ANKLE 8414 AMPUTAT THROUGH MALLEOLI 8415 BELOW KNEE AMPUTAT NEC 8416 DISARTICULATION OF KNEE 8417 ABOVE KNEE AMPUTATION 8418 DISARTICULATION OF HIP 8419 HINDQUARTER AMPUTATION Diagnosis Codes For Diabetes: 25000 DMII WO CMP NT ST UNCNTR 25001 DMI WO CMP NT ST UNCNTRL 25002 DMII WO CMP UNCNTRLD 25003 DMI WO CMP UNCNTRLD 25010 DMII KETO NT ST UNCNTRLD 25011 DMI KETO NT ST UNCNTRLD 25012 DMII KETOACD UNCONTROLD 25013 DMI KETOACD UNCONTROLD 25020 DMII HPRSM NT ST UNCNTRL 25021 DMI HPRSM NT ST UNCNTRLD 25022 DMII HPROSMR UNCONTROLD 25023 DMI HPROSMR UNCONTROLD 25030 DMII O CM NT ST UNCNTRLD 25031 DMI O CM NT ST UNCNTRL 25032 DMII OTH COMA UNCONTROLD 25033 DMI OTH COMA UNCONTROLD 25040 DMII RENL NT ST UNCNTRLD 25041 DMI RENL NT ST UNCNTRLD 25042 DMII RENAL UNCNTRLD 25043 DMI RENAL UNCNTRLD 25050 DMII OPTH NT ST UNCNTRL 25051 DMI OPTH NT ST UNCNTRLD 25052 DMII OPTH UNCNTRLD 25053 DMI OPTH UNCNTRLD 25060 DMII NEURO NT ST UNCNTRL 25061 DMI NEURO NT ST UNCNTRLD 25062 DMII NEURO UNCNTRLD 25063 DMI NEURO UNCNTRLD 25070 DMII CIRC NT ST UNCNTRLD 25071 DMI CIRC NT ST UNCNTRLD 25072 DMII CIRC UNCNTRLD 25073 DMI CIRC UNCNTRLD 25080 DMII OTH NT ST UNCNTRLD 25081 DMI OTH NT ST UNCNTRLD 25082 DMII OTH UNCNTRLD 25083 DMI OTH UNCNTRLD 25090 DMII UNSPF NT ST UNCNTRL 25091 DMI UNSPF NT ST UNCNTRLD 25092 DMII UNSPF UNCNTRLD 25093 DMI UNSPF UNCNTRLD	Procedure codes for major lower-extremity amputation NOT SPECIFIED Diagnosis codes for diabetes: E10.0 INSULIN-DEPENDENT DIABETES MELLITUS WITH COMA E10.1 INSULIN-DEPENDENT DIABETES MELLITUS WITH KETOACIDOSIS E10.2 INSULIN-DEPENDENT DIABETES MELLITUS WITH RENAL COMPLICATIONS E10.3 INSULIN-DEPENDENT DIABETES MELLITUS WITH OPHTHALMIC COMPLICATIONS E10.4 INSULIN-DEPENDENT DIABETES MELLITUS WITH NEUROLOGICAL COMPLICATIONS E10.5 INSULIN-DEPENDENT DM WITH PERIPHERAL CIRCULATORY COMPLICATIONS E10.6 INSULIN-DEPENDENT DM WITH OTHER SPECIFIED COMPLICATIONS E10.7 INSULIN-DEPENDENT DIABETES MELLITUS WITH MULTIPLE COMPLICATIONS E10.8 INSULIN-DEPENDENT DIABETES MELLITUS WITH UNSPECIFIED COMPLICATIONS E10.9 INSULIN-DEPENDENT DIABETES MELLITUS WITHOUT COMPLICATIONS E11.0 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH COMA E11.1 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH KETOACIDOSIS E11.2 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH RENAL COMPLICATIONS E11.3 NON-INSULIN-DEPENDENT DM WITH OPHTHALMIC COMPLICATIONS E11.4 NON-INSULIN-DEPENDENT DM WITH NEUROLOGICAL COMPLICATIONS E11.5 NON-INSULIN-DEPENDENT DM WITH PERIPHERAL CIRCULATORY COMPLICATIONS E11.6 NON-INSULIN-DEPENDENT DM WITH OTHER SPECIFIED COMPLICATIONS E11.7 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH MULTIPLE COMPLICATIONS E11.8 NON-INSULIN-DEPENDENT DM WITH UNSPECIFIED COMPLICATIONS E11.9 NON-INSULIN-DEPENDENT DIABETES MELLITUS WITHOUT COMPLICATIONS E13.0 OTHER SPECIFIED DIABETES MELLITUS WITH COMA E13.1 OTHER SPECIFIED DIABETES MELLITUS WITH KETOACIDOSIS

	E13.2 OTHER SPECIFIED DIABETES MELLITUS WITH RENAL COMPLICATIONS E13.3 OTHER SPECIFIED DIABETES MELLITUS WITH OPHTHALMIC COMPLICATIONS E13.4 OTHER SPECIFIED DIABETES MELLITUS WITH NEUROLOGICAL COMPLICATIONS 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
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Exclude trauma diagnosis codes:

ICD-9-CM	ICD-10-WHO
8950 AMPUTATION TOE 8951 AMPUTATION TOE-COMPLICAT 8960 AMPUTATION FOOT, UNILAT 8961 AMPUT FOOT, UNILAT-COMPL 8962 AMPUTATION FOOT, BILAT 8963 AMPUTAT FOOT, BILAT-COMP 8970 AMPUT BELOW KNEE, UNILAT 8971 AMPUTAT BK, UNILAT-COMPL 8972 AMPUT ABOVE KNEE, UNILAT 8973 AMPUT ABV KN, UNIL-COMPL 8974 AMPUTAT LEG, UNILAT NOS 8975 AMPUT LEG, UNIL NOS-COMP 8976 AMPUTATION LEG, BILAT 8977 AMPUTAT LEG, BILAT-COMPL	S78.0 TRAUMATIC AMPUTATION AT HIP JOINT S78.1 TRAUMATIC AMPUTATION AT LEVEL BETWEEN HIP AND KNEE S78.9 TRAUMATIC AMPUTATION OF HIP AND THIGH, LEVEL UNSPECIFIED S88.0 TRAUMATIC AMPUTATION AT KNEE LEVEL S88.1 TRAUMATIC AMPUTATION AT LEVEL BETWEEN KNEE AND ANKLE S88.9 TRAUMATIC AMPUTATION OF LOWER LEG, LEVEL UNSPECIFIED S98.0 TRAUMATIC AMPUTATION OF FOOT AT ANKLE LEVEL S98.1 TRAUMATIC AMPUTATION OF ONE TOE S98.2 TRAUMATIC AMPUTATION OF TWO OR MORE TOES S98.3 TRAUMATIC AMPUTATION OF OTHER PARTS OF FOOT S98.4 TRAUMATIC AMPUTATION OF FOOT, LEVEL UNSPECIFIED T05.3 TRAUMATIC AMPUTATION OF BOTH FEET T05.4 TRAUMATIC AMPUTATION OF 1 FOOT AND

	OTHER LEG [ANY LEVEL, EXCEPT FOOT] T05.5 TRAUMATIC AMPUTATION OF BOTH LEGS [ANY LEVEL] T13.6 TRAUMATIC AMPUTATION OF LOWER LIMB, LEVEL UNSPECIFIED
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PRIMARY CARE - PRESCRIBING (PR) INDICATORS

Indicators in the Prescribing indicator set include:

- PR1) Adequate use of cholesterol lowering treatment in people with diabetes
- PR2) First choice anti-hypertensives for people with diabetes
- PR3) Long-term use of benzodiazepines and benzodiazepine related drugs in people aged 65 years and over (> 365 DDD in one year)
- PR4) Use of long-acting benzodiazepines in people aged 65 years and over
- PR5) Volume of cephalosporines and quinolones as a proportion of all systemic antibiotics prescribed
- PR6) Overall volume of antibiotics for systemic use prescribed
- PR7) Any anticoagulating drug in combination with an oral NSAID
- PR8) Proportion of 75 years and over who are taking more than 5 medications concurrently (>90 days excluding dermatological and antibiotics)
-

- PR9) Overall volume of opioids prescribed (DDDs per 1000 population per day)
- PR10) Proportion of the population who are chronic opioid users (≥ 90 day's supply in a year)

NOTES

Data are requested for prescribing undertaken in **PRIMARY CARE ONLY**. This includes prescribing undertaken in the primary and ambulatory care setting, whether private or public, and regardless of who is issuing the prescription i.e. family doctors, specialists or other health care professionals (such as the case of nurse practitioners or mental health professionals who can, in certain countries, prescribe medicines). Please exclude, as far as possible, prescribing undertaken in hospital care. Please specify in the online survey the health care sectors to which the data pertain.

The preferred data are those based on DDDs but if not please provide data based on days and specify in the online survey.

Skip the worksheets for which you are not able to provide data for the numerator and / or denominator of the indicator.

Please refer to the following guidelines for DDD and ATC codes:

- WHO Collaborating Centre for Drug Statistics Methodology, Guidelines for ATC classification and DDD assignment 2020. Oslo, Norway, 2020. https://www.whocc.no/atc_ddd_index/
- Countries are advised to cross-check whether there is any impact to the historic data with applying the most recent Guidelines for ATC and DDD assignment 2020.

PR1) Adequate use of cholesterol lowering treatment in people with diabetes

See Glossary (Section 2) for definitions of italicised terminology.

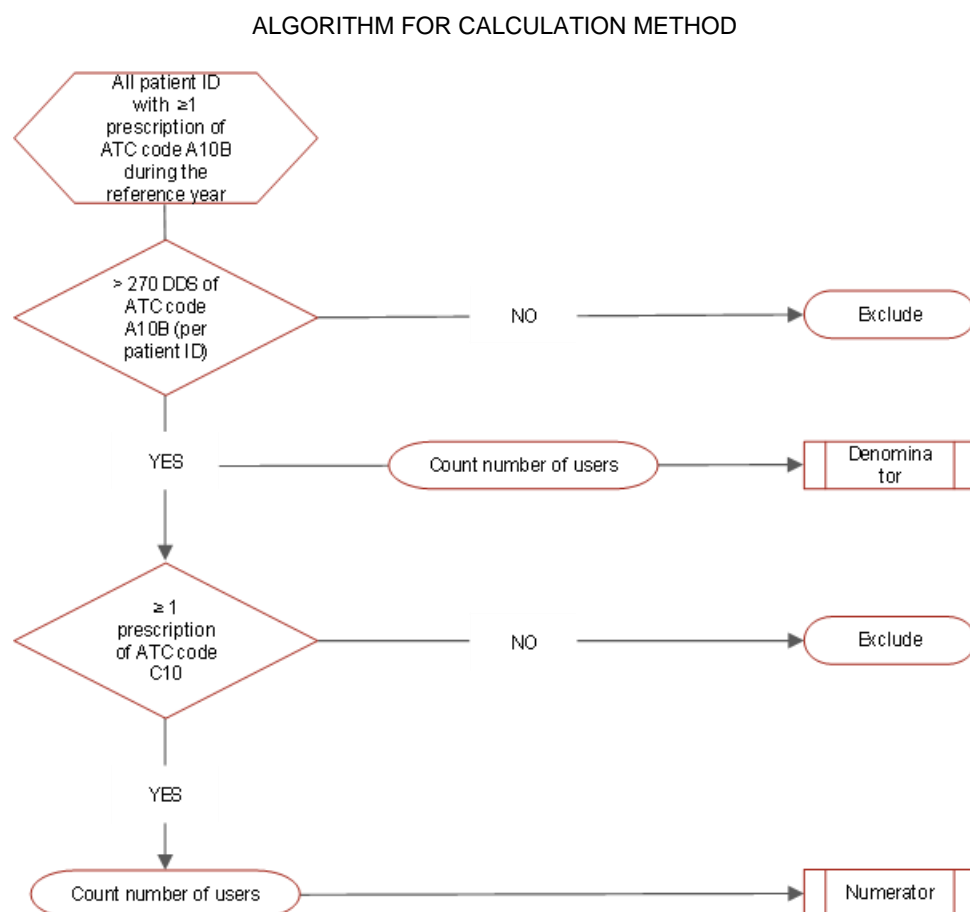
Coverage: Population in the *prescribing database* with ≥ 1 prescription of ATC code A10B during the reference year

Numerator: Number of people who are long-term users of glucose regulating medication (A10B) with concomitant use of ≥ 1 prescription of cholesterol lowering medication (C10).

Denominator: Number of people who are long-term users of glucose regulating medication (A10B) in the prescribing database (see Figure 1).

Notes: Number of people who are long-term users of glucose regulating medication (A10B) are defined as individuals who use >270 *Defined Daily Doses (DDD)* of A10B per year. If your database does not report DDD, please derive indicator using >270 days of A10B per year.

Figure 1. Adequate use of cholesterol lowering treatment in people with diabetes



Source: OECD.

PR2) First choice anti-hypertensives for people with diabetes

See Glossary (Section 2) for definitions of italicised terminology.

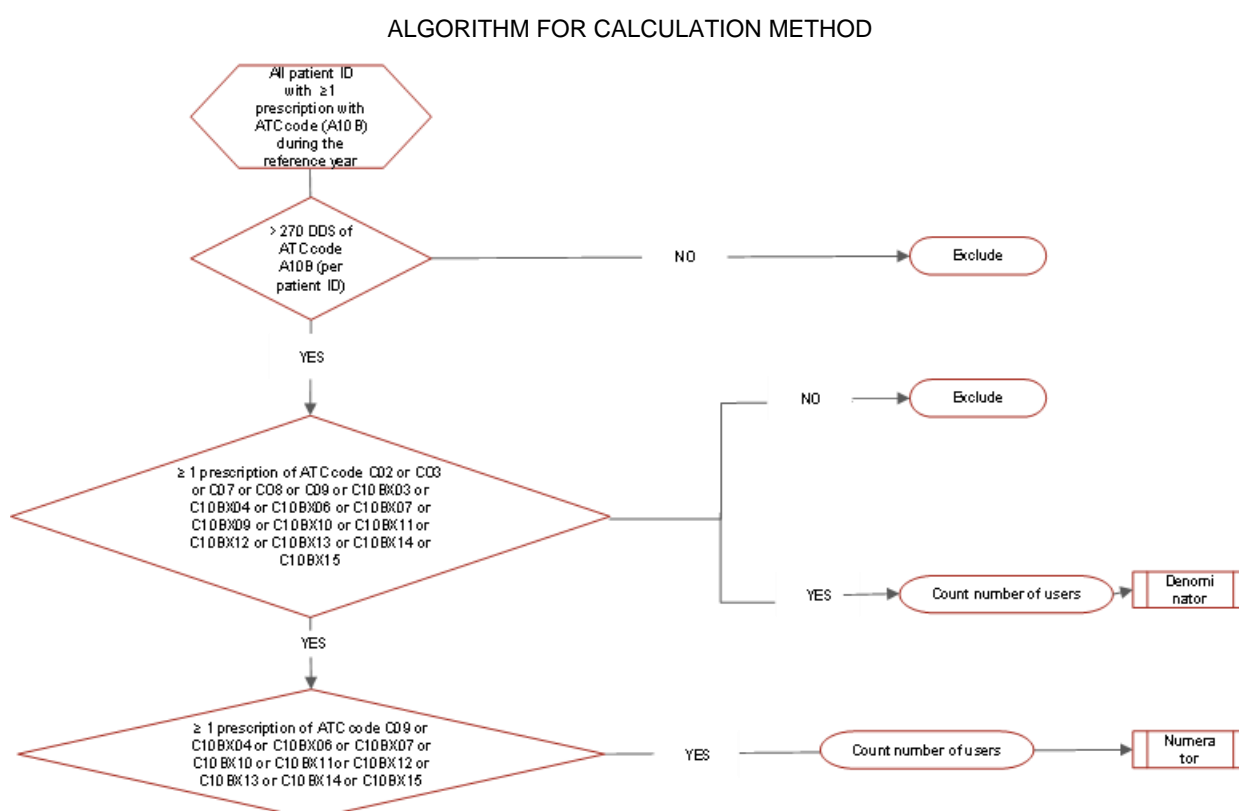
Coverage: Population in *prescribing database* with ≥ 1 prescription of ATC code A10B during the reference year

Numerator: Number of people who are long-term users of glucose regulating medication (A10B) with concomitant use of ≥ 1 prescription angiotensin converting enzyme inhibitor (ACE-I) or angiotensin receptor blocker (ARB) (C09, C10BX04, C10BX06, C10BX07, C10BX10, C10BX11, C10BX12, C10BX13, C10BX14, C10BX15).

