Hospital Harm Indicator

General Methodology Notes

October 2022

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Table of contents

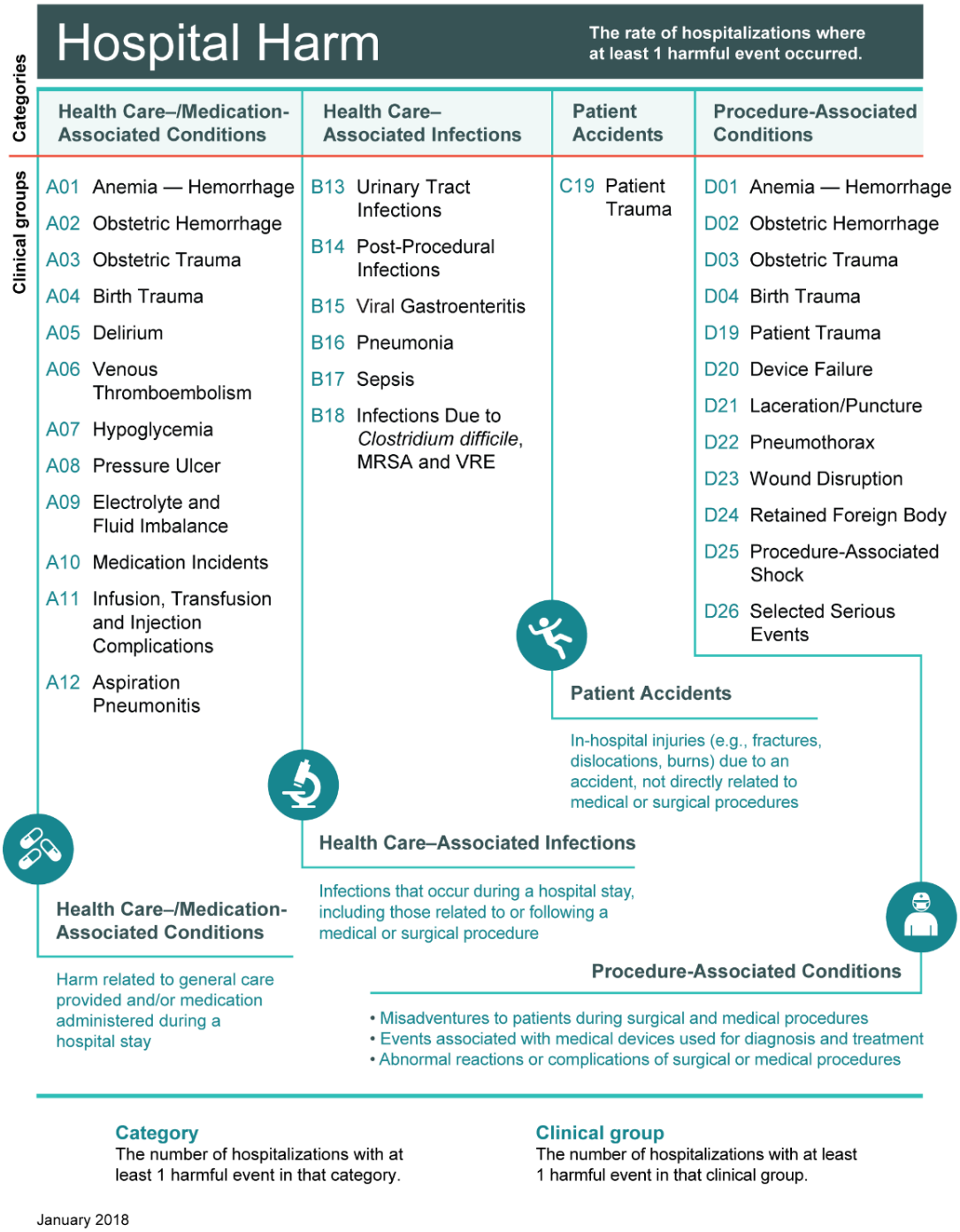
1. Hospital Harm Framework....5
2. Hospital Harm numerator....6
   - Clinical group selection....6
   - Alignment with existing CIHI indicators....6
   - Data source....7
   - Counting harm....7
3. Clinical groups — Definition, concept and methodology....10
   - Category A: Health Care–/Medication-Associated Conditions....10
     - A01: Anemia — Hemorrhage....10
     - A02: Obstetric Hemorrhage....11
     - A03: Obstetric Trauma....13
     - A04: Birth Trauma....16
     - A05: Delirium....18
     - A06: Venous Thromboembolism....18
     - A07: Hypoglycemia....20
     - A08: Pressure Ulcer....21
     - A09: Electrolyte and Fluid Imbalance....21
     - A10: Medication Incidents....22
     - A11: Infusion, Transfusion and Injection Complications....23
     - A12: Aspiration Pneumonitis....24
   - Category B: Health Care–Associated Infections....24
     - B13: Urinary Tract Infections....24
     - B14: Post-Procedural Infections....25
     - B15: Viral Gastroenteritis....27
     - B16: Pneumonia....28
     - B17: Sepsis....29
     - B18: Infections Due to Clostridium difficile, MRSA or VRE....32
   - Category C: Patient Accidents....35
     - C19: Patient Trauma....35
   - Category D: Procedure-Associated Conditions....36
     - D01: Anemia — Hemorrhage....36
     - D02: Obstetric Hemorrhage....37

D03: Obstetric Trauma 38
D04: Birth Trauma 41
D19: Patient Trauma 43
D20: Device Failure 44
D21: Laceration/Puncture 45
D22: Pneumothorax 46
D23: Wound Disruption 47
D24: Retained Foreign Body 48
D25: Procedure-Associated Shock 48
D26: Selected Serious Events 49
4. Definition of diagnosis type and diagnosis cluster 50
Definitions 50
Appendices 51
Appendix A: ICD-10-CA code descriptions 51
Appendix B: List of ICD-10-CA infection codes 57
Appendix C: Calculation of crude rates 71
Appendix D: Text alternative for the Hospital Harm Framework 73
References 74

Updates

Please note that updates were made based on stakeholder input during validation of the results in 2017.