Denominator: Number of people who are long-term users of glucose regulating medication (A10B) with concomitant use of ≥ 1 prescription antihypertensives (ATC-C02) or diuretics (ATC C03) or beta-blockers (ATC C07) or calcium channel blockers (C08) or angiotensin converting enzyme inhibitor (ACE-I) or angiotensin receptor blocker (ARB) (C09) or C10BX03 or C10BX04, or C10BX06, or C10BX07, or C10BX09, or C10BX10 or C10BX11 or C10BX12 or C10BX13 or C10BX14 or C10BX15 (Figure 2).

Notes: Number of people who are long-term users of glucose regulating medication (A10B) are defined as individuals who use >270 *Defined Daily Doses (DDD)* of A10B per year. If your prescribing database does not report DDD, please derive indicator using >270 days of A10B per year.

Figure 2. First choice anti-hypertensives for people with diabetes



Source: OECD.

PR3) Long-term use of benzodiazepines and benzodiazepine related drugs in people aged 65 years and over (> 365 DDD in one year)

See Glossary (Section 2) for definitions of italicised terminology.

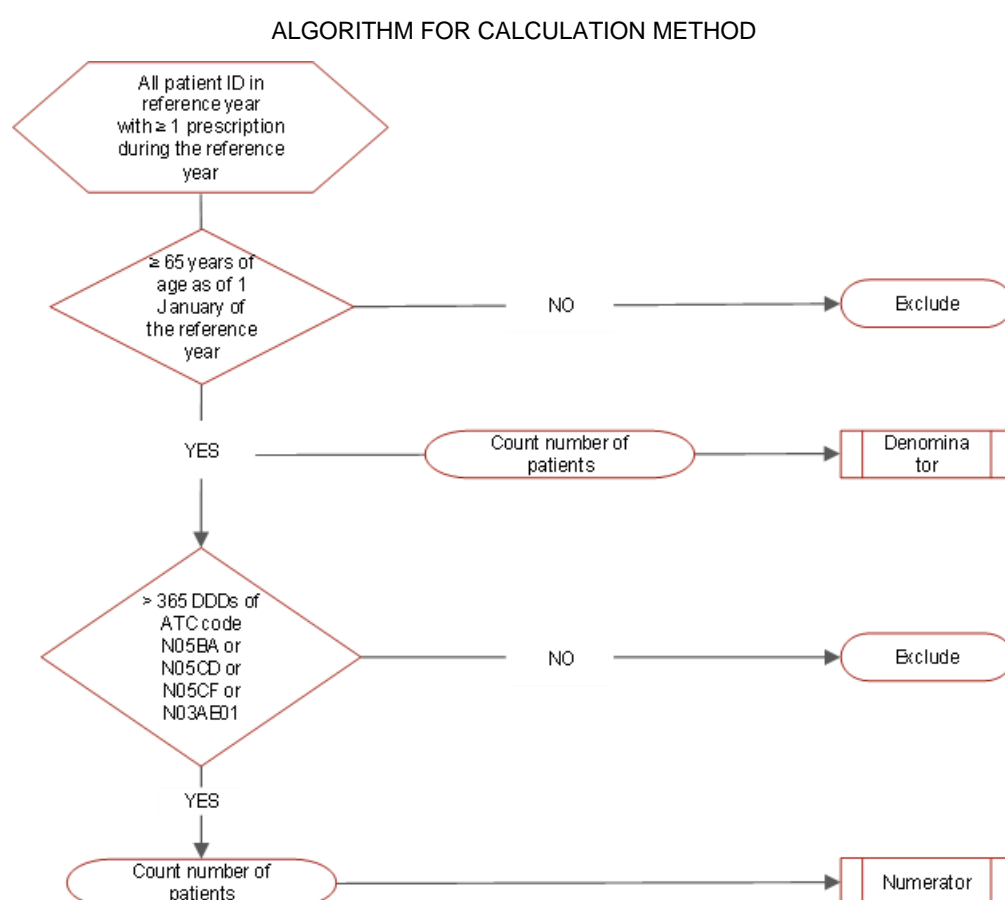
Coverage: Population aged 65 years and over (at 1 January of the reference year) in the prescribing database with ≥ 1 prescription during the reference year

Numerator: Number of individuals ≥ 65 years of age at 1 January in the prescribing database with > 365 DDDs of benzodiazepines (N05BA or N05CD or N05CF or N03AE01) prescribed in the year.

Denominator: Number of individuals ≥ 65 years of age at 1 January in the prescribing database (Figure 3).

Note: If your prescribing database does not report DDD, please derive indicator using > 365 days of benzodiazepines per year.

Figure 3. Long-term use of benzodiazepines and benzodiazepine related drugs in people aged 65 years and over (> 365 DDD in one year)



Source: OECD.

PR4) Use of long-acting benzodiazepines in people aged 65 years and over

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Population aged 65 years and over (at 1 January of the reference year) in the *prescribing database* with ≥ 1 prescription during the reference year

Numerator: Number of individuals ≥ 65 years of age at 1 January in the prescribing database with ≥ 1 prescription long-acting benzodiazepines (N05BA01, N05BA02, N05BA05, N05BA08, N05BA11, N05CD01, N05CD02, N05CD03, N05CD10)

Denominator: Number of individuals ≥ 65 years of age at 1 January in the prescribing database

PR5) Volume of cephalosporines and quinolones as a proportion of all systemic antibiotics prescribed

See Glossary (Section 2) for definitions of italicised terminology.

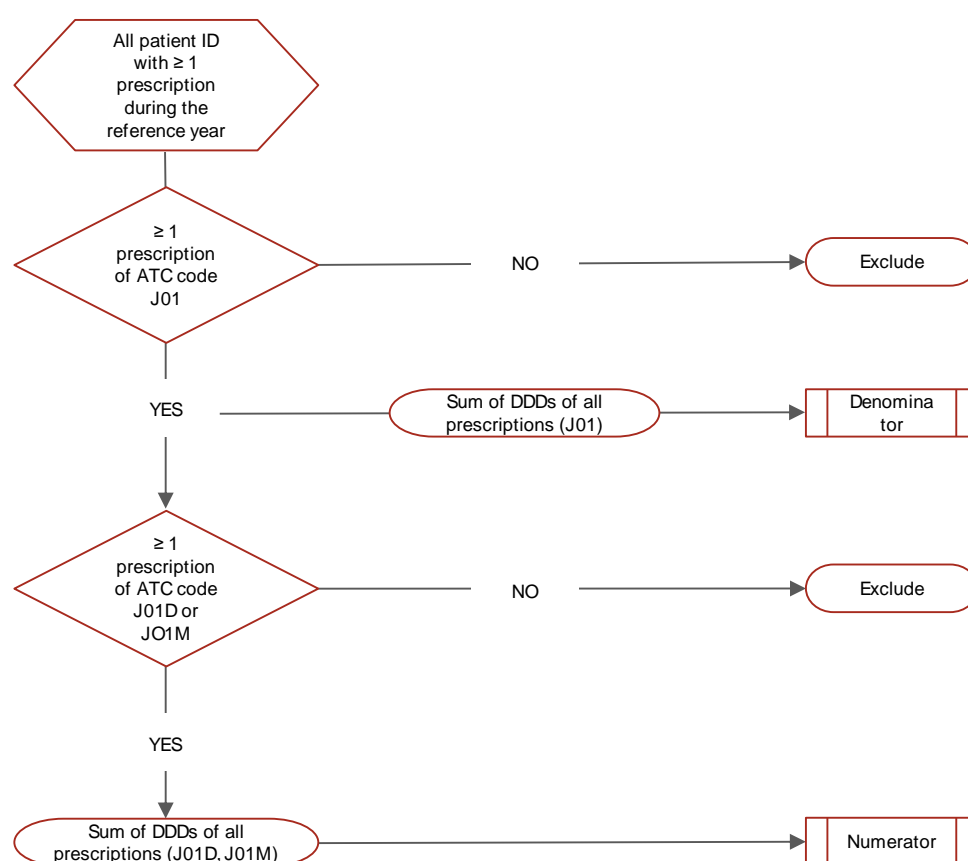
Coverage: Population in the *prescribing database* with ≥ 1 prescription during the reference year

Numerator: Sum *DDDs* of all ATC J01D and J01M prescriptions.

Denominator: Sum *DDDs* of all ATC J01 prescriptions in database (Figure 4).

Figure 4. Volume of cephalosporines and quinolones as a proportion of all systemic antibiotics prescribed

ALGORITHM FOR CALCULATION METHOD



Source: OECD.

PR6) Overall volume of antibiotics for systemic use prescribed

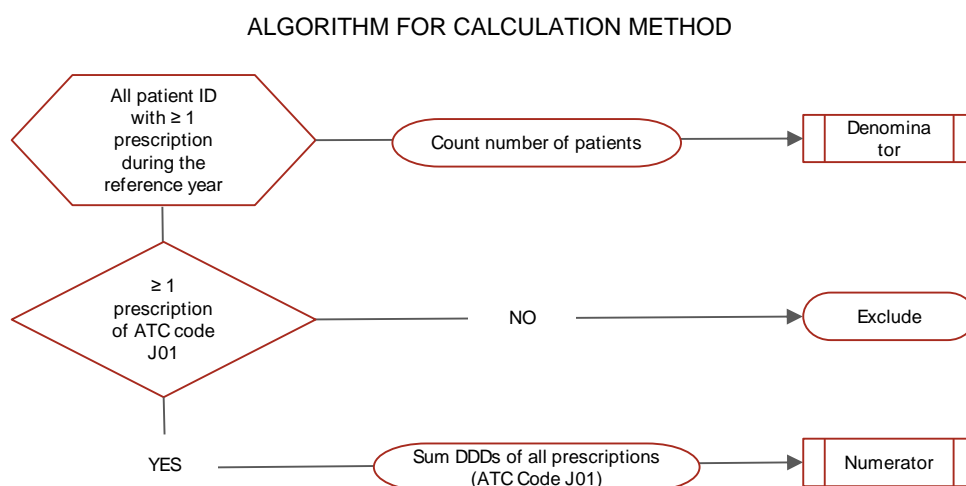
See Glossary (Section 2) for definitions of italicised terminology.

Numerator: Sum *DDD* of all ATC J01 prescriptions

Coverage: Population in the *prescribing database* with ≥ 1 prescription during the reference year

Denominator: Population covered by database at 1 January.

Figure 5. Overall volume of antibiotics for systemic use prescribed



Source: OECD.

PR7) Any anticoagulating drug in combination with an oral NSAID

See Glossary (Section 2) for definitions of italicised terminology.

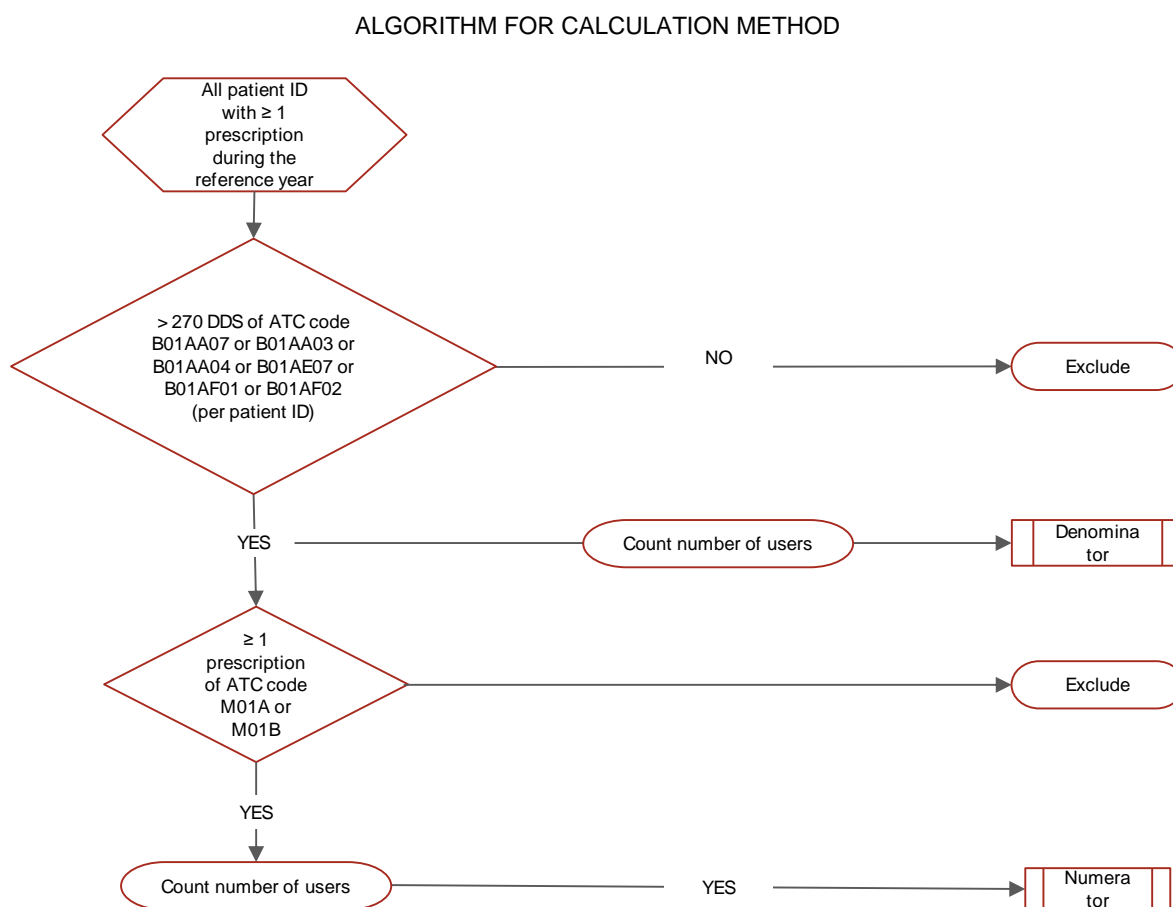
Coverage: Population in the *prescribing database* with ≥ 1 prescription during the reference year

Numerator: Number of individuals who are long-term users of anticoagulating drugs acenocoumarol (B01AA07) or warfarin (B01AA03) or phenprocoumon (B01AA04) or dabigatran (B01AE07) or rivaroxaban (B01AF01) or apixaban (B01AF02) or Edoxaban (B01AF03) with concomitant use of ≥ 1 prescription of NSAID (M01A or M01B)

Denominator: Number of individuals who long-term users of ATC-codes acenocoumarol (B01AA07) or warfarin (B01AA03) or phenprocoumon (B01AA04) or dabigatran (B01AE07) or rivaroxaban (B01AF01) or apixaban (B01AF02) or Edoxaban (B01AF03) (Figure 6).

Note: individuals who are long-term users of anticoagulating drugs are defined as individuals who use >270 *Defined Daily Doses (DDD)* of the B01A codes listed above. If your prescribing database does not report *DDD*, please derive indicator using >270 *days* of the B01A codes listed above.

Figure 6. Any anticoagulating drug in combination with an oral NSAID



Source: OECD.

PR8) Proportion of 75 years and over who are taking more than 5 medications concurrently (>90 days excluding dermatological and antibiotics)

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Population aged 75 years and over (at 1 January of the reference year) in the prescribing database with ≥ 1 prescription during the reference year

Numerator: Number of individuals ≥ 75 years of age as at 1 January in database with ≥ 5 chronically used medications with different ATC codes at the fourth level (e.g., A10BA) during the reference year. This means that a different medication should only be counted if it is not within the same ATC codes at the fourth level. Medication here refers to subgroups of chemicals classified by the World Health Organization at the fourth level of the ATC classification system, 2017 version.

For example,

- Person A is a one-drug user if ATC fourth level codes are the following: A10BA01, A10BA02, A10BA03, A10BA04
- Person B is a five-drug user if ATC fourth level codes are the following: A10BA01, A10BB01, A10BC01, A10BD01, A10BE01
- Chronic usage is defined as medication prescribed for more than 90 days or four or more prescriptions of a medication in the year.

Denominator: Number of individuals ≥ 75 years of age at 1 January in database (Figure 7).

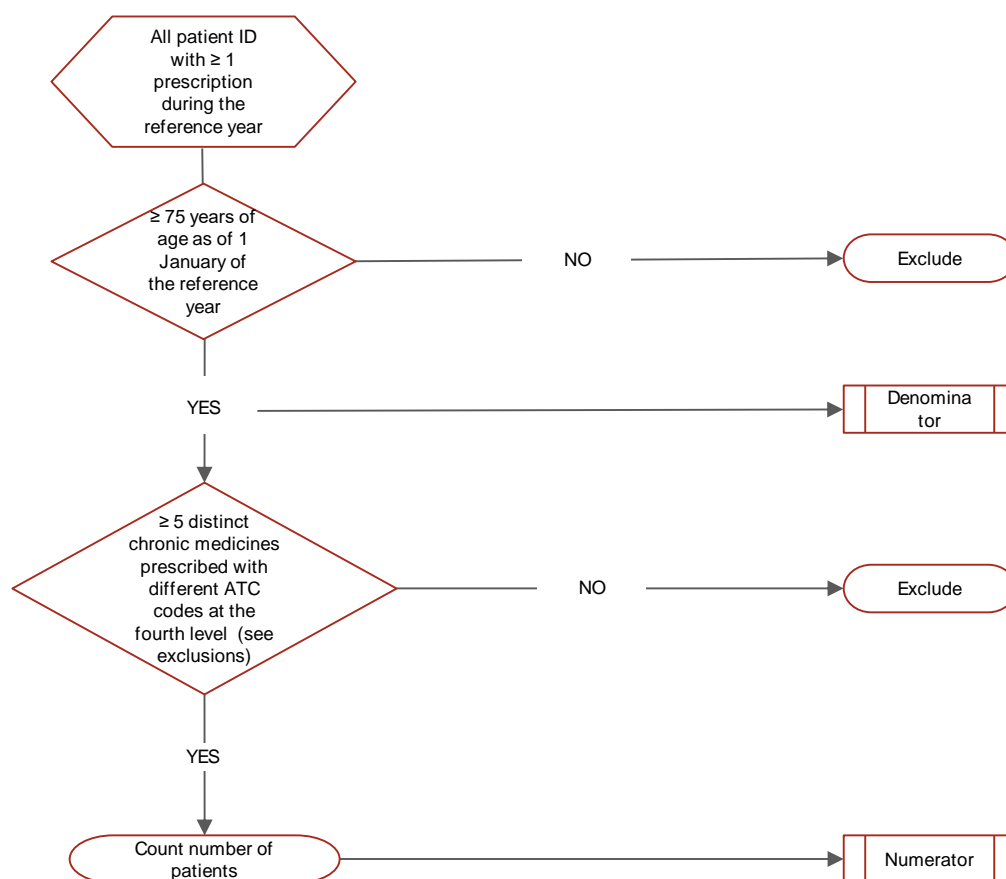
NOTE: Dermatologicals for topical usage are excluded of the count because these medications usually do not interact with other (systemic) medications. Antibiotics (i.e., ATC codes “J01”) are also excluded because they are almost exclusively prescribed for acute infections. Please check the table below listing the ATC codes to be excluded from the numerator.

<i>Dermatologicals for topical use to be excluded</i>	<i>ATC codes</i>
Antibiotics for the eye	S01A
Otologicals	S02
Antifungals for topical use	D01A
Emollients and protectives	D02
Preparations for treatment of wounds and ulcers	D03
Antipruritics, incl. antihistamines, anaesthetics, etc.	D04
Antipsoriatics for topical use	D05A
Antibiotics and chemotherapeutics for dermatological use	D06
Corticosteroids, dermatological preparations	D07
Antiseptics and disinfectants	D08
Medicated dressings	D09A
Anti-acne preparations for topical use	D10A
Antihidrotics	D11AA
Medicated shampoos	D11AC
Androgens for topical use	D11AE
Wart and anti-corn preparations	D11AF
Tacrolimus	D11AH01
Pimecrolimus	D11AH02
Cromoglicic acid	D11AH03
Crisaborole	D11AH06

Other dermatologicals (excl. finasteride; D11AX10)	D11AX01 to D11AX09
Other dermatologicals (excl. finasteride; D11AX10)	D11AX11 to D11AX57
Antiinfectives and antiseptics, excl. combinations with corticosteroids	G01A
Combinations of corticosteroids and antiinfectives for gynaecological use	G01B
<u>Antiinfectives and antiseptics for local oral treatment</u>	A01AB
Corticosteroids for local oral treatment	A01AC
Antihemorrhoidals with corticosteroids	C05AA

Figure 7. Proportion of 75 years and over who are taking more than 5 medications concurrently (>90 days excluding dermatological and antibiotics)

ALGORITHM FOR CALCULATION METHOD



Source: OECD.

PR9) Overall volume of opioids prescribed (DDDs per 1000 population per day)

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Population aged 18 years and over (at 1 January of the reference year) in *prescribing database* with ≥ 1 prescription during the reference year

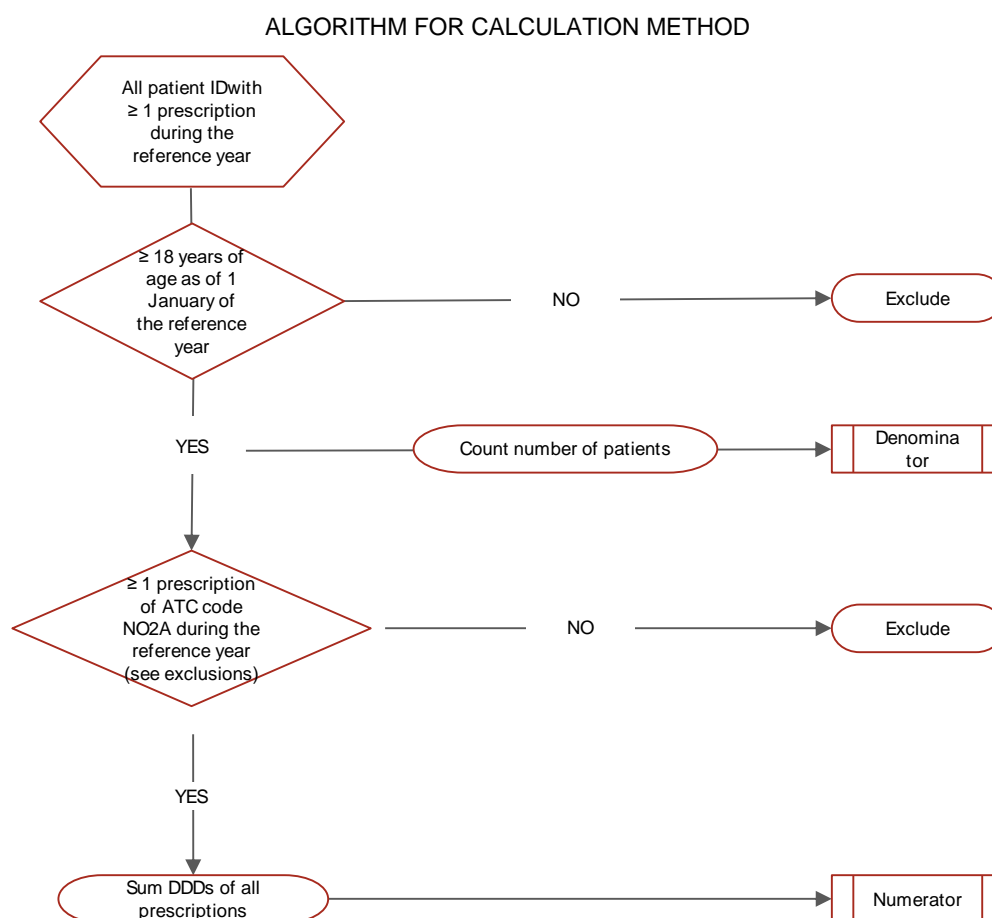
Numerator: Sum *DDD* of all ATC N02A prescriptions

Denominator: Number of individuals ≥ 18 years of age at 1 January 2017 in database

NOTE: Methadone and buprenorphine/naloxone combinations (Suboxone) are excluded from all analyses, as these products are most often used in the treatment of addiction and the focus of this collection is opioids for pain. Please check the table below listing the ATC codes to be excluded both from the numerator and the denominator.

Name of opioids for the treatment of addiction for exclusion from the numerator of the opioids indicators	ATC codes
Methadone, combinations excl. psycholeptics	N02AC52
Buprenorphine	N02AE01

Figure 8. Overall volume of opioids prescribed (DDDs per 1000 population per day)



Source: OECD.

PR10) Proportion of the population who are chronic opioid users (≥ 90 day's supply in a year)

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Population aged 18 years and over (at 1 January of the reference year) in *prescribing database* with ≥ 1 prescription during the reference year

Numerator: Number of individuals ≥ 18 years of age at 1 January in database with 2 or more prescriptions of opioids (N02A) prescribed for ≥ 90 days in the year.

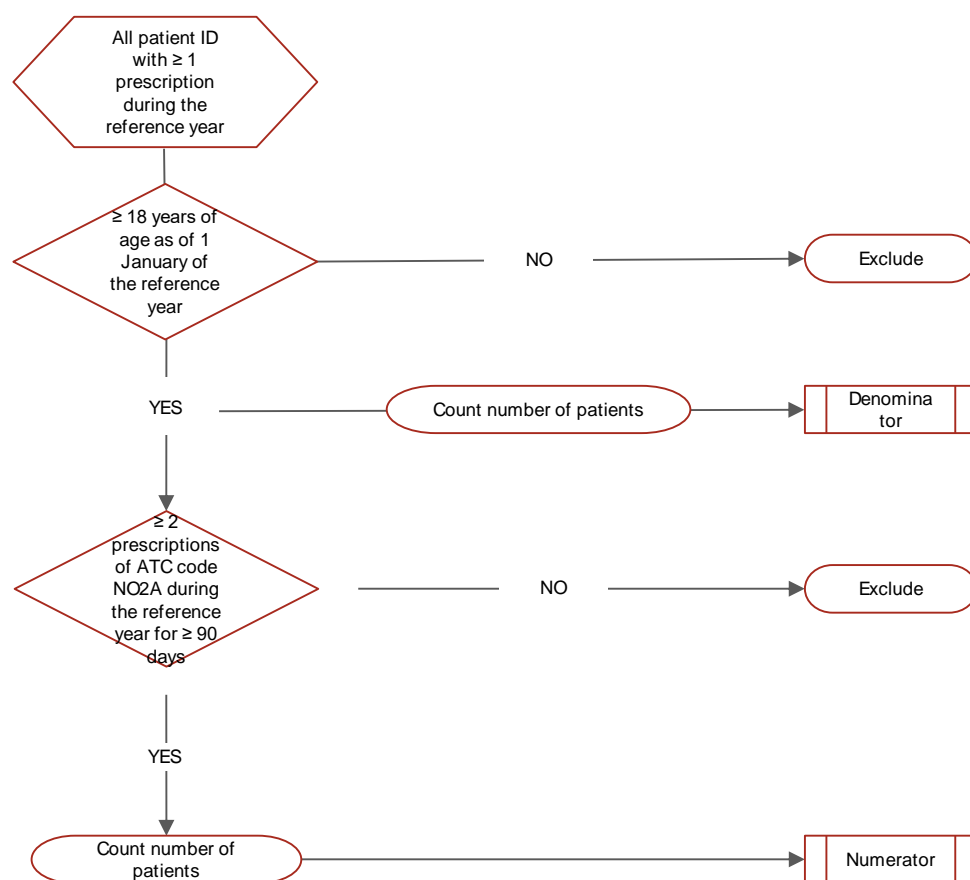
Denominator: Number of individuals ≥ 18 years of age at 1 January 2017 in database (Figure 9).

NOTE: Methadone and buprenorphine/naloxone combinations (Suboxone) are excluded from all analyses, as these products are most often used in the treatment of addiction and the focus of this collection is opioids for pain.

<i>Name of opioids for the treatment of addiction for exclusion from the numerator of the opioids indicators</i>	<i>ATC codes</i>
Methadone, combinations excl. psycholeptics	N02AC52
Buprenorphine	N02AE01

Figure 9. Proportion of the population who are chronic opioid users (≥ 90 day's supply in a year)

ALGORITHM FOR CALCULATION METHOD



Source: OECD.

PR11) Proportion of people 65 years and over prescribed antipsychotics

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: All persons 65 years and over (on the first day of the reference year) in the *prescribing database* (5 year age groups) that show at least one prescription in the reference year

Numerator: Number of individuals ≥ 65 years on first day of reference year with ≥ 1 prescription for any antipsychotic medication (ATC codes N05A) prescribed during the reference year.

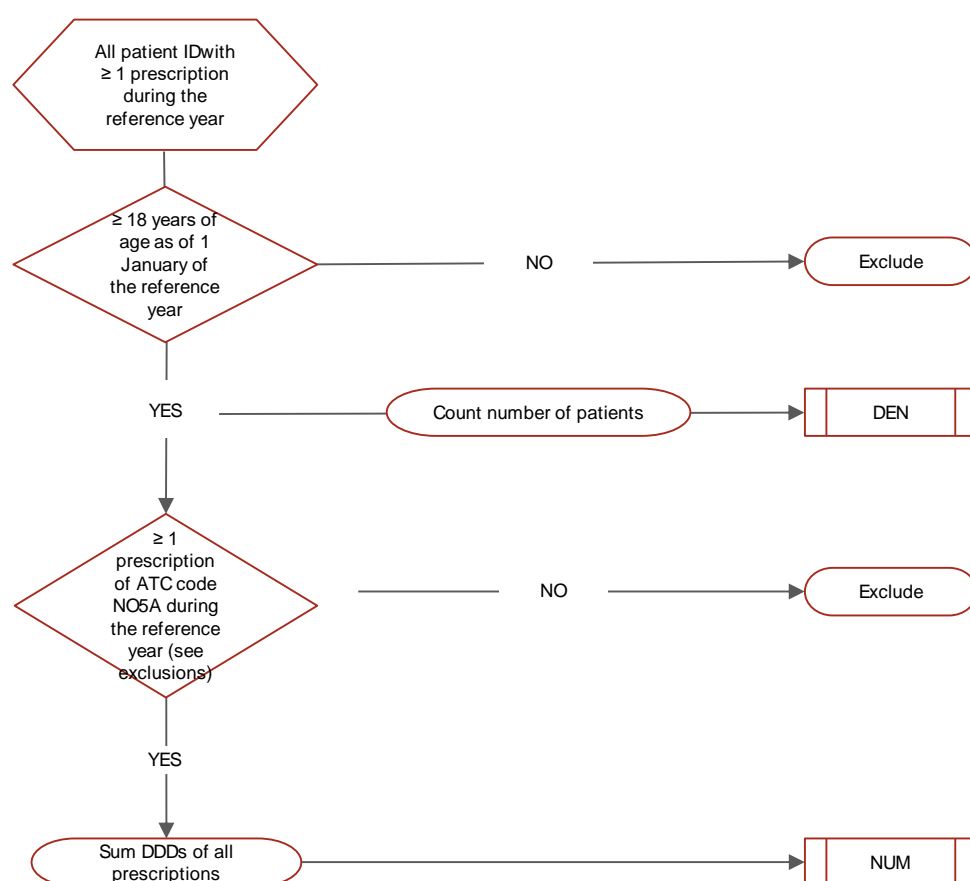
Denominator: Number of individuals ≥ 65 years of age on first day of reference year in the national prescription database in the reference year (Figure 10).