1. Hospital Harm Framework



2. Hospital Harm numerator

Clinical group selection

Codes for inclusion were gathered from other existing patient safety measures[1–8] and a review of the International Statistical Classification of Diseases and Related Health Problems (ICD-10-CA)[9]/Canadian Classification of Health Interventions (CCI)[10] and the Canadian Coding Standards[11] by CIHI classifications specialists. In consultation with clinical experts, CIHI first identified clinical groups related to harm that is associated with medical care, medication and surgical care, as well as health care–associated infections and patient accidents. The ICD-10-CA codes of these clinical groups were then defined in consultation with clinical experts and with feedback from a group of 7 selected hospitals. A modified Delphi process was employed to refine the scope of the big dot indicator, and the definitions and concepts of the remaining clinical groups were fine-tuned in close consultation with CIHI's classifications specialists and clinical experts. At this point, there are 31 clinical groups in the framework and they fall under **4 categories of harm**. Please see the Hospital Harm Framework (Section 1).

Alignment with existing CIHI indicators

The definitions and case selections for the following clinical groups were adopted from existing CIHI indicators, as they were developed in close consultation with experts in the field:

- Obstetric Trauma (With Instrument); and
- In-Hospital Sepsis.

However, case counts in these clinical groups may be slightly different from those for the above indicators. The reason is that the inclusions and exclusions for the denominator of the Hospital Harm indicator may be different from those of each of the above indicators.

Data source

Discharge Abstract Database (DAD), Canadian Institute for Health Information

The DAD captures administrative, clinical and demographic information on hospital discharges (including deaths, sign-outs and transfers). No additional data collection is needed to calculate the occurrence of hospital harm.

Harm is defined by ICD-10-CA codes or CCI codes in the Canadian Coding Standards.[11] Diagnosis and intervention codes are used, as are a number of data elements that are uniquely suited to capturing harm in hospital, such as diagnosis types and diagnosis clusters (refer to Section 4 for definitions).

Descriptions of the ICD-10-CA codes and CCI intervention codes included in indicator calculations are provided under each clinical group definition in this document.

Counting harm

Hospital stays with multiple harms

At each level of the Hospital Harm Framework, the number of hospital stays with at least 1 occurrence of harm is counted. Some patients may experience more than 1 occurrence of harm during a hospital stay (e.g., a urinary tract infection and a fall). In this case, each event would be counted within its respective clinical group. The table below details how harm is tabulated in a clinical group, in a category of harm and at the overall level.

Table 1 Counting harms for hospital stays with multiple occurrences of harm

Abstract	Harm	Clinical group: Pneumonia	Clinical group: Sepsis	Clinical group: Patient Trauma	Category B: Health Care–Associated Infections	Category D: Procedure-Associated Conditions	Hospital Harm (overall)
A	2 episodes of pneumonia	1	—	—	1	—	1
B	Pneumonia and trauma	1	—	1	1	1	1
C	Pneumonia and sepsis	1	1	—	1	—	1

Note
— Not applicable.

Abstract A: The patient has experienced 2 occurrences of the same type of harmful event. This harm is counted once in the Pneumonia clinical group and once in the Health Care–Associated Infections category.

Abstract B: The patient has experienced 2 different harmful events that fall into different categories of harm. This harm is counted once in the Pneumonia clinical group and once in the Patient Trauma clinical group, and it is counted once in the overall Health Care–Associated Infections category and once in Procedure-Associated Conditions.

Abstract C: The patient has experienced 2 different types of harm that both fall into the same Health Care–Associated Infections category. This harm is counted once in the Pneumonia clinical group and once in the Sepsis clinical group, but it is counted only once in the Health Care–Associated Infections category.

Each of these abstracts is counted once in the big dot indicator.

Harm reflected in multiple clinical groups

Some occurrences of harm meet the definitions of 2 clinical groups that describe the event from different perspectives (such as the cause versus the outcome).

Examples:

- Pneumonia following a surgical procedure is counted in both Pneumonia and Post-Procedural Infections clinical groups. This hospital stay is counted as 1 occurrence of harm in the Health Care–Associated Infections category and in the overall Hospital Harm.
- An injury caused by insertion of a needle is counted in both the Infusion, Transfusion and Injection Complications and the Patient Trauma clinical groups. This hospital stay is counted as 1 occurrence in the Health Care–Associated Conditions category and as 1 occurrence in the Procedure-Associated Conditions category, but as 1 in the overall Hospital Harm.

The Table below presents the clinical groups that may be relevant to the same occurrence of harm.

Table 2 Clinical groups that may overlap in relevance to the same occurrence of harm

Clinical groups	Overlapping clinical group
A01: Anemia — Hemorrhage **A02: Obstetric Hemorrhage** **A05: Delirium** **A06: Venous Thromboembolism** **A07: Hypoglycemia** **A09: Electrolyte and Fluid Imbalance**	A10: Medication Incidents
A06: Venous Thromboembolism **A09: Electrolyte and Fluid Imbalance** **B14: Post-Procedural Infections** **D19: Patient Trauma** **D22: Pneumothorax**	A11: Infusion, Transfusion and Injection Complications
A12: Aspiration Pneumonitis **B13: Urinary Tract Infections** **B15: Viral Gastroenteritis** **B16: Pneumonia**	B14: Post-Procedural Infections
B13: Urinary Tract Infections **B14: Post-Procedural Infections** **B15: Viral Gastroenteritis** **B16: Pneumonia**	B18: Infections Due to *Clostridium difficile*, MRSA or VRE
D20: Device Failure **D21: Laceration/Puncture** **D22: Pneumothorax** **D23: Wound Disruption** **D24: Retained Foreign Body**	D19: Patient Trauma
D20: Device Failure **D21: Laceration/Puncture**	D22: Pneumothorax
B13: Urinary Tract Infections **B14: Post-Procedural Infections** **B15: Viral Gastroenteritis** **B16: Pneumonia**	D26: Selected Serious Events

3. Clinical groups — Definition, concept and methodology

Category A: Health Care–/ Medication-Associated Conditions

This category includes harm related to general care provided as well as medication administered during a hospital stay. Harm associated with medications may be the result of medication administered appropriately (adverse effects in therapeutic use) or in error (incorrect medication or dosage).