Exclude:

- Prescriptions for antipsychotic medications registered through in-patient hospital prescription registries.

Figure 10. Proportion of people 65 years and over prescribed antipsychotics

ALGORITHM FOR CALCULATION METHOD



Source: OECD.

ACUTE CARE (AC) INDICATORS

Indicators in the acute care indicator set include:

- AC1) AMI 30 day mortality - national level using linked data
- AC2) AMI 30 day mortality - national level using unlinked data
- AC3) Hemorrhagic stroke 30 day mortality - national level using linked data
- AC4) Hemorrhagic stroke 30 day mortality - national level using unlinked data
- AC5) Ischemic stroke 30 day mortality using linked data
- AC6) Ischemic stroke 30 day mortality - national level using unlinked data
- AC7) Hip fracture surgery initiated within 2 calendar days after admission to the hospital

NOTES

In order to contribute the pilot data collection for integrated care delivery which will commence in the beginning of 2021, number of stroke cases and crude mortality rates by ICD10 code will be requested as part of HCQO's acute care questionnaire in the worksheet Data_RD.

AC1) AMI 30 day mortality - national level using linked data

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Patients aged 15 and older (5 year age group)

Numerator: Number of deaths in any hospital and out of hospital that occurred within 30 days of the admission date of the denominator cases.

Denominator: The last *admission* for each patient admitted to hospital for acute non-elective (urgent) care with a *principal diagnosis* (PDx) of acute myocardial infarction during 1 January to 31 December in the specified year. [AMI diagnostic codes upon separation: ICD-9 410 or ICD-10 I21, I22.].

Please note only one admission per patient is to be counted in the denominator and the numerator is calculated by following up all denominator cases for up to 30 days.

AC2) AMI 30 day mortality - national level using unlinked data

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Patients aged 15 and older (5 year age group)

Numerator: Number of deaths (in the same hospital) that occurred within 30 days of the admission date of the denominator cases.

Denominator: Number of *admissions* to hospital for acute non-elective (urgent) care with a *primary diagnosis* of acute myocardial infarction from 1 January to 31 December in the specified year. [AMI diagnostic codes upon separation: ICD-9 410 or ICD-10 I21, I22.]

Please note:

- All admissions (including *day cases*) are to be counted in the denominator including admissions resulting a) in a *transfer* to another acute care facility (*transfers out*) and b) from a transfer from another acute care facility (*transfers in*).

AC3) Hemorrhagic stroke 30 day mortality - national level using linked data

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Patients aged 15 and older (5 year age group)

Numerator: Number of deaths in any hospital and out of hospital that occurred within 30 days of the admission date of the denominator cases.

Denominator: The last *admission* in the specified year for each patient admitted to hospital for acute non-elective (urgent) care with a *principal diagnosis* (PDx) of hemorrhagic stroke from 1 January to 31 December in the specified year. [Hemorrhagic stroke diagnostic codes upon separation: ICD-9 430-432 or ICD-10 I60-I62.]

Please note only one admission per patient is to be counted in the denominator and the numerator is calculated by following up all denominator cases for up to 30 days.

AC4) Hemorrhagic stroke 30 day mortality - national level using unlinked data

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Patients aged 15 and older (5 year age group)

Numerator: Number of deaths in the same hospital that occurred within 30 days of the admission date of the denominator cases.

Denominator: Number of *admissions* to hospital for acute non-elective (urgent) care with a *primary diagnosis* of hemorrhagic stroke from 1 January to 31 December in the specified year. [Hemorrhagic stroke diagnostic codes upon separation: ICD-9 430-432 or ICD-10 I60-I62.]

Please note:

- All *admissions* (including *day cases*) are to be counted in the denominator including admissions resulting a) in a *transfer* to another acute care facility (*transfers out*) and b) from a transfer from another acute care facility (*transfers in*).

AC5) Ischemic stroke 30 day mortality using linked data

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Patients aged 15 and older (5 year age group)

Numerator: Number of deaths in any hospital and out of hospital that occurred within 30 days of the admission date of the denominator cases.

Denominator: The last *admission* in the specified year for each patient admitted to hospital for acute non-elective (urgent) care with a *principal diagnosis* (PDx) of ischemic stroke from 1 January to 31 December in the specified year. [Ischemic stroke diagnostic codes upon separation: ICD-9 433, 434, and 436 or ICD-10 I63-I64.]

Please note only one admission per patient is to be counted in the denominator

AC6) Ischemic stroke 30 day mortality - national level using unlinked data

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Patients aged 15 and older (5 year age group)

Numerator: Number of deaths in the same hospital that occurred within 30 days of the admission date of the denominator cases.

Denominator: Number of *admissions* to hospital for acute non-elective (urgent) care with a *primary diagnosis* of ischemic stroke from 1 January to 31 December in the specified year. [Ischemic stroke diagnostic codes upon separation: ICD-9 433, 434, and 436 or ICD-10 I63-I64.]

Please note:

- All *admissions* (including *day cases*) are to be counted in the denominator including admissions resulting a) in a transfer to another acute care facility (*transfers out*) and b) from a transfer from another acute care facility (*transfers in*).
- The numerator is calculated by following up all denominator cases for up to 30 days

AC7) Hip fracture surgery initiated within 2 calendar days after admission to the hospital

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Patients aged 65 and older (5 year age group)

Numerator: Number of denominator cases that were surgically treated (see list of procedures below) within 2 calendar days after admission.

Denominator: Number of patients aged 65 years or older admitted to hospital for acute non-elective (urgent) care with a *principal diagnosis* (PDx) of upper femur fracture and who were surgically treated (see list of procedures below) in the same hospital during the specified year [Hip fracture diagnostic codes: ICD-10 S72.0, S72.1, S72.2 or ICD-9 820].

Exclude:

- *Admissions* where the hip fracture occurred during the admission (e.g. hip fracture is coded as a post-admission diagnosis)
- *Admissions* with missing or invalid procedure date

Technical notes:

Within 2 Calendar Days: for the purposes of calculating the numerator cases the term ‘within 2 calendar days’ includes cases that were:

- Treated on day 0 (same day as admission)
- Treated on day 1 (next day)
- Treated on day 2

Surgically Treated: for the purposes of calculating the denominator cases the term ‘surgically treated’ refers to the following list of procedures:

- Fixation, hip joint
- Application of external fixator device
- Implantation of internal device, hip joint
- Fixation, femur
- Implantation of internal device pelvis
- Closed reduction of fracture with internal fixation
- Open reduction of fracture with internal fixation
- Total hip replacement
- Partial hip replacement

Since procedure classifications vary between countries the procedures listed here are not coded. Countries are requested to map their procedure classification codes to these procedure descriptions and report any related issues in the comments box in the Sources and Methods section of the questionnaire.

MENTAL HEALTH CARE (MH) QUESTIONNAIRE

Indicators in the mental care indicator set include:

- MH1) In-patient death from suicide among patients at the hospital with a mental disorder
- MH2) Death from suicide within 1 year after discharge among patients discharged with a mental disorder
- MH3) Death from suicide within 30 days after discharge among patients discharged with a mental disorder
- MH4) Excess mortality from schizophrenia
- MH5) Excess mortality from bipolar disorder

NOTES

Excess mortality indicators include;

- Excess mortality from schizophrenia
- Excess mortality from bipolar disorder

These indicators represent a ratio of two mortality rates (**Rate 1** and **Rate 2**) and aim to measure the excess mortality from all causes in people who have a diagnosis of the respective condition. **Rate 1** for these indicators equals the “all cause” mortality rate for all persons aged between 15 and 74 years old in the population diagnosed with the respective condition (schizophrenia, bipolar disorder). **Rate 2** equals the all-cause mortality rate for all persons aged between 15 and 74 in the total population.

Ideal data source for the denominator population in **Rate 1** is a complete register of all people who have ever had a relevant diagnosis but countries without complete registers should consider and assess the suitability of following datasets **provided they can be linked with mortality data**:

- Partial registers (e.g. covering one or more regions)
- Unique patients with a primary or first two listed secondary diagnoses of schizophrenia or bipolar disorder from combined inpatients/outpatients aggregated data, over a number of years (preferably at least 5)
- Representative health surveys
- Unique patients prescribed relevant medicines
- Primary care or other patient databases
- Insurance data

MH1) In-patient death from suicide among patients at the hospital with a mental disorder

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Patients aged 15 years and older (5 year age group)

Numerator: Number of patient discharges among denominator cases coded as suicide (ICD-10 codes: X60-X84) in the year. Please note that only suicide should be included – i.e. suicide attempts and self-harm not resulting in death should be excluded.

Denominator: Number of patients discharged with a *principal diagnosis* or first two listed *secondary diagnosis* code of mental health and behavioural disorders (ICD-10 codes F10-F69 and F90-99) in the year.

MH2) Death from suicide within 1 year after discharge among patients discharged with a mental disorder

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Patients aged 15 years and older (5 year age group)

Numerator: Number of patients among denominator cases that committed suicide (ICD-10 codes: X60-X84) within 1 year after discharge. Please note that only suicide should be included – i.e. suicide attempts and self-harm not resulting in death should be excluded.

Denominator: Number of patients discharged alive with a *principal diagnosis* or first two listed *secondary diagnosis* code of mental health and behavioural disorders (ICD-10 codes F10-F69 and F90-99) in the year. In cases with several admissions during the year, the follow up period starts from the last discharge (discharge from a hospital and thus not from one department to another).

Note: This indicator requires data that links hospital records with deaths after discharge.

MH3) Death from suicide within 30 days after discharge among patients discharged with a mental disorder

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Patients aged 15 years and older (5 years age group)

Numerator: Number of patients among denominator cases that committed suicide (ICD-10 codes: X60-X84) within 30 days after discharge. Please note that only suicide should be included – i.e. suicide attempts and self-harm not resulting in death should be excluded.

Denominator: Number of patients discharged alive with a *principal diagnosis* or first two listed *secondary diagnosis* code of mental health and behavioural disorders (ICD-10 codes F10-F69 and F90-99) in the year. In cases with several admissions during the year, the follow up period starts from the last discharge (discharge from a hospital and thus not from one department to another).

Note: This indicator requires data that links hospital records with deaths after discharge.

MH4) Excess mortality from schizophrenia

See Glossary (Section 2) for definitions of italicised terminology.

The indicator will be the ratio of Rate 1: Rate 2

Rate 1: Directly age- and sex-standardised “all cause” mortality rate in the year for all persons aged between 15 and 74 years old in the population with schizophrenia.

Coverage: Patients aged between 15 and 74 years (5 year age groups)

Numerator: All deaths among the denominator population in the year.

Denominator: All people aged 15-74 years ever diagnosed with schizophrenia (see list of ICD codes) as obtained from a register or equivalent data source in the year.

Rate 2: Directly age- and sex-standardised “all cause” mortality rate in the same year for all persons aged between 15 and 74 years old in the total population.

Coverage: People aged between 15 and 74 years (5 year age groups)

Numerator: All deaths among the denominator population in the year.

Denominator: All people aged 15-74 years in the year.

Schizophrenia diagnostic codes:

ICD-9-CM	ICD-10-WHO
295.0 Simple type of schizophrenia	F20 Schizophrenia
295.1 Disorganised type of schizophrenia	F21 Schizotypal disorder
295.2 Catatonic type of schizophrenia	F23.1 Acute polymorphic psychotic disorder with symptoms of schizophrenia
295.3 Paranoid type of schizophrenia	F23.2 Acute schizophrenia-like psychotic disorder
295.4 Acute schizophrenic episode	F25.0 Schizoaffective disorders
295.5 Latent schizophrenia	F25.1 Schizoaffective disorder, depressive type
295.6 Residual schizophrenia	F25.2 Schizoaffective disorder, mixed type
295.7 Schizoaffective type of schizophrenia	F25.8 Other schizoaffective disorders
295.8 Other specified types of schizophrenia	F25.9 Schizoaffective disorder, unspecified
295.9 Unspecified schizophrenia	

MH5) Excess mortality from bipolar disorder

See Glossary (Section 2) for definitions of italicised terminology.

The indicator will be the ratio of Rate 1: Rate 2

Rate 1: Directly age- and sex-standardised “all cause” mortality rate in the year for all persons aged between 15 and 74 years old in the population with bipolar disorder.

Coverage: Patients aged between 15 and 74 years (5 year age groups)

Numerator: All deaths among the denominator population in the year.

Denominator: All people aged 15-74 years ever diagnosed with bipolar disorder (see list of ICD codes) as obtained from a register or equivalent data source in the year.

Rate 2: Directly age- and sex-standardised “all cause” mortality rate in the same year for all persons aged between 15 and 74 years old in the total population.

Coverage: People aged between 15 and 74 years (5 year age groups)

Numerator: All deaths among the denominator population in the year.

Denominator: All people aged 15-74 in the year.

Bipolar disorder diagnostic codes:

ICD-9-CM	ICD-10-WHO
296.4 Bipolar affective disorder, manic	F31 Bipolar affective disorder
296.5 Bipolar affective disorder, depressed	
296.6 Bipolar affective disorder, mixed	
296.7 Bipolar affective disorder, unspecified	
296.8 Manic depressive psychosis, other and unspecified	

PATIENT EXPERIENCES (PE) QUESTIONNAIRE

Indicators in the patient experience indicator set include:

- PE1) Consultation skipped due to costs
- PE2) Medical tests, treatment or follow-up skipped due to costs
- PE3) Prescribed medicine skipped due to costs
- PE4) Doctor spending enough time with patient during the consultation
- PE5) Regular doctor spending enough time with patient during the consultation
- PE6) Doctor providing easy-to-understand explanations
- PE7) Regular doctor providing easy-to-understand explanations
- PE8) Doctor giving opportunity to ask questions or raise concerns
- PE9) Regular doctor giving opportunity to ask questions or raise concerns
- PE10) Doctor involving patient in decisions about care and treatment
- PE11) Regular doctor involving patient in decisions about care and treatment
- PE12) Doctor treating patient with courtesy and respect
- PE13) Regular doctor treating patient with courtesy and respect

NOTES

PE questionnaire collects weighted rates, and standard errors of the weighted rates. Weighted rates are calculated by removing bias from a survey sample, so they are estimates for the survey target population as a whole and not just for the survey respondents (unweighted rates). Standard errors measure the accuracy of weighted rates and they **should take account of survey sample design**. But if not possible, please calculate it using the following equation:

$$Se(p_{ij}) = \sqrt{\frac{p_{ij} \times (1 - p_{ij})}{n_{ij}}}$$

Where p is the sample proportion, n is the sample size, i is the age group, and j the sex.

If data do not strictly comply with the definitions, please indicate this in the online survey. To assess the data comparability based on question phrases and response categories such as yes/no answer and frequency, please send us the survey questionnaire(s) to HCQO.Contact@oecd.org if your country has not done.

PE1) Consultation skipped due to costs

See Glossary (Section 2) for definitions of italicized terminology

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design.

Coverage: Survey respondents aged 16 and over who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered not having visited a health professional (e.g., doctor, nurse or allied health professional) because of costs (i.e., actual out-of-pocket payments for services) by *income quintile* and for all income groups.

Denominator: Number of survey respondents who answered "Yes" or "No" to a survey question on whether consultation was skipped due to costs in the reference year by *income quintile* and for all income groups.

PE2) Medical tests, treatment or follow-up skipped due to costs

See Glossary (Section 2) for definitions of italicized terminology

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design.

Coverage: Survey respondents aged 16 and over who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered having skipped a medical test, treatment (excluding medicines), or other follow-up that was recommended by a health professional (e.g., doctor, nurse or allied health professional) because of costs (i.e., actual out-of-pocket payments for services) by *income quintile* and for all income groups.