A01: Anemia — Hemorrhage

Concept

Hemorrhagic anemia or hemorrhagic disorders that require(s) blood transfusion, identified during a hospital stay, related to the health care delivered or therapeutic use of anticoagulants

Notes

1. This clinical group does not include obstetric hemorrhage (refer to A02: Obstetric Hemorrhage and D02: Obstetric Hemorrhage) and hemorrhage or hemorrhagic anemia associated with a medical or surgical procedure (refer to D01: Anemia — Hemorrhage).
2. Prior to 2018–2019, the blood transfusion indicator was optional to code in British Columbia.

Selection criteria

Codes	Conditions
D62	Identified as diagnosis type (2) **not in a diagnosis cluster AND** documentation of blood transfusion (blood received indicator = 1)
D68.3	Identified as diagnosis type (2) **AND** Y44.2 **in the same diagnosis cluster**

Exclusions

Y60–Y84 in the same diagnosis cluster

Code descriptions

Codes	Code descriptions
D62	Acute posthaemorrhagic anaemia
D68.3	Haemorrhagic disorder due to circulating anticoagulants

Additional codes: Inclusions

Codes	Code descriptions
Y44.2	Drugs, medicaments and biological substances causing adverse effects in therapeutic use; anticoagulants

Additional codes: Exclusions

Codes	Code descriptions
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

A02: Obstetric Hemorrhage

Concept

Hemorrhage from the pelvic area, genital tract or perineum following non-instrumented vaginal delivery that requires blood transfusion during the delivery episode of care

Notes

1. This clinical group includes hemorrhage due to episiotomy.
2. Refer to D02: Obstetric Hemorrhage for hemorrhage after an instrument-assisted delivery or Caesarean section delivery.
3. The blood transfusion indicator is optional to code in British Columbia.

Selection criteria

Codes	Conditions
O72.002 **O72.102** **O72.202** **O90.202**	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y) **AND** documentation of blood transfusion (blood received indicator = 1)

Exclusions

Abstracts with intervention codes for instrument-assisted or Caesarean section delivery (5.MD.53.^^, 5.MD.54.^^, 5.MD.55.^^, 5.MD.56.NN, 5.MD.56.PC, 5.MD.56.NR, 5.MD.56.PF, 5.MD.56.NW, 5.MD.56.PJ or 5.MD.60.^^)

Code descriptions

Codes	Code descriptions
O72.002	Third-stage hemorrhage; delivered with mention of postpartum complication
O72.102	Other immediate postpartum hemorrhage; delivered with mention of postpartum complication
O72.202	Delayed and secondary postpartum hemorrhage; delivered with mention of postpartum complication
O90.202	Hematoma of obstetric wound; delivered with mention of postpartum complication

Additional codes: Exclusions

Codes	Code descriptions
5.MD.53.^^	Forceps traction and rotation delivery
5.MD.54.^^	Vacuum traction delivery
5.MD.55.^^	Combination of vacuum and forceps delivery
5.MD.56.NN	Breech delivery without episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
5.MD.56.PC	Breech delivery with episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
5.MD.56.NR	Breech delivery without episiotomy, total breech extraction with forceps to aftercoming head
5.MD.56.PF	Breech delivery with episiotomy, total breech extraction with forceps to aftercoming head
5.MD.56.NW	Breech delivery without episiotomy, unspecified breech extraction with forceps to aftercoming head
5.MD.56.PJ	Breech delivery with episiotomy, unspecified breech extraction with forceps to aftercoming head
5.MD.60.^^	Caesarean section delivery

A03: Obstetric Trauma

Concept

Third- or fourth-degree perineal lacerations or other obstetric injuries to pelvic organs during a non-instrumented vaginal delivery identified during the delivery episode of care

Notes

Refer to D03: Obstetric Trauma for obstetric trauma during an instrument-assisted vaginal delivery.

Selection criteria

Codes	Conditions
O70.201* **O70.211†** **O70.221†** **O70.231†** **O70.281†** **O70.291†** **O70.301** **O71.181** **O71.301** **O71.401** **O71.501** **O71.601**	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y) **AND** O10–O16, O21–O26, O28–O37, O40–O46, O48.–, O60–O75, O85–O92, O95.– or O98–O99 with a sixth digit of 1 or 2 or Z37.– **on the same abstract**
5.PC.80.JH **5.PC.80.JJ** **5.PC.80.JR** **5.PC.80.JQ** **5.PC.80.JU** **5.PC.80.JL**	Identified as an intervention **AND** O10–O16, O21–O26, O28–O37, O40–O46, O48.–, O60–, O75, O85–O92, O95.– or O98–O99 with a sixth digit of 1 or 2 or Z37.– **on the same abstract**

* Before 2018–2019 data.

† Starting with 2018–2019 data.

Exclusions

1. Abstracts with intervention codes for instrument-assisted or Caesarean section delivery (5.MD.53.^^, 5.MD.54.^^, 5.MD.55.^^, 5.MD.56.NN, 5.MD.56.PC, 5.MD.56.NR, 5.MD.56.PF, 5.MD.56.NW, 5MD.56.PJ or 5.MD.60.^^)
2. Abstracts indicating a pregnancy with abortive outcome (O04. – **OR** 5.CA.20.^^, 5.CA.24.^^, 5.CA.88.^^, 5.CA.89.^^ or 5.CA.93.^^, not abandoned)