Denominator: Number of survey respondents who answered "Yes" or "No" to a survey question on whether recommended medical tests, treatment or follow-up was skipped due to costs in the reference year by *income quintile* and for all income groups.

PE3) Prescribed medicine skipped due to costs

See Glossary (Section 2) for definitions of italicized terminology

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design.

Coverage: Survey respondents aged 16 and over who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered not having filled a prescription for medicine/collect a prescription for medicine, or skipped doses of medicine because of costs (i.e., actual out-of-pocket payments for medicine) by *income quintile* and for all income groups.

Denominator: Number of survey respondents who answered "Yes" or "No" to a survey question on whether prescribed medicine was skipped due to costs in the reference year by *income quintile* and for all income groups.

PE4) Doctor spending enough time with patient during the consultation

See Glossary (Section 2) for definitions of italicised terminology.

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design

Coverage: Survey respondents aged 16 and over (4 age groups (16-24, 25-44, 45-65 and 65+) and 16+) who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered that a doctor spent enough time with them.

Denominator: Number of survey respondents who reported having had a consultation with a doctor in the reference year and answered "Yes" or "No" to a survey question on whether a doctor spent enough time with them.

PE5) Regular doctor spending enough time with patient during the consultation

See Glossary (Section 2) for definitions of italicised terminology.

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design

Coverage: Survey respondents aged 16 and over (4 age groups (16-24, 25-44, 45-65 and 65+) and 16+) who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered that a regular doctor always or often spent enough time with them.

Denominator: Number of survey respondents who reported having had a regular doctor in the reference year and answered a frequency to a survey question on how often a regular doctor spent enough time with them.

PE6) Doctor providing easy-to-understand explanations

See Glossary (Section 2) for definitions of italicised terminology.

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design

Coverage: Survey respondents aged 16 and over (4 age groups (16-24, 25-44, 45-65 and 65+) and 16+) who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered that a doctor explained things in a way that was easy to understand.

Denominator: Number of survey respondents who reported having had a consultation with a doctor in the reference year and answered "Yes" or "No" to a survey question on whether a doctor explained things in a way that was easy to understand.

PE7) Regular doctor providing easy-to-understand explanations

See Glossary (Section 2) for definitions of italicised terminology.

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design

Coverage: Survey respondents aged 16 and over (4 age groups (16-24, 25-44, 45-65 and 65+) and 16+) who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered that a regular doctor always or often explained things in a way that was easy to understand.

Denominator: Number of survey respondents who reported having had a regular doctor in the reference year and answered a frequency to a survey question on how often a regular doctor explained things in a way that was easy to understand.

PE8) Doctor giving opportunity to ask questions or raise concerns

See Glossary (Section 2) for definitions of italicised terminology.

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design.

Coverage: Survey respondents aged 16 and over (4 age groups (16-24, 25-44, 45-65 and 65+) and 16+) who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered that a doctor gave an opportunity to ask questions or raise concerns about recommended treatment.

Denominator: Number of survey respondents who reported having had a consultation with a doctor in the reference year and answered "Yes" or "No" to a survey question on whether a doctor gave an opportunity to ask questions or raise concerns about recommended treatment.

PE9) Regular doctor giving opportunity to ask questions or raise concerns

See Glossary (Section 2) for definitions of italicised terminology.

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design.

Coverage: Survey respondents aged 16 and over (4 age groups (16-24, 25-44, 45-65 and 65+) and 16+) who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered that a regular doctor always or often gave an opportunity to ask questions or raise concerns about recommended treatment.

Denominator: Number of survey respondents who reported having had a regular doctor in the reference year and answered a frequency to a survey question on how often a regular doctor gave an opportunity to ask questions or raise concerns about recommended treatment.

PE10) Doctor involving patient in decisions about care and treatment

See Glossary (Section 2) for definitions of italicised terminology.

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design.

Coverage: Survey respondents aged 16 and over (4 age groups (16-24, 25-44, 45-65 and 65+) and 16+) who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered that a doctor involved them as much as they wanted to be in decisions about their care and treatment.

Denominator: Number of survey respondents who reported having had a consultation with a doctor in the reference year and answered "Yes" or "No" to a survey question on whether a doctor involved them as much as they wanted to be in decisions about their care and treatment.

PE11) Regular doctor involving patient in decisions about care and treatment

See Glossary (Section 2) for definitions of italicised terminology.

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design.

Coverage: Survey respondents aged 16 and over (4 age groups (16-24, 25-44, 45-65 and 65+) and 16+) who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered that a doctor always or often involved them as much as they wanted to be in decisions about their care and treatment.

Denominator: Number of survey respondents who reported having had a regular doctor in the reference year and answered a frequency to a survey question on how often a regular doctor involved them as much as they wanted to be in decisions about their care and treatment.

PE12) Doctor treating patient with courtesy and respect

See Glossary (Section 2) for definitions of italicised terminology.

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design.

Coverage: Survey respondents aged 16 and over (4 age groups (16-24, 25-44, 45-65 and 65+) and 16+) who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered that a doctor treated them with courtesy and respect.

Denominator: Number of survey respondents who reported having had a consultation with a doctor in the reference year and answered "Yes" or "No" to a survey question on whether a doctor treated with courtesy and respect.

PE13) Regular doctor treating patient with courtesy and respect

See Glossary (Section 2) for definitions of italicised terminology.

Crude rate (weighted) is calculated based on the following definitions. Standard errors should be calculated based on the sample design.

Coverage: Survey respondents aged 16 and over (4 age groups (16-24, 25-44, 45-65 and 65+) and 16+) who answered the specific question.

Numerator: Number of survey respondents among denominator cases who answered that a doctor always or often treated them with courtesy and respect.

Denominator: Number of survey respondents who reported having had a regular doctor in the reference year and answered a frequency to a survey question on how often a regular doctor treated them with courtesy and respect.

PATIENT SAFETY (PS) QUESTIONNAIRE

Indicators in the Patient safety indicator (PSI) set include:

- PS1) Retained surgical item or unretrieved device fragment using unlinked data
- PS2) Retained surgical item or unretrieved device fragment using linked data
- PS3) Postoperative pulmonary embolism - hip and knee replacement discharges using unlinked data
- PS4) Postoperative pulmonary embolism - hip and knee replacement discharges using linked data
- PS5) Postoperative deep vein thrombosis - hip and knee replacement discharges using unlinked data
- PS6) Postoperative deep vein thrombosis - hip and knee replacement discharges using linked data
- PS7) Postoperative sepsis - abdominal discharges using unlinked data
- PS8) Postoperative sepsis - abdominal discharges using linked data
- PS9) Post-operative wound dehiscence using unlinked data
- PS10) Post-operative wound dehiscence using linked data
- PS11) Obstetric trauma vaginal delivery with instrument
- PS12) Obstetric trauma vaginal delivery without instrument

NOTES

The following abbreviations are used in the indicator algorithms and questionnaire to denote specified data outputs for the 2020-21 HCQO data collection:

DEN	Denominator dataset
LOS	Length of stay
NUM	Numerator dataset
PDX	Principal diagnosis

Each indicator includes a flow chart to illustrate calculation steps.

PS1) Retained surgical item or unretrieved device fragment using unlinked data

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Surgical and medical discharges for patients aged 15 and older

Numerator: Discharges among cases defined in the denominator with ICD code for foreign body left in during procedure in a secondary diagnosis field during the surgical admission (see ICD codes below).

Denominator: All surgical and medical discharges for patients aged 15 and older (Figure 11).

Exclude:

- **PDX** - with ICD- code for foreign body left in during procedure in a) the principal diagnosis field or b) secondary diagnosis present on admission (if known).
- **LOS** - with a length of stay less than 24 hours where patient is discharged alive (in those countries where a timestamp of admission or discharge is not available, cases with a length of stay of 0 days shall be excluded).

ICD-9-CM Retained surgical item or unretrieved device fragment diagnosis codes:

9984	Foreign body accidentally left during a procedure
9987	Acute reactions to foreign substance accidentally left during a procedure

Foreign body left in during:

E8710	Surgical operation
E8711	Infusion or transfusion
E8712	Kidney dialysis or other perfusion
E8713	Injection or vaccination
E8714	Endoscopic examination
E8715	Aspiration of fluid or tissue, puncture, and catheterization
E8716	Heart catheterization
E8717	Removal of catheter or packing
E8718	Other specified procedures
E8719	Unspecified procedure

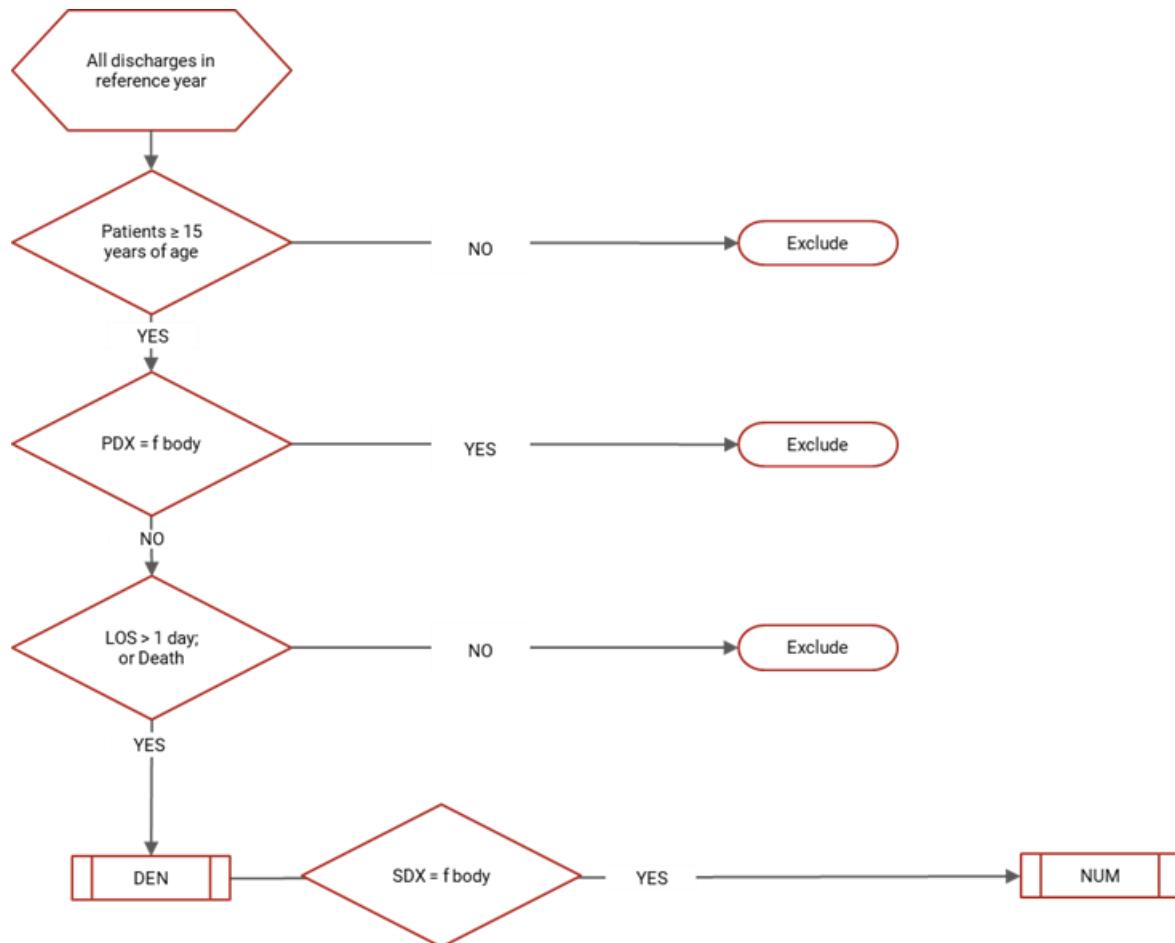
ICD-10-WHO Retained surgical item or unretrieved device fragment diagnosis codes:

T81.5	Foreign body accidentally left in body cavity or operation wound following a procedure
T81.6	Acute reaction to foreign substance accidentally left during a procedure
Y61.0	Foreign object accidentally left in body during surgical and medical care: During surgical operation
Y61.1	Foreign object accidentally left in body during surgical and medical care: During infusion or transfusion

Y61.2	Foreign object accidentally left in body during surgical and medical care: During kidney dialysis or other perfusion
Y61.3	Foreign object accidentally left in body during surgical and medical care: During injection or immunization
Y61.4	Foreign object accidentally left in body during surgical and medical care: During endoscopic examination
Y61.5	Foreign object accidentally left in body during surgical and medical care: During heart catheterization
Y61.6	Foreign object accidentally left in body during surgical and medical care: During aspiration, puncture and other catheterization
Y61.7	Foreign object accidentally left in body during surgical and medical care: During removal of catheter or packing
Y61.8	Foreign object accidentally left in body during surgical and medical care: During other surgical and medical care
Y61.9	Foreign object accidentally left in body during surgical and medical care: During unspecified surgical and medical care

Figure 11. Retained surgical item or unretrieved device fragment

ALGORITHM FOR SURGICAL CALCULATION METHOD USING UNLINKED DATA



PDX: principal diagnosis, f body: foreign body, LOS: length of stay, DEN: denominator dataset, SDX: secondary diagnosis, NUM: numerator cases based on surgical admission

Source: OECD.

PS2) Retained surgical item or unretrieved device fragment using linked data

See Glossary (Section 2) for definitions of italicised terminology.

NOTE:

No calculation information is available for this indicator in the data collection guidelines. This indicator should be calculated only using SAS code provided by the OECD.

PS3) Postoperative pulmonary embolism - hip and knee replacement discharges using unlinked data

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Hip&knee replacement discharges for patients aged 15 and older.

Numerator: Discharges among cases defined in the denominator with ICD code for pulmonary embolism in a *secondary diagnosis* field during the surgical admission (see ICD codes below).

Denominator: Hip and knee replacement discharges, meeting the inclusion and exclusion rules with an ICD code for an operating room procedure (Figure 12).

Countries which make use of the ICD-10-AM (Australian modification) may consider using surgical DRGs and the following medical DRGs B60*, B61*, B82* (paraplegia, quadriplegia and spinal cord conditions) if these are reported with an operating room procedure.

Exclude:

- **MDC** - cases from the numerator and denominator for *MDC 14* (Pregnancy, childbirth, and puerperium) or in Annex C (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G) in any field
- **IVC** - Cases from the numerator and denominator where a procedure for interruption of vena cava or insertion of inferior vena cava filter occurs before or on the same day as the first / main operating room procedure (hip/knee replacement and all surgical discharges) or where a procedure for interruption of vena cava is the only operating room procedure (all surgical discharges).
- **PDX** - case with principal diagnosis or secondary diagnosis present on admission (if known) of pulmonary embolism during the *surgical admission (NUM1)*,
- **LOS** - *surgical admissions (NUM1)* with length of stay less than 2 days where patient is discharged alive.

ICD-9-CM Total hip and knee replacement procedure code:

8151	Total hip replacement
8153	Revision of hip replacement
8154	Total knee replacement
8155	Revision of knee replacement

ICD-9-CM Pulmonary Embolism diagnosis codes:

4151	Pulmonary embolism
41511	Iatrogenic pulmonary embolism and infarction
41519	Pulmonary embolism and infarction, other
41513	Saddle embolism pulmonary artery

ICD-10-WHO Pulmonary Embolism diagnosis codes:

I26.0	Pulmonary embolism with mention of acute cor pulmonale
I26.9	Pulmonary embolism without mention of acute cor pulmonale

ICD-9-CM Interruption of Vena Cava procedure code:

387	Interruption of vena cava
	Percutaneous and open insertion of inferior vena cava filter

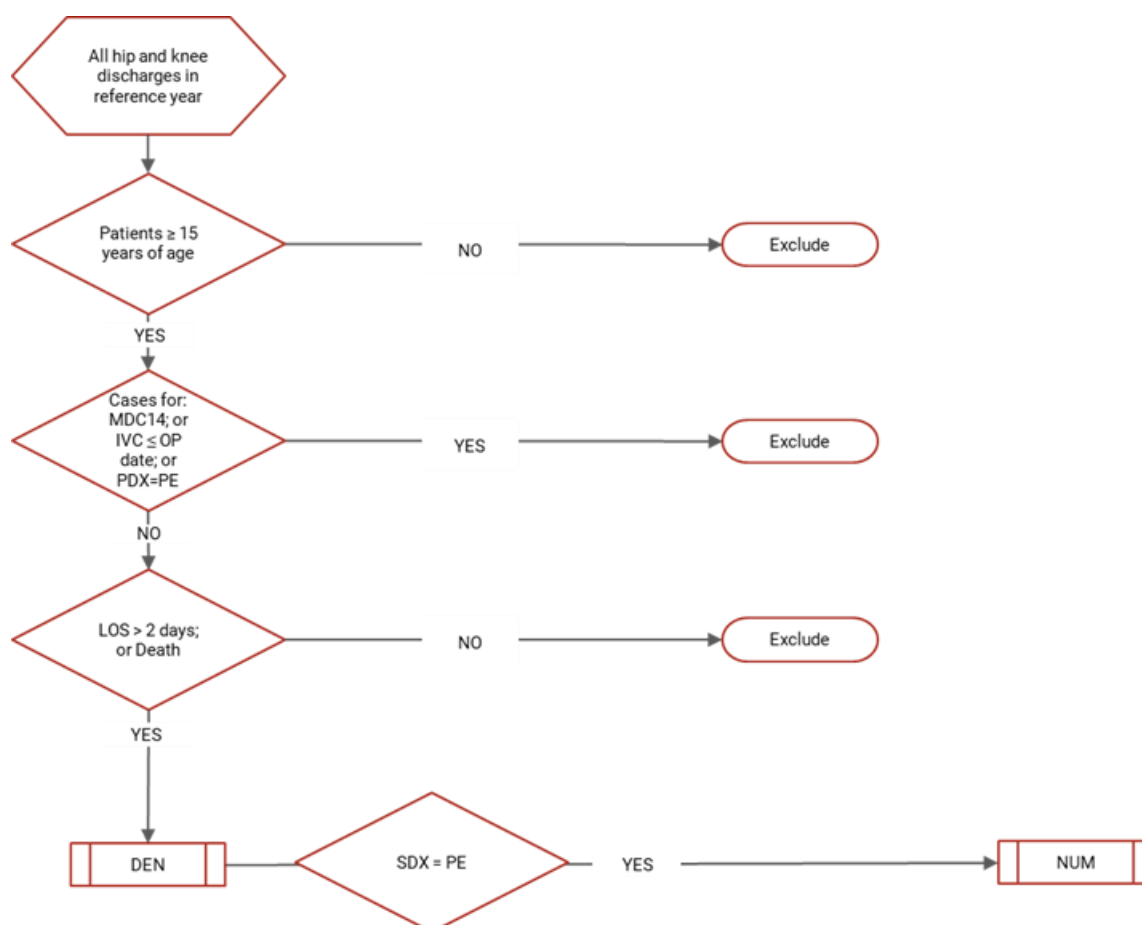
Note: Please search for percutaneous and open insertion of IVC filter codes in your country's version of procedure coding.

The Australian Classification of Health Interventions (ACHI) codes:

Block [726]	34800-00	Interruption of vena cava
Block [723]	35330-00	Percutaneous insertion of inferior vena cava filter
Block [723]	35330-01	Open insertion of inferior vena cava filter

Figure 12. Postoperative pulmonary embolism - hip and knee replacement

ALGORITHM FOR CALCULATION METHOD USING UNLINKED DATA



OP=IVC: operating procedure for vena cava, PDX: principal diagnosis, PE: pulmonary embolism, LOS: length of stay, DEN: denominator dataset, SDX: secondary diagnosis, NUM1: numerator cases based on surgical admission.
Source: OECD.

PS4) Postoperative pulmonary embolism - hip and knee replacement discharges using linked data

See Glossary (Section 2) for definitions of italicised terminology.

NOTE:

No calculation information is available for this indicator in the data collection guidelines. This indicator should be calculated only using SAS code provided by the OECD.

PS5) Postoperative deep vein thrombosis - hip and knee replacement discharges using unlinked data

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Hip and knee replacement discharges for patients aged 15 and older.

Numerator: Discharges among cases defined in the denominator with ICD code for deep vein thrombosis in a secondary diagnosis field during the surgical admission (see ICD codes below)

Denominator: Hip and knee replacement discharges, meeting the inclusion and exclusion rules with an ICD code for an operating room procedure (Figure 13).

Countries which make use of the ICD-10-AM (Australian modification) may consider using surgical DRGs and the following medical DRGs B60*, B61*, B82* (paraplegia, quadriplegia and spinal cord conditions) if these are reported with an operating room procedure.

Exclude:

- **MDC** - cases from the numerator and denominator for MDC 14 (Pregnancy, childbirth, and puerperium) or in Annex C (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G) in any field
- **IVC** - cases from the numerator and denominator where a procedure for interruption of vena cava or insertion of inferior vena cava filter occurs before or on the same day as the first / main operating room procedure (hip/knee replacement and all surgical discharges)
- **PE** - if a patient has both PE and DVT, such case is assigned to PE
- **PDX** - cases with principal diagnosis or secondary diagnosis present on admission (if known) of deep vein thrombosis during the surgical admission (NUM1)
- **LOS** - surgical admissions (NUM1) with length of stay less than 2 days where patient is discharged alive.

ICD-9-CM Total hip and knee replacement procedure code:

8151	Total hip replacement
8153	Revision of hip replacement
8154	Total knee replacement
8155	Revision of knee replacement

ICD-9-CM Deep Vein Thrombosis diagnosis codes:

45111	Phlebitis and thrombosis of femoral vein (deep) (superficial)
45119	Phlebitis and thrombophlebitis of deep vessel of lower extremities – other
4512	Phlebitis and thrombophlebitis of lower extremities
45181	Phlebitis and thrombophlebitis of iliac vein
4519	Phlebitis and thrombophlebitis of other sites – of unspecified site
45340	DVT-embolism lower ext nos (Oct 04)

45341	DVT-emb prox lower ext
45342	DVT-emb distal lower ext
4538	Other venous embolism and thrombosis of other specified veins

ICD-10-WHO Pulmonary Embolism and Deep Vein Thrombosis diagnosis codes:

I80.1	Phlebitis and thrombophlebitis of femoral vein
I80.2	Phlebitis and thrombophlebitis of other deep vessels of lower extremities
I80.3	Phlebitis and thrombophlebitis of lower extremities, unspecified
I80.8	Phlebitis and thrombophlebitis of other sites
I80.9	Phlebitis and thrombophlebitis of unspecified site
I82.8	Embolism and thrombosis of other specified veins

ICD-9-CM Interruption of Vena Cava procedure code:

387	Interruption of vena cava
	Percutaneous and open insertion of inferior vena cava filter

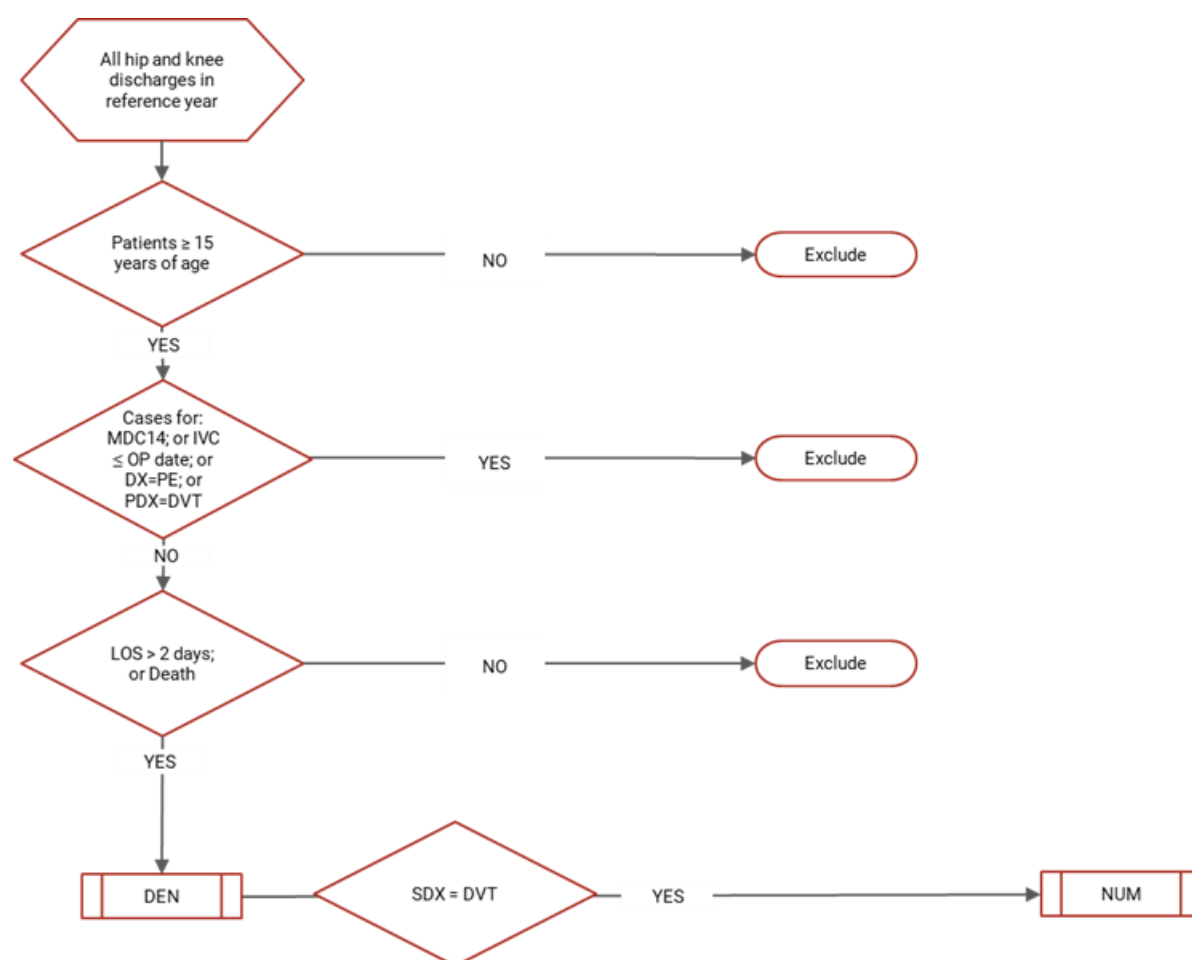
Note: Please search for percutaneous and open insertion of IVC filter codes in your country's version of procedure coding.

The Australian Classification of Health Interventions (ACHI) codes:

Block [726]	34800-00	Interruption of vena cava
Block [723]	35330-00	Percutaneous insertion of inferior vena cava filter
Block [723]	35330-01	Open insertion of inferior vena cava filter

Figure 13. Postoperative deep vein thrombosis - hip and knee replacement

ALGORITHM FOR CALCULATION METHOD USING UNLINKED DATA



OP=IVC: operating procedure for vena cava, PDX: principal diagnosis, PE: pulmonary embolism, DVT: deep vein thrombosis, LOS: length of stay, DEN: denominator dataset, SDX: secondary diagnosis, NUM1: numerator cases based on surgical admission.

Source: OECD,

PS6) Postoperative deep vein thrombosis - hip and knee replacement discharges using linked data

See Glossary (Section 2) for definitions of italicised terminology.

Note: No calculation information is available for this indicator in the data collection guidelines. This indicator should be calculated only using SAS code provided by the OECD.

PS7) Postoperative sepsis - abdominal discharges using unlinked data

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Abdominal discharges for patients aged 15 and older.

Numerator: Discharges among cases defined in the denominator with ICD code for sepsis in a secondary diagnosis field during the surgical admission (see ICD codes below)

Denominator: Abdominopelvic surgical discharges only, meeting the inclusion and exclusion rules with an ICD code for an operating room procedure (Figure 14).

Abdominopelvic discharges: See Annex D (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G)

Exclude:

- **MDC** - cases from the numerator and denominator for MDC 14 (Pregnancy, childbirth, and puerperium) or in Annex C (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G) in any field
- **INF** - cases from numerator and denominator with principal diagnosis of infection or secondary diagnosis present on admission, if known – see ICD codes below,
- **IMM/CA** - cases from numerator and denominator with any code for immunocompromised state or cancer – see ICD codes below
- **PDX** - cases with principal diagnosis or diagnosis present on admission (where possible) of sepsis
- **LOS** - length of stay of less than 3 days where patient is discharged alive.

ICD-9-CM Sepsis diagnosis codes:

0380	Streptococcal septicaemia
0381	Staphylococcal septicaemia
03810	Staphylococcal ependence, unspecified
03811	Methicillin susceptible Staphylococcus aureus septicaemia
03812	Methicillin resistant Staphylococcus aureus septicaemia
03819	Other staphylococcal septicaemia
0382	Pneumococcal ependence (streptococcus pneumoniae ependence)
0383	Septicaemia due to anaerobes
78552	Septic shock
78559	Other shock w/o mention of trauma
9980	Postoperative shock
99800	Postoperative shock, nos
99802	Postoperative shock, septic

Septicaemia due to:

03840	Gram-negative organism, unspecified
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03841	Haemophilus influenza
03842	Escherichia coli
03843	Pseudomonas
03844	Serratia
03849	Septicaemia due to other gram-negative organisms
0388	Other specified septicaemias
0389	Unspecified septicaemia
99591	Systemic inflammatory response syndrome due to infectious process w/o organ dysfunction
99592	Systemic inflammatory response syndrome due to infectious process w/organ dysfunction

ICD-10-WHO Sepsis diagnosis codes:

A40.0	Septicaemia due to streptococcus, group a
A40.1	Septicaemia due to streptococcus, group b
A40.2	Septicaemia due to streptococcus, group d
A40.3	Septicaemia due to streptococcus pneumoniae
A40.8	Other streptococcal septicaemia
A40.9	Streptococcal septicaemia, unspecified
A41.0	Septicaemia due to staphylococcus aureus
A41.1	Septicaemia due to other specified staphylococcus
A41.2	Septicaemia due to unspecified staphylococcus
A41.3	Septicaemia due to haemophilus influenza
A41.4	Septicaemia due to anaerobes
A41.5	Septicaemia due to other gram-negative organisms
A41.8	Other specified septicaemia
A41.9	Septicaemia, unspecified
R57.2	Septic shock
R57.8	Other shock
R65.0	Systemic Inflammatory Response Syndrome of infectious origin without organ failure
R65.1	Systemic Inflammatory Response Syndrome of infectious origin with organ failure
T81.1	Shock during or resulting from a procedure, not elsewhere classified

Immunocompromised state codes:

- ICD-9-CM: See Appendix I – Immunocompromised state diagnosis and procedure codes, of the following document:

<http://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V44/TechSpecs/PSI%20Appendices.pdf>

- ICD-10-WHO: See Annex E (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G). Please note the related procedure codes (see ICD-9-CM codes above) are not specified

and countries are requested to search for the relevant codes in their procedure classification systems.

Cancer codes:

- ICD-9-CM: See *Appendix H – Cancer diagnosis codes*, of the following document:

<http://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V44/TechSpecs/PSI%20Appendices.pdf>

- ICD-10-WHO: See Annex F (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G).