Code descriptions

Codes	Code descriptions
O70.201	Third degree perineal laceration during delivery; delivered with or without mention of antepartum condition
O70.211	Third degree perineal laceration during delivery, type 3a, so described, delivered, with or without mention of antepartum condition
O70.221	Third degree perineal laceration during delivery, type 3b, so described, delivered, with or without mention of antepartum condition
O70.231	Third degree perineal laceration during delivery, type 3c, so described, delivered, with or without mention of antepartum condition
O70.281	Third degree perineal laceration during delivery, other specified type, delivered, with or without mention of antepartum condition
O70.291	Third degree perineal laceration during delivery, unspecified type, delivered, with or without mention of antepartum condition
O70.301	Fourth degree perineal laceration during delivery; delivered with or without mention of antepartum condition
O71.181	Other rupture of uterus during labour; delivered with or without mention of antepartum condition
O71.301	Obstetric laceration of cervix; delivered with or without mention of antepartum condition
O71.401	Obstetric high vaginal laceration; delivered with or without mention of antepartum condition
O71.501	Other obstetric injury to pelvic organs; delivered with or without mention of antepartum condition
O71.601	Obstetric damage to pelvic joints and ligaments; delivered with or without mention of antepartum condition
5.PC.80.JH	Surgical repair, postpartum of obstetric laceration of corpus uteri [body of uterus]
5.PC.80.JJ	Surgical repair, postpartum of current obstetric laceration of cervix occurring at vaginal delivery
5.PC.80.JR	Surgical repair, postpartum of current obstetric laceration of bladder and urethra
5.PC.80.JQ	Surgical repair, postpartum of current obstetric laceration of rectum and sphincter ani
5.PC.80.JU	Surgical repair, postpartum of current obstetric high vaginal laceration
5.PC.80.JL	Surgical repair, postpartum of current obstetric laceration of broad ligament(s) of uterus

Additional codes: Inclusions

Codes	Code descriptions
O10–O16 **O21–O26** **O28–O37** **O40–O46** **O48.–** **O60–O75** **O85–O92** **O95.–** **O98–O99** **Z37.–**	Outcome of delivery (refer to Appendix A)

Additional codes: Exclusions

Codes	Code descriptions
O04.–	Medical abortion
5.CA.20.^^	Pharmacotherapy (in preparation for), termination of pregnancy
5.CA.24.^^	Preparation by dilating cervix (for), termination of pregnancy
5.CA.88.^^	Pharmacological termination of pregnancy
5.CA.89.^^	Surgical termination of pregnancy
5.CA.93.^^	Surgical removal of extrauterine pregnancy
5.MD.53.^^	Forceps traction and rotation delivery
5.MD.54.^^	Vacuum traction delivery
5.MD.55.^^	Combination of vacuum and forceps delivery
5.MD.56.NN	Breech delivery without episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
5.MD.56.PC	Breech delivery with episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
5.MD.56.NR	Breech delivery without episiotomy, total breech extraction with forceps to aftercoming head
5.MD.56.PF	Breech delivery with episiotomy, total breech extraction with forceps to aftercoming head
5.MD.56.NW	Breech delivery without episiotomy, unspecified breech extraction with forceps to aftercoming head
5.MD.56.PJ	Breech delivery with episiotomy, unspecified breech extraction with forceps to aftercoming head
5.MD.60.^^	Caesarean section delivery

A04: Birth Trauma

Concept

Injuries to the newborn during non-instrumented vaginal delivery identified during the birth episode of care

Notes

Refer to D04: Birth Trauma for injuries during an instrument-assisted or Caesarean section delivery.

Selection criteria

Codes	Conditions
P10–P15	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y) **AND** Entry Code N*

Exclusions

1. Newborns whose mother's abstract has intervention codes for instrument-assisted or Caesarean section delivery,† (5.MD.53.^^, 5.MD.54.^^, 5.MD.55.^^, 5.MD.56.NN, 5.MD.56.PC, 5.MD.56.NR, 5.MD.56.PF, 5.MD.56.NW, 5MD.56.PJ or 5.MD.60.^^)‡ **OR**
2. Newborn abstracts with brain damage due to birth injury (P10.–, P11.1 or P11.2) as diagnosis type (M) or (1) **AND** preterm and low birth weight (P07.–) as diagnosis type (M), (1) or (2) **OR**
3. Newborn abstracts with termination of pregnancy affecting fetuses and newborns (P96.4) **OR**
4. Newborn abstracts with congenital malformations of the central nervous system (Q00–Q07) as diagnosis type (M) or (1) **OR**
5. Newborn abstracts with congenital malformations and deformations of the musculoskeletal system (Q65–Q79) as diagnosis type (M) or (1)

Code descriptions

Codes	Code descriptions
P10.–	Intracranial laceration and hemorrhage due to birth injury
P11.–	Other birth injuries to central nervous system
P12.–	Birth injury to scalp
P13.–	Birth injury to skeleton
P14.–	Birth injury to peripheral nervous system
P15.–	Other birth injuries

Additional codes: Exclusions

Codes	Code descriptions
P07.–	Disorders related to short gestation and low birth weight, not elsewhere classified
P10.–§	Intracranial laceration and hemorrhage due to birth injury
P11.1§	Other specified brain damage due to birth injury
P11.2§	Unspecified brain damage due to birth injury
P96.4	Termination of pregnancy, affecting fetus and newborn
Q00–Q07	Congenital malformations of the nervous system (refer to Appendix A)
Q65–Q79	Congenital malformations and deformations of the musculoskeletal system (refer to Appendix A)
5.CA.20.^^	Pharmacotherapy (in preparation for), termination of pregnancy
5.CA.24.^^	Preparation by dilating cervix (for), termination of pregnancy
5.CA.88.^^	Pharmacological termination of pregnancy
5.CA.89.^^	Surgical termination of pregnancy
5.CA.93.^^	Surgical removal of extrauterine pregnancy
5.MD.53.^^	Forceps traction and rotation delivery
5.MD.54.^^	Vacuum traction delivery
5.MD.55.^^	Combination of vacuum and forceps delivery
5.MD.56.NN	Breech delivery without episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
5.MD.56.PC	Breech delivery with episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
5.MD.56.NR	Breech delivery without episiotomy, total breech extraction with forceps to aftercoming head
5.MD.56.PF	Breech delivery with episiotomy, total breech extraction with forceps to aftercoming head
5.MD.56.NW	Breech delivery without episiotomy, unspecified breech extraction with forceps to aftercoming head
5.MD.56.PJ	Breech delivery with episiotomy, unspecified breech extraction with forceps to aftercoming head
5.MD.60.^^	Caesarean section delivery

* Entry Code N indicates an infant was born alive in the reporting facility.