Infection codes:

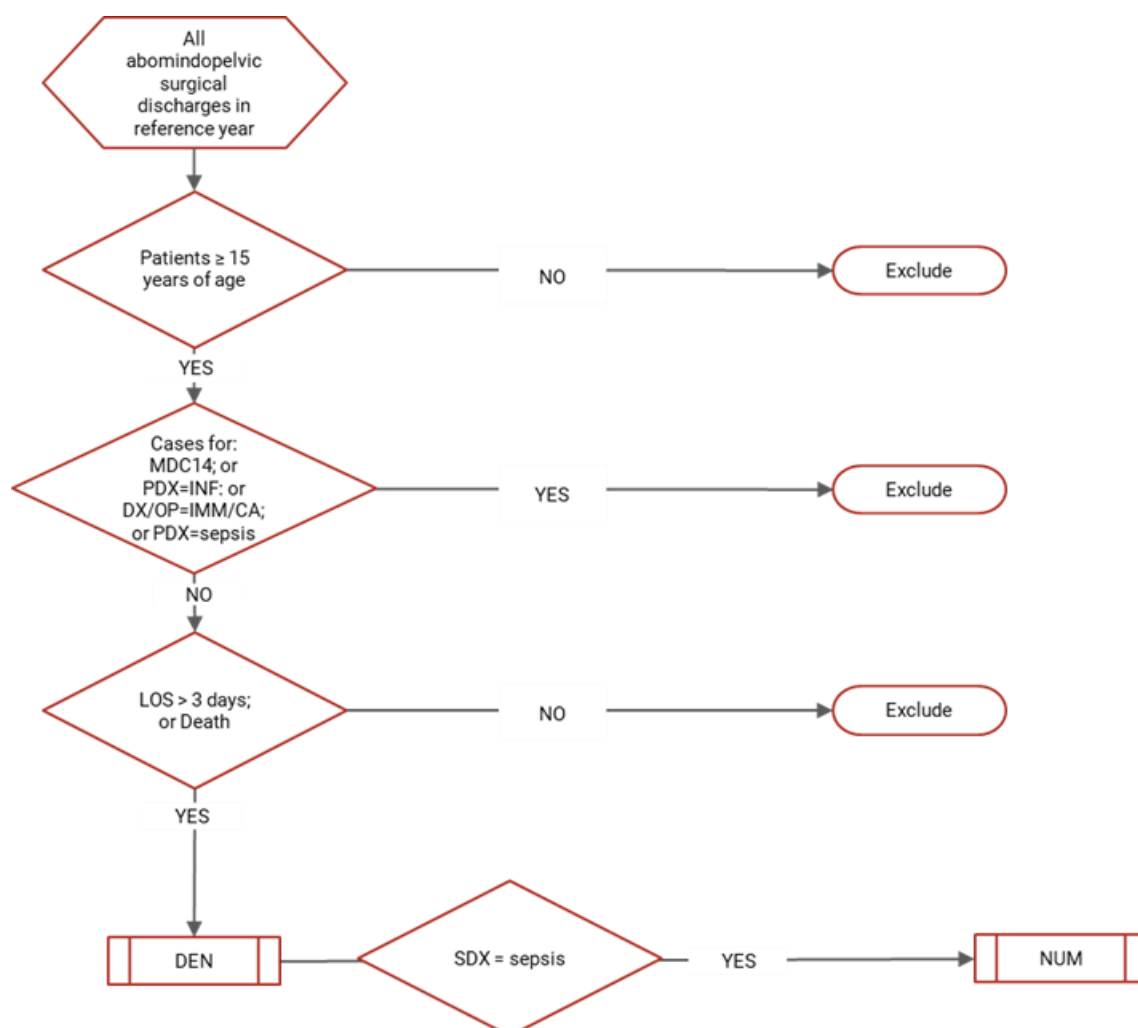
- ICD-9-CM: See Appendix F –Infection diagnosis codes, of the following document:

<http://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V44/TechSpecs/PSI%20Appendices.pdf>

- ICD-10-WHO: See Annex G (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G).

Figure 14. Postoperative sepsis

ALGORITHM FOR CALCULATION METHOD USING UNLINKED DATA



DX/OP=imm/ca: diagnosis or operating procedure immunocompromised state or cancer, PDX: principal diagnosis, LOS: length of stay, DEN: denominator dataset, SDX: secondary diagnosis, NUM1: numerator cases based on surgical admission
Source: OECD.

PS8) Postoperative sepsis - abdominal discharges using linked data

See Glossary (Section 2) for definitions of italicised terminology.

NOTE: No calculation information is available for this indicator in the data collection guidelines. This indicator should be calculated only using SAS code provided by the OECD.

PS9) Post-operative wound dehiscence using unlinked data

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Abdominal discharges for patients aged 15 and older

Numerator: Discharges among cases defined in the denominator with procedure code for reclosure of postoperative disruption of abdominal wall (see procedure code below)

Denominator: All abdominopelvic surgical discharges meeting the inclusion and exclusion rules.

- See Annex D (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G)

Exclude:

- **MDC** - MDC 14 (Pregnancy, childbirth, and puerperium) or in Annex C (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G) in any field from the numerator and denominator.
- **IMM** - Cases from the numerator and denominator with any diagnosis or procedure code for immunocompromised state –see ICD codes below,
- **REC** - Cases from the numerator and denominator where a procedure for reclosure of postoperative disruption of abdominal wall occurs before or on the same day as the first abdominopelvic surgery procedure (Reclos<=date*)
- **LOS** - surgical admissions (NUM1) where length of stay is less than 2 days where patient is discharged alive

ICD-9-CM Reclosure procedure code:

5461	Reclosure postoperative disruption
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Immunocompromised state codes:

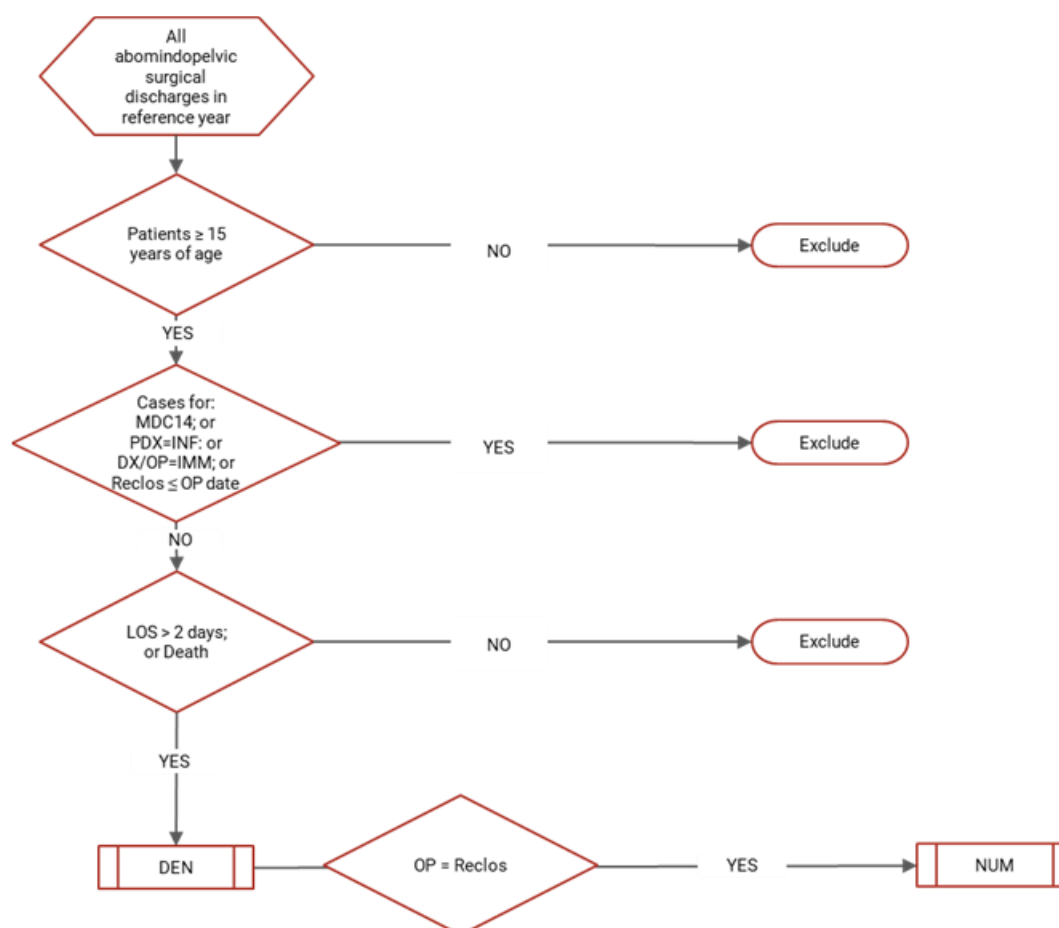
- ICD-9-CM: See Appendix I – Immunocompromised state diagnosis and procedure codes, of the following document:

<http://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V44/TechSpecs/PSI%20Appendices.pdf>,

- ICD-10-WHO: See Annex E (Excel sheet - HCQO 2020_21 Data Collection_Annex A-G).

Figure 15. Post-operative wound dehiscence

ALGORITHM FOR CALCULATION METHOD USING UNLINKED DATA



DX/OP=imm: diagnosis or operating procedure immunocompromised state, PDX: principal diagnosis, LOS: length of stay, DEN: denominator dataset, SDX: secondary diagnosis, NUM1: numerator cases based on surgical admission.
Source: OECD.

PS10) Post-operative wound dehiscence using linked data

See Glossary (Section 2) for definitions of italicised terminology.

NOTE: No calculation information is available for this indicator in the data collection guidelines. This indicator should be calculated only using SAS code provided by the OECD.

PS11) Obstetric trauma vaginal delivery with instrument

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Vaginal delivery discharges for patients aged 15 and over.

Numerator: Discharges among cases defined in the denominator with ICD code for 3rd and 4th degree obstetric trauma in any diagnosis or procedure field (see ICD codes below).

Denominator: All vaginal delivery discharges with any procedure code for instrument-assisted delivery (see procedure codes below and Figure 16).

ICD-9-CM Obstetric Trauma diagnosis codes:

66420	Delivery with third degree laceration, unspecified
66421	Delivery with third degree laceration, during delivery
66424	Delivery with third degree laceration, postpartum condition or complication
66430	Trauma to perineum and vulva during delivery, fourth degree perineal laceration
66431	Trauma to perineum and vulva during delivery, fourth degree perineal laceration
66434	Trauma to perineum and vulva during delivery, fourth degree perineal laceration

ICD-9-CM Obstetric Trauma procedure codes:

7561	Repair of current obstetric lacerations of bladder and urethra
7562	Repair of current obstetric lacerations of rectum and sphincter

ICD-10-WHO Obstetric Trauma diagnosis codes:

O70.2	Third degree perineal laceration during delivery
O70.3	Fourth degree perineal laceration during delivery

ICD-9-CM Instrument-Assisted Delivery procedure codes:

720	Low forceps operation
721	Low forceps operation w/ episiotomy
7221	Mid forceps operation w/ episiotomy
7229	Other mid forceps operation
7231	High forceps operation w/ episiotomy
7239	Other high forceps operation
724	Forceps rotation of fetal head
7251	Partial breech extraction w/ forceps to aftercoming head
7253	Total breech extraction w/ forceps to aftercoming head
726	Forceps application to aftercoming head
7271	Vacuum extraction w/ episiotomy
7279	Vacuum extraction delivery nec

Note: delivery admissions must be classified into three categories:

- c-section deliveries (excluded),
- forceps and vacuum assisted deliveries from which this indicator is calculated, and
- all other deliveries (including failed forceps/vacuum, episotomy, etc ... and non-instrument) from which non-instrument indicator is calculated

ICD-9-CM Outcome of delivery codes:

Note: This category is intended for the coding of the outcome of delivery on the mother's record (Department of Health and Human Services, 2007)

V27.0	Single liveborn
V27.1	Single stillborn
V27.2	Twins, both liveborn
V27.3	Twins, one liveborn and one stillborn
V27.4	Twins, both stillborn
V27.5	Other multiple birth, all liveborn
V27.6	Other multiple birth, some liveborn
V27.7	Other multiple birth, all stillborn
V27.9	Unspecified outcome of delivery

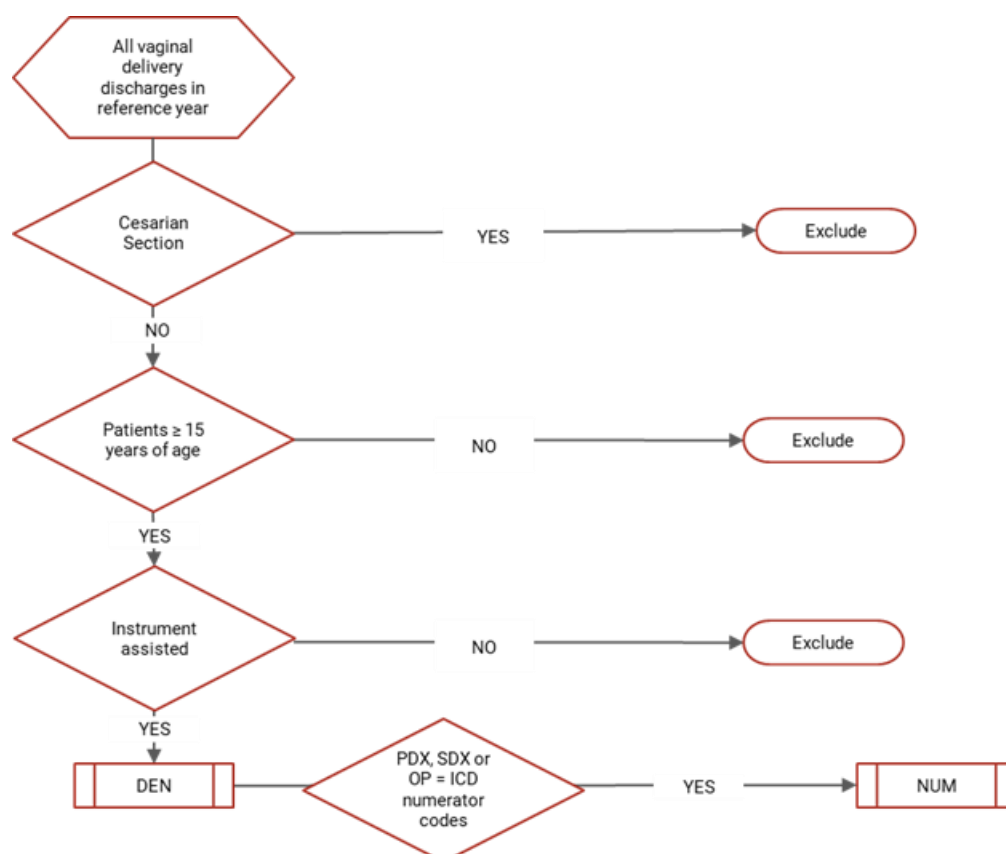
ICD-10-WHO Outcome of delivery codes:

Note: This category is intended for use as an additional code to identify the outcome of delivery on the mother's record.(WHO, 2006)

Z37.0	Single live birth
Z37.1	Single stillbirth
Z37.2	Twins, both liveborn
Z37.3	Twins, one liveborn and one stillborn
Z37.4	Twins, both stillborn
Z37.5	Other multiple births, all liveborn
Z37.6	Other multiple births, some liveborn
Z37.7	Other multiple births, all stillborn
Z37.9	Outcome of delivery, unspecified

Figure 16. Obstetric trauma vaginal delivery with instrument

ALGORITHM FOR CALCULATION METHOD



PDX: principal diagnosis, DEN: denominator dataset, SDX: secondary diagnosis, NUM: numerator cases, OP: procedure code.
Source: OECD.

PS12) Obstetric trauma vaginal delivery without instrument

See Glossary (Section 2) for definitions of italicised terminology.

Coverage: Vaginal delivery discharges for patients aged 15 and over.

Numerator: Discharges among cases defined in the denominator with ICD code for 3rd and 4th degree obstetric trauma in any diagnosis or procedure field (see ICD codes below).

Denominator: All vaginal delivery discharge patients.

Exclude cases: with instrument-assisted delivery.