† Due to the unavailability of chart numbers for Prince Edward Island, birth trauma with and without the assistance of instruments cannot be differentiated; therefore, all birth trauma in P.E.I. is included in this group regardless of the use of instruments or method of delivery.

‡ Newborns whose mothers are discharged from acute care facilities in a different fiscal year cannot be linked to the mothers' records; therefore, a few birth trauma cases that belong to D04 could be misclassified to A04 as the linkage is done within a fiscal year. A fiscal year is defined based on discharged date from April 1 of the current year to March 31 of the subsequent year.

§ These codes are part of the selection criteria, except when preterm and low birth weight is also coded. See the exclusion terms in the selection criteria section above.

A05: Delirium

Concept

Temporary disturbance in consciousness with changes in cognition identified during a hospital stay

Selection criteria

Codes	Conditions
F05.–	Identified as diagnosis type (2)

Code descriptions

Codes	Code descriptions
F05.–	Delirium, not induced by alcohol and other psychoactive substances

A06: Venous Thromboembolism

Concept

Embolism, thrombosis, phlebitis or thrombophlebitis of the pulmonary vein or other veins (excluding superficial veins) identified during a hospital stay

Selection criteria

Codes	Conditions
I26.– **I80.1** **I80.2** **I82.2** **I82.8** **I82.9**	Identified as diagnosis type (2) **OR** Identified as diagnosis type (3) **AND** T80.1, T81.7, T82.8, T83.8, T84.8 or T85.8 as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**
O87.102 **O87.902**	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y)

Code descriptions

Codes	Code descriptions
I26.–	Pulmonary embolism
I80.1	Phlebitis and thrombophlebitis of femoral vein
I80.2	Phlebitis and thrombophlebitis of other deep vessels of lower extremities
I82.2	Embolism and thrombosis of vena cava
I82.8	Embolism and thrombosis of other specified veins
I82.9	Embolism and thrombosis of unspecified vein
O87.102	Deep phlebothrombosis in the puerperium; delivered with mention of postpartum complication
O87.902	Venous complication in the puerperium, unspecified; delivered with mention of postpartum complication

Additional codes: Inclusions

Codes	Code descriptions
T80.1	Vascular complications following infusion, transfusion and therapeutic injection
T81.7	Vascular complications following a procedure, not elsewhere classified
T82.8	Other specified complications of cardiac and vascular prosthetic devices, implants and grafts
T83.8	Other complications of genitourinary prosthetic devices, implants and grafts
T84.8	Other complications of internal orthopaedic prosthetic devices, implants and grafts
T85.8	Other complications of internal prosthetic devices, implants and grafts, not elsewhere classified
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

A07: Hypoglycemia

Concept

Hypoglycemia in diabetic and non-diabetic patients identified during a hospital stay

Selection criteria

Codes	Conditions
E10.63 **E11.63** **E13.63** **E14.63** **E15**	Identified as diagnosis type (2)
E16.0	Identified as diagnosis type (2) **AND** U07.7, Y40–Y59 **in the same diagnosis cluster**

Code descriptions

Codes	Code descriptions
E10.63	Type 1 diabetes mellitus with hypoglycaemia
E11.63	Type 2 diabetes mellitus with hypoglycaemia
E13.63	Other specified diabetes mellitus with hypoglycaemia
E14.63	Unspecified diabetes mellitus with hypoglycaemia
E15	Nondiabetic hypoglycaemic coma
E16.0	Drug-induced hypoglycaemia without coma

Additional codes: Inclusions

Codes	Code descriptions
U07.7, **Y40–Y59**	Drugs, medicaments and biological substances causing adverse effects in therapeutic use (refer to Appendix A)

A08: Pressure Ulcer

Concept

Any stage of pressure ulcer identified during a hospital stay

Selection criteria

Codes	Conditions
L89.–	Identified as diagnosis type (2)

Code descriptions

Codes	Code descriptions
L89.–	Decubitus [pressure] ulcer and pressure area

A09: Electrolyte and Fluid Imbalance

Concept

Electrolyte, fluid or acid–base imbalance identified during a hospital stay

Note

This clinical group does not include procedure-associated hypovolemic shock (refer to D25: Procedure-Associated Shock).

Selection criteria

Codes	Conditions
E86.– **E87.–**	Identified as diagnosis type (2)
E87.7	Identified as diagnosis type (3) **AND** T80.8 as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**
R57.1	Identified as diagnosis type (2) **not in a diagnosis cluster**

Code descriptions

Codes	Code descriptions
E86.–	Volume depletion
E87.–	Other disorders of fluid, electrolyte and acid-base balance
E87.7	Fluid overload
R57.1	Hypovolaemic shock

Additional codes: Inclusions

Codes	Code descriptions
T80.8	Other complications following infusion, transfusion and therapeutic injection
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

A10: Medication Incidents

Concept

Medication-related events involving incorrect administration or dosage of medications identified during a hospital stay

Note

This clinical group does not include events caused by medications in therapeutic use.

Selection criteria

Codes	Conditions
T36–T50	Identified as diagnosis type (2)

Code descriptions

Codes	Code descriptions
T36.–	Poisoning by systemic antibiotics
T37.–	Poisoning by other systemic anti-infectives and antiparasitics
T38.–	Poisoning by hormones and their synthetic substitutes and antagonists, not elsewhere classified
T39.–	Poisoning by nonopioid analgesics, antipyretics and antirheumatics
T40.–	Poisoning by narcotics and psychodysleptics [hallucinogens]
T41.–	Poisoning by anaesthetics and therapeutic gases
T42.–	Poisoning by antiepileptic, sedative-hypnotic and antiparkinsonism drugs
T43.–	Poisoning by psychotropic drugs, not elsewhere classified
T44.–	Poisoning by drugs primarily affecting the autonomic nervous system
T45.–	Poisoning by primarily systemic and haematological agents, not elsewhere classified
T46.–	Poisoning by agents primarily affecting the cardiovascular system
T47.–	Poisoning by agents primarily affecting the gastrointestinal system

Codes	Code descriptions
T48.–	Poisoning by agents primarily acting on smooth and skeletal muscles and the respiratory system
T49.–	Poisoning by topical agents primarily affecting skin and mucous membrane and by ophthalmological, otorhinolaryngological and dental drugs
T50.–	Poisoning by diuretics and other and unspecified drugs, medicaments and biological substances

A11: Infusion, Transfusion and Injection Complications

Concept

Complications from infusions, transfusions and injections, including those related to therapeutic substances or procedures

Selection criteria

Codes	Conditions
T80.0 **T80.1** **T80.2** **T80.3** **T80.4** **T80.5** **T80.6** **T80.8** **T80.9**	Identified as diagnosis type (2)

Code descriptions

Codes	Code descriptions
T80.0	Air embolism following infusion, transfusion and therapeutic injection
T80.1	Vascular complications following infusion, transfusion and therapeutic injection
T80.2	Infections following infusion, transfusion and therapeutic injection
T80.3	ABO incompatibility reaction
T80.4	Rh incompatibility reaction
T80.5	Anaphylactic shock due to serum
T80.6	Other serum reactions
T80.8	Other complications following infusion, transfusion and therapeutic injection
T80.9	Unspecified complication following infusion, transfusion and therapeutic injection

A12: Aspiration Pneumonitis

Concept

Inflammation of the lungs caused by aspiration of solids or liquids during a hospital stay

Selection criteria

Codes	Conditions
J69.–	Identified as diagnosis type (2) **OR** Identified as diagnosis type (3) **AND** J95.88 as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**

Code descriptions

Codes	Code descriptions
J69.–	Pneumonitis due to solids and liquids

Additional codes: Inclusions

Codes	Code descriptions
J95.88	Other postprocedural respiratory disorders *Includes:* Ventilator-associated pneumonia (VAP)
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

Category B: Health Care–Associated Infections

This category includes infections identified during a hospital stay or infections following a medical or surgical procedure.

B13: Urinary Tract Infections

Concept

Urinary tract infections identified during a hospital stay

Note

In the neonatal age group, underestimation is probable, due to the exclusion of cases where identification of in-utero or birth process infections versus environment-acquired infections has been documented as a challenge.

Selection criteria

Codes	Conditions
N39.0	Identified as diagnosis type (2) **OR** Identified as diagnosis type (3) **AND** T83.5 as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**
O86.202	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y)

Exclusions

Abstracts with a length of stay less than 2 days

Code descriptions

Codes	Code descriptions
N39.0	Urinary tract infection, site not specified
O86.202	Urinary tract infection following delivery; delivered with mention of postpartum complication

Additional codes: Inclusions

Codes	Code descriptions
T83.5	Infection and inflammatory reaction due to prosthetic device, implant and graft in urinary system
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

B14: Post-Procedural Infections

Concept

Infections associated with a medical or surgical procedure

Notes

This clinical group may include inflammatory reactions in the absence of infection.

Selection criteria

Codes	Conditions
O86.002	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y)
T80.2 **T81.4** **T82.6** **T82.7–** **T83.6** **T84.5–** **T84.6–** **T84.7** **T85.7** **T87.0*1** **T87.1*1** **T87.201** **T87.4–**	Identified as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**

Code descriptions

Codes	Code descriptions
O86.002	Infection of obstetric surgical wound; delivered with mention of postpartum complication
T80.2	Infections following infusion, transfusion and therapeutic injection
T81.4	Infection following a procedure, not elsewhere classified
T82.6	Infection and inflammatory reaction due to cardiac valve prosthesis
T82.7–	Infection and inflammatory reaction due to other cardiac and vascular devices, implants and grafts
T83.6	Infection and inflammatory reaction due to prosthetic device, implant and graft in genital tract
T84.5–	Infection and inflammatory reaction due to internal joint prosthesis
T84.6–	Infection and inflammatory reaction due to internal fixation device [any site]
T84.7	Infection and inflammatory reaction due to other internal orthopaedic prosthetic devices, implants and grafts
T85.7	Infection and inflammatory reaction due to other internal prosthetic devices, implants and grafts
T87.0*1	Complication of reattached (part of) upper extremity; infection
T87.1*1	Complications of reattached (part of) lower extremity; infection
T87.201	Infection of other reattached body part
T87.4–	Infection of amputation stump

Additional codes: Inclusions

Codes	Code descriptions
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

B15: Viral Gastroenteritis

Concept

Viral gastrointestinal infections during a hospital stay

Selection criteria

Codes	Conditions
A08.0 **A08.1** **A08.2** **A08.3** **A08.4**	Identified as diagnosis type (2)

Exclusions

Abstracts with a length of stay less than 2 days

Code descriptions

Codes	Code descriptions
A08.0	Rotaviral enteritis
A08.1	Acute gastroenteropathy due to Norwalk agent
A08.2	Adenoviral enteritis
A08.3	Other viral enteritis
A08.4	Viral intestinal infection, unspecified

B16: Pneumonia

Concept

Pneumonia identified during a hospital stay

Selection criteria

Codes	Conditions
J10.0 **J11.0** **J12.–** **J13** **J14** **J15.–** **J16.8** **J18.–** **J85.1**	Identified as diagnosis type (2) **OR** Identified as diagnosis type (3) **AND** J95.88 as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**

Exclusions

Abstracts with a length of stay less than 2 days

Code descriptions

Codes	Code descriptions
J10.0	Influenza with pneumonia, other influenza virus identified
J11.0	Influenza with pneumonia, virus not identified
J12.–	Viral pneumonia, not elsewhere classified
J13	Pneumonia due to *Streptococcus pneumoniae*
J14	Pneumonia due to *Haemophilus influenzae*
J15.–	Bacterial pneumonia, not elsewhere classified
J16.8	Pneumonia due to other specified infectious organisms
J18.–	Pneumonia, organism unspecified
J85.1	Abscess of lung with pneumonia

Additional codes: Inclusions

Codes	Code descriptions
J95.88	Other postprocedural respiratory disorders *Includes:* Ventilator-associated pneumonia (VAP)
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

B17: Sepsis

Concept

Sepsis identified during a hospital stay, excluding neonatal sepsis

Notes

This clinical group includes an episode of sepsis that developed in hospital; however, the infection which led to sepsis might have been acquired in the community or hospital.