ICD-9-CM Obstetric Trauma diagnosis codes:

66420	Delivery with third degree laceration, unspecified
66421	Delivery with third degree laceration, during delivery
66424	Delivery with third degree laceration, postpartum condition or complication
66430	Trauma to perineum and vulva during delivery, fourth degree perineal laceration
66431	Trauma to perineum and vulva during delivery, fourth degree perineal laceration
66434	Trauma to perineum and vulva during delivery, fourth degree perineal laceration

ICD-9-CM Obstetric Trauma procedure codes:

7561	Repair of current obstetric lacerations of bladder and urethra
7562	Repair of current obstetric lacerations of rectum and sphincter

ICD-10-WHO Obstetric Trauma diagnosis codes:

O70.2	Third degree perineal laceration during delivery
O70.3	Fourth degree perineal laceration during delivery

ICD-9-CM Instrument-Assisted Delivery procedure codes

720	Low forceps operation
721	Low forceps operation w/ episiotomy
7221	Mid forceps operation w/ episiotomy
7229	Other mid forceps operation
7231	High forceps operation w/ episiotomy
7239	Other high forceps operation
724	Forceps rotation of fetal head
7251	Partial breech extraction w/ forceps to aftercoming head
7253	Total breech extraction w/ forceps to aftercoming head
726	Forceps application to aftercoming head

7271	Vacuum extraction w/ episiotomy
7279	Vacuum extraction delivery nec
728*	Other specified instrumental delivery
729*	Unspecified instrumental delivery

Note: Failed vacuum extraction, failed forceps, assisted breech delivery, episiotomy, incision of cervix and symphysiotomy procedures are not included in the Instrument Assisted Delivery Procedures code list. Therefore, these procedures are excluded from the definition of the 'with instrument' indicator and conversely included in the definition of the 'without instrument' indicator.

ICD-9-CM Outcome of delivery codes:

Note: This category is intended for the coding of the outcome of delivery on the mother's record. (Department of Health and Human Services, 2007)

V27.0	Single liveborn
V27.1	Single stillborn
V27.2	Twins, both liveborn
V27.3	Twins, one liveborn and one stillborn
V27.4	Twins, both stillborn
V27.5	Other multiple birth, all liveborn
V27.6	Other multiple birth, some liveborn
V27.7	Other multiple birth, all stillborn
V27.9	Unspecified outcome of delivery

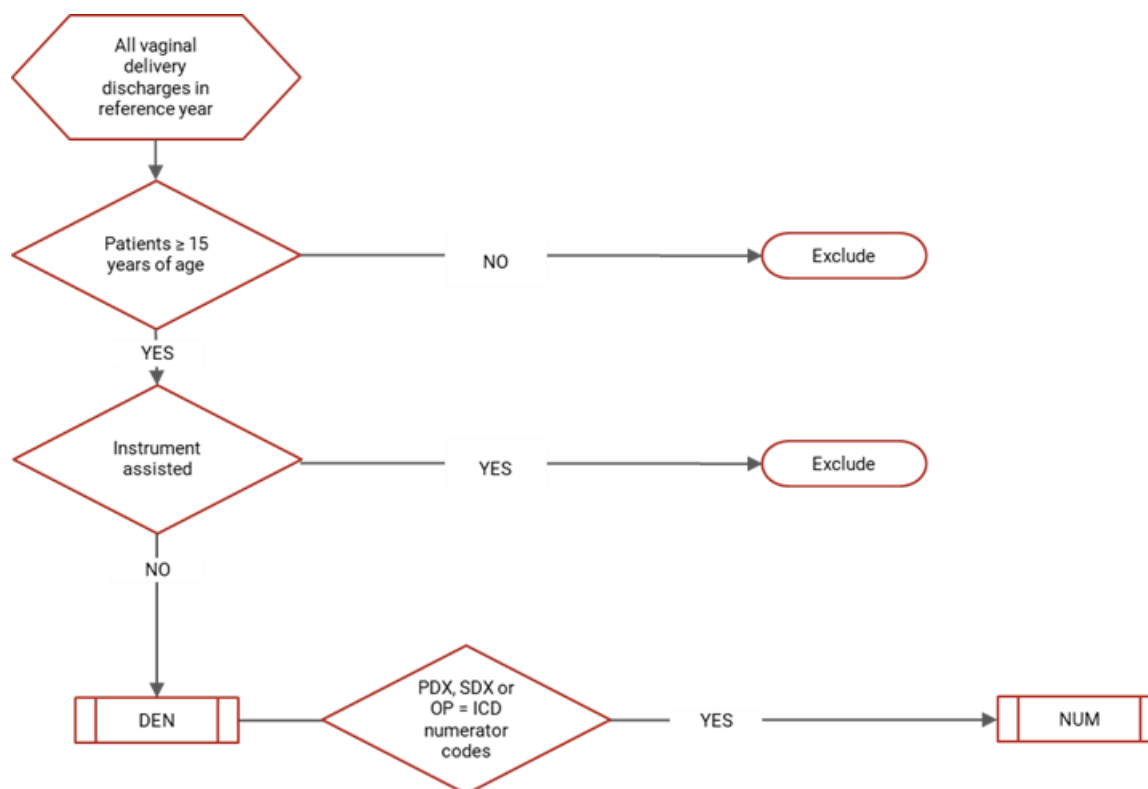
ICD-10-WHO Outcome of delivery codes:

Note: This category is intended for use as an additional code to identify the outcome of delivery on the mother's record (WHO, 2006).

Z37.0	Single live birth
Z37.1	Single stillbirth
Z37.2	Twins, both liveborn
Z37.3	Twins, one liveborn and one stillborn
Z37.4	Twins, both stillborn
Z37.5	Other multiple births, all liveborn
Z37.6	Other multiple births, some liveborn
Z37.7	Other multiple births, all stillborn
Z37.9	Outcome of delivery, unspecified

Figure 17. Obstetric trauma vaginal delivery without instrument

ALGORITHM FOR CALCULATION METHOD



PDX: principal diagnosis, DEN: denominator dataset, SDX: secondary diagnosis, NUM: numerator cases, OP: procedure code.
Source: OECD.

CANCER CARE

Cancer care indicators include:

- Breast cancer five-year net survival
- Cervical cancer five-year net survival
- Colon cancer five-year net survival
- Rectal cancer five-year net survival
- Childhood acute lymphoblastic leukaemia five year net survival
- Lung cancer five year net survival
- Stomach cancer five year net survival

Five-year net survival is the cumulative probability that cancer patients survive their cancer for at least five years since diagnosis, after controlling for the risks of death from other causes, and taking into account that competing risks of deaths are higher in the elderly. The period approach is used to allow estimation of five-year survival when five years of follow-up are not available. Cancer survival estimates are age-standardised with the International Cancer Survival Standard (ICSS) weights.

Quality control and analysis for age-standardised five-year net survival were performed centrally as part of CONCORD, the global programme for the surveillance of cancer survival, led by the London School of Hygiene and Tropical Medicine (Allemani et al., 2018).

Reference:

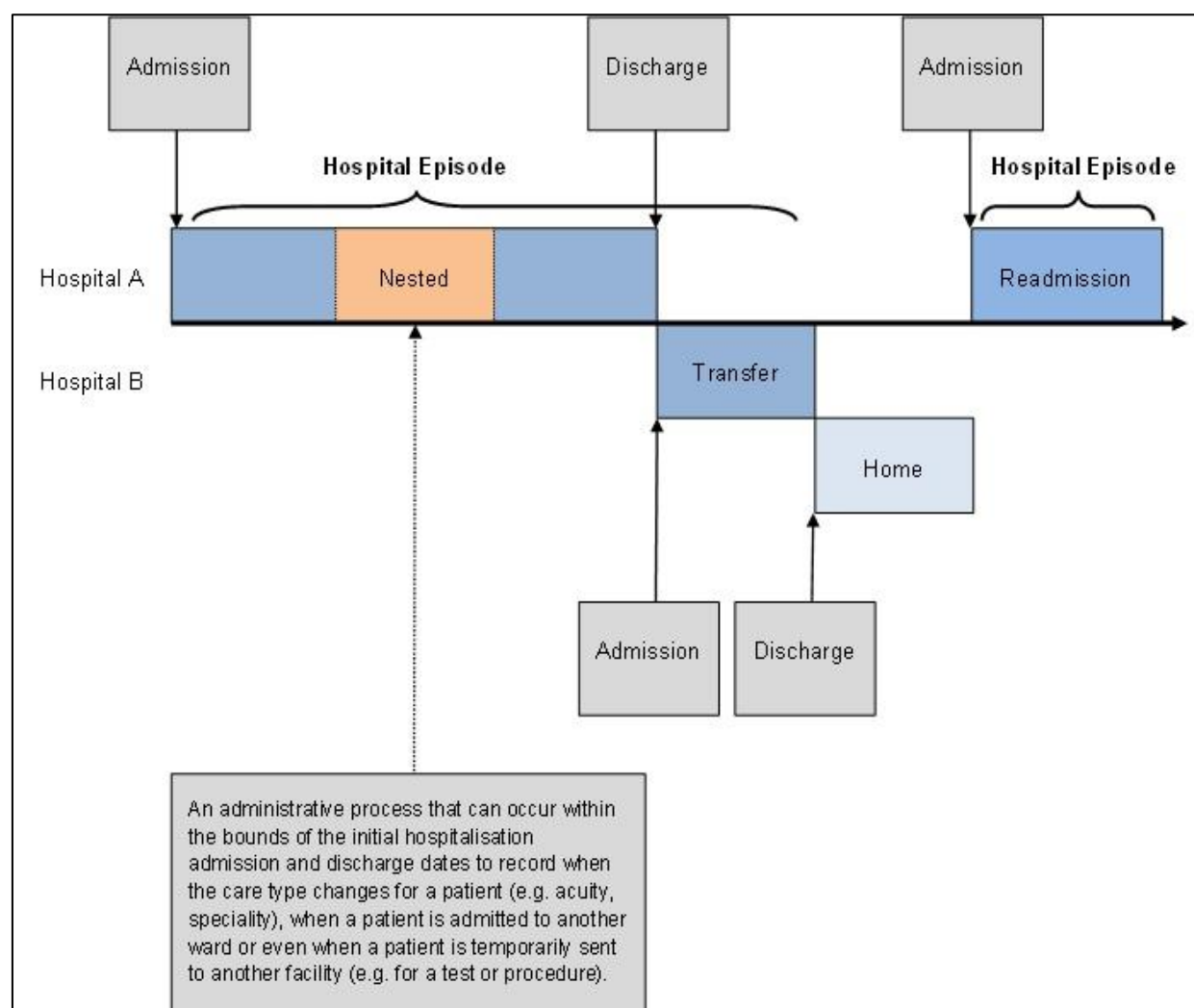
Allemani, C. et al. (2018), "Global surveillance of trends in cancer survival 2000–14 (CONCORD-3): analysis of individual records for 37 513 025 patients diagnosed with one of 18 cancers from 322 population-based registries in 71 countries", *The Lancet*, Vol. 391/10125, pp. 1023-1075, [http://dx.doi.org/10.1016/s0140-6736\(17\)33326-3](http://dx.doi.org/10.1016/s0140-6736(17)33326-3).

2. Glossary

1. The following glossary has been developed to clarify the meaning of key concepts used to specify the indicators for the HCQO data collection. Please refer to these definitions particularly when calculating indicators using Excel files:

- **Acute care hospitals:** A hospital in which acute care is provided (includes acute admissions).
- **Admission/separation/discharge:** Admission follows a clinical decision that a patient requires same-day or overnight hospital care or treatment. Separation or discharge is the process by which care for an admitted patient ceases either due to discharge from the hospital or death. For the purposes of these guidelines the three terms are considered interchangeable, allowing for countries to choose the data source readily available in their context (admission, discharge or separation databases). Thus, indicator and glossary definitions using these terms should be read as referring to any of the three possibilities unless indicated otherwise.
- **Average Length of Stay (ALOS):** The total number of days of stay in hospital(s) divided by the associated total number of admissions for the specified period.
- **Defined daily dose (DDD):** DDDs are a measure of drug consumption defined by the World Health Organization to standardize drug use.
- **Hospital:** This is defined as single separate organisational entity that provides admitted patient care. Some hospitals may be located on more than one campus, while some hospital campuses will have more than one hospital. The organisation of care in some countries results in the aggregation of single hospital entities into corporations, trusts, groups, chains, or networks. For the purposes of this data collection the term hospital represents a single hospital entity.
- **Hospital admission:** This is defined as a period of hospital care from the date of formal admission to a hospital to the date of formal discharge from the same hospital, which includes the any 'nested admissions' where an administrative process results in the discharge and admission of a patient within the bounds of the initial hospitalisation admission and discharge dates. (see Figure 2.1)
- **Hospital episode:** This is defined as a period of hospitalised care from the date of admission to a hospital to the date of discharge home (or to a nursing home or long term care), which excludes the counting of any hospital admissions that occurred during this period (either as a result of transferring a patient from one hospital to another or a nested admission) for the calculation of the patient based rates. (see Figure 2.1)

Figure 2.1. Structure and Relationship between Hospital Admissions and Hospital Episodes



Source: OECD.

- **Income quintiles:** income quintiles are calculated based on the total equivalised disposable income attributed to each member of the household. The data need to be ordered by income value and then four cut-off values, which divide the survey population into five equal groups representing 20 % of individuals each, need to be identified. The first quintile group represents 20 % of population with the lowest income, and the fifth quintile group represents 20 % of population with the highest income.
- **Linked data:** The unit of counting is a patient that can be individually tracked through several admissions and requires unique patient identification and the linking of related admissions within a specified period. Only one admission is counted per patient for the purposes of calculating indicator rates.
- **MDC 14:** In countries using DRGs for hospital reimbursement, cases are assigned a Major Diagnostic Category (MDC) by the reimbursement software. MDC 14 corresponds to obstetric admissions. For countries using **ICD-10 without DRG reimbursement**, or where MDC assignment is impossible for whatever reason, lists of ICD-10-WHO codes relating to MDC 14 are provided at Annex C worksheet of HCQO 2020_21 Data Collection_Annex A-G file available

in the online community site <https://community.oecd.org/community/hcqo-working-party>. Countries should note that these codes lists do not fully align with ICD 10 Chapter XV Pregnancy, childbirth and the puerperium and Chapter XVI Certain conditions originating in the perinatal period.

- **Patient_id:** patient identifier which is unique by individual and can be used at a minimum to construct hospital admissions (See unique person identifier).
- **Prescribing database:** electronic database with drug prescribing or dispensing data submitted by dispensing pharmacies and/or prescribing practitioners.
- **Principal diagnosis (PDx)** follows one of two approaches:
 - a. The PDx is the condition established after early clinical evaluation to be chiefly responsible for causing the hospitalisation (*'condition held chiefly responsible'* approach).
 - b. The PDx is the diagnosis that is finally established to be the main reason for the hospital stay; that is demanding the most resources/medical effort over the course of the patients stay (*'condition demanding the most resources'* approach).
- **Same day/day only admissions:** A same day admission is defined as an admission with a length of stay less than 24 hours. In those countries where a timestamp on admission or discharge is not available, cases with a length of stay of 0 (discharge date-admission date=0) will qualify for same day admission.
- **Secondary diagnosis (SDx):** Comorbid conditions for which the patient received treatment and consumed hospital resources in addition to those conditions considered to be the principal diagnosis.
- **Surgical Admission** for the purposes of calculating the patient safety indicators in the HCQO data collection is the initial denominator case where surgery was performed. This is used as the reference discharge for identifying valid numerator cases in the same admission or any subsequent related readmissions up to and including 30 days after surgery (or if not available, admission) date.
- **Transfers (in/out)** – admissions that result in a transfer from other acute care institutions are considered transfers-in. Admissions which result in a transfer to another acute care facility are considered transfers out.
- **Unique person identifier (UPI)** – patient number that allow patient data to be linked across hospital admissions, hospital episodes, and to death records outside of the hospital.
- **Unlinked data:** The unit of counting is a patient admission and does not require unique patient identification and the linking of related admissions. This means each admission is counted for the purposes of calculating indicator rates, regardless of whether a patient has multiple admissions within the specified period or not.
- **Year:** for the purpose of these guidelines, a year refers to a calendar year, starting the 1st of January and ending the 31st of December.