Selection criteria

Codes	Conditions
A40.– **A41.–** **B37.7** **R57.2** **R65.1**	Identified as diagnosis type (2) **OR** Identified as diagnosis type (3) **AND** T80.2, T81.4, T82.6, T82.7–, T83.5, T83.6, T84.5–, T84.6–, T84.7, T85.7 or T88.0 as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster** **OR** Identified as diagnosis type (3) **AND** O03.0, O03.5, O04.0, O04.5, O05.0, O05.5, O07.3 or O08.0– as diagnosis type (2) **on the same abstract** **OR** Identified as diagnosis type (3) **AND** O98.502 or O98.802 as diagnosis type (M), (1), (2), (W), (X) or (Y) **on the same abstract**
O85.002	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y)
R57.2	Identified as diagnosis type (3) **AND** T81.1 as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**

Exclusions

1. Abstracts with age on admission less than 1 year
2. Abstracts with a length of stay less than 2 days
3. Abstracts with a most responsible diagnosis of palliative care (ICD-10-CA: Z51.5)
4. Abstracts where sepsis is also identified as a pre-admit condition are excluded from the numerator:
    - Abstracts with sepsis codes (ICD-10-CA: A40.–, A41.–, B37.7, R65.1, R57.2) or the associated post-procedural complication codes (ICD-10-CA: T80.2, T81.1, T81.4, T82.6, T82.7–, T83.5, T83.6, T84.5–, T84.6–, T84.7, T85.7, T88.0) identified as pre-admit (type (M), (1), (W), (X) or (Y))
    - Abstract with sepsis in obstetric patients where the puerperal sepsis code or the associated obstetric infection code is identified as pre-admit (ICD-10-CA: O85.004, O85.009, O98.501, O98.503, O98.504, O98.509, O98.801, O98.803, O98.804, O98.809 — any diagnosis type **or** O03.0, O03.5, O04.0, O04.5, O05.0, O05.5, O07.3, O08.0 as type (M), (1), (W), (X) or (Y))

As an exception, sepsis is not considered as a pre-admit condition when the above codes identified as type (M), (W), (X) or (Y) also appear as type (2) or within a post-admit sepsis coding scenario (sepsis code as type (2); sepsis code as type (3) or an associated infection code as type (2) in sepsis as post-procedural or obstetric complications).

Code descriptions

Codes	Code descriptions
A40.–	Streptococcal sepsis
A41.–	Other sepsis
B37.7	Candidal sepsis
O03.0	Spontaneous abortion, incomplete, complicated by genital tract and pelvic infection
O03.5	Spontaneous abortion, complete or unspecified, complicated by genital tract and pelvic infection
O04.0	Medical abortion, incomplete, complicated by genital tract and pelvic infection
O04.5	Medical abortion, complete or unspecified, complicated by genital tract and pelvic infection
O05.0	Other abortion, incomplete, complicated by genital tract and pelvic infection
O05.5	Other abortion, complete or unspecified, complicated by genital tract and pelvic infection
O07.3	Failed attempted abortion, complicated
O08.0–	Complications following abortion and ectopic and molar pregnancy; genital tract and pelvic infection
O85.002	Puerperal sepsis, delivered with mention of postpartum complication
O98.502	Other viral diseases complicating pregnancy, childbirth and the puerperium; delivered with mention of postpartum complication
O98.802	Other maternal infectious and parasitic diseases complicating pregnancy, childbirth and the puerperium; delivered with mention of postpartum complication
R57.2	Septic shock
R65.1	Systemic inflammatory response syndrome of infectious origin with acute organ failure

Additional codes: Inclusions

Codes	Code descriptions
T80.2	Infections following infusion, transfusion and therapeutic injection
T81.4	Infection following a procedure, not elsewhere classified
T81.1	Shock during or resulting from a procedure, not elsewhere classified
T82.6	Infection and inflammatory reaction due to cardiac valve prosthesis

Codes	Code descriptions
T82.7–	Infection and inflammatory reaction due to other cardiac and vascular devices, implants and grafts
T83.5	Infection and inflammatory reaction due to prosthetic device, implant and graft in urinary system
T83.6	Infection and inflammatory reaction due to prosthetic device, implant and graft in genital tract
T84.5–	Infection and inflammatory reaction due to internal joint prosthesis
T84.6–	Infection and inflammatory reaction due to internal fixation device [any site]
T84.7	Infection and inflammatory reaction due to other internal orthopaedic prosthetic devices, implants and grafts
T85.7	Infection and inflammatory reaction due to other internal prosthetic devices, implants and grafts
T88.0	Infection following immunization
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

Additional codes: Exclusions

Codes	Code descriptions
O85.004	Puerperal sepsis, postpartum condition or complication
O85.009	Puerperal sepsis, unspecified as to episode of care, or not applicable
O98.501	Other viral diseases complicating pregnancy, childbirth and the puerperium; delivered with or without mention of antepartum condition
O98.503	Other viral diseases complicating pregnancy, childbirth and the puerperium; antepartum condition or complication
O98.504	Other viral diseases complicating pregnancy, childbirth and the puerperium; postpartum condition or complication
O98.509	Other viral diseases complicating pregnancy, childbirth and the puerperium; unspecified as to episode of care, or not applicable
O98.801	Other maternal infectious and parasitic diseases complicating pregnancy, childbirth and the puerperium; delivered with or without mention of antepartum condition
O98.803	Other maternal infectious and parasitic diseases complicating pregnancy, childbirth and the puerperium; antepartum condition or complication
O98.804	Other maternal infectious and parasitic diseases complicating pregnancy, childbirth and the puerperium; postpartum condition or complication
O98.809	Other maternal infectious and parasitic diseases complicating pregnancy, childbirth and the puerperium; unspecified as to episode of care, or not applicable
Z51.5	Palliative care

B18: Infections Due to *Clostridium difficile*, MRSA or VRE

Concept

Bacterial infections identified during a hospital stay due to *Clostridium difficile* (*C. difficile*), methicillin-resistant *Staphylococcus aureus* (MRSA) or vancomycin-resistant enterococci (VRE)

C. difficile

Selection criteria

Codes	Conditions
A04.7	Identified as diagnosis type (2)

Exclusions

1. Abstracts with age on admission less than 1 year
2. Abstracts with a length of stay less than 3 days

MRSA

Selection criteria

Codes	Conditions
A41.0	Identified as diagnosis type (2) **AND** U82.1 as diagnosis type (1) or (2) **in the same diagnosis cluster** **OR** Identified as diagnosis type (3) **AND** U82.1 as diagnosis type (1) or (2) **AND** T80.2, T81.4, T82.6, T82.7–, T83.5, T83.6, T84.5–, T84.6–, T84.7, T85.7 or T88.0 as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster** **OR** Identified as diagnosis type (3) **AND** U82.1 as diagnosis type (1) or (2) **AND** O03.0, O03.5, O04.0, O04.5, O05.0, O05.5, O07.3 or O08.0– as diagnosis type (2) **in the same diagnosis cluster** **OR** Identified as diagnosis type (3) **AND** U82.1 as diagnosis type (1) or (2) **AND** O98.502 or O98.802 as diagnosis type (M), (1), (2), (W), (X) or (Y) **in the same diagnosis cluster**
A49.0 **J15.2** **G00.3** **L00** **M00.0–**	Identified as diagnosis type (2) **AND** U82.1 as diagnosis type (1) or (2) **in the same diagnosis cluster**
B95.6	Identified as diagnosis type (3) **AND** U82.1 as diagnosis type (1) or (2) **AND** a site of infection code* as diagnosis type (2) **in the same diagnosis cluster**

Exclusions

Abstracts with a length of stay less than 2 days

VRE

Selection criteria

Codes	Conditions
A41.80* **A40.21†**	Identified as diagnosis type (2) **AND** U83.0 as diagnosis type (1) or (2) **in the same diagnosis cluster** **OR** Identified as diagnosis type (3) **AND** U83.0 as diagnosis type (1) or (2) **AND** T80.2, T81.4, T82.6, T82.7–, T83.5, T83.6, T84.5–, T84.6–, T84.7, T85.7 or T88.0 as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster** **OR** Identified as diagnosis type (3) **AND** U83.0 as diagnosis type (1) or (2) **AND** O03.0, O03.5, O04.0, O04.5, O05.0, O05.5, O07.3 or O08.0– as diagnosis type (2) **in the same diagnosis cluster** **OR** Identified as diagnosis type (3) **AND** U83.0 as diagnosis type (1) or (2) **AND** O98.502 or O98.802 as diagnosis type (M), (1), (2), (W), (X) or (Y) **in the same diagnosis cluster**
B96.81* **B95.21†**	Identified as diagnosis type (3) **AND** U83.0 as diagnosis type (1) or (2) **AND** a site of infection code* as diagnosis type (2) **in the same diagnosis cluster**

* Before 2018–2019 data.
† Starting with 2018–2019 data.

Exclusions

Abstracts with a length of stay less than 2 days

Code descriptions

Codes	Code descriptions
A04.7	Enterocolitis due to *Clostridium difficile*
A41.0	Sepsis due to *Staphylococcus aureus*
A41.80 **A40.21**	Sepsis due to *Enterococcus*
B95.6	*Staphylococcus aureus* as the cause of diseases classified to other chapters
B96.81 **B95.21**	*Enterococcus* as the cause of diseases classified to other chapters
A49.0	Staphylococcal infection, unspecified site
J15.2	Pneumonia due to *Staphylococcus*
G00.3	Staphylococcal meningitis
L00	Staphylococcal scalded skin syndrome

Additional codes: Inclusions

Codes	Code descriptions
O03.0	Spontaneous abortion, incomplete, complicated by genital tract and pelvic infection
O03.5	Spontaneous abortion, complete or unspecified, complicated by genital tract and pelvic infection
O04.0	Medical abortion, incomplete, complicated by genital tract and pelvic infection
O04.5	Medical abortion, complete or unspecified, complicated by genital tract and pelvic infection
O05.0	Other abortion, incomplete, complicated by genital tract and pelvic infection
O05.5	Other abortion, complete or unspecified, complicated by genital tract and pelvic infection
O07.3	Failed attempted abortion, complicated
O08.0–	Complications following abortion and ectopic and molar pregnancy; genital tract and pelvic infection
O98.502	Other viral diseases complicating pregnancy, childbirth and the puerperium; delivered with mention of postpartum complication
O98.802	Other maternal infectious and parasitic diseases complicating pregnancy, childbirth and the puerperium; delivered with mention of postpartum complication
T80.2	Infections following infusion, transfusion and therapeutic injection
T81.4	Infection following a procedure, not elsewhere classified
T82.6	Infection and inflammatory reaction due to cardiac valve prosthesis
T82.7–	Infection and inflammatory reaction due to other cardiac and vascular devices, implants and grafts
T83.5	Infection and inflammatory reaction due to prosthetic device, implant and graft in urinary system
T83.6	Infection and inflammatory reaction due to prosthetic device, implant and graft in genital tract
T84.5–	Infection and inflammatory reaction due to internal joint prosthesis
T84.6–	Infection and inflammatory reaction due to internal fixation device [any site]
T84.7	Infection and inflammatory reaction due to other internal orthopaedic prosthetic devices, implants and grafts
T85.7	Infection and inflammatory reaction due to other internal prosthetic devices, implants and grafts
T88.0	Infection following immunization
U82.1	Resistance to methicillin
U83.0	Resistance to vancomycin
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

* For the descriptions of site of infection codes, please see Appendix B.

Category C: Patient Accidents

This category includes in-hospital injuries (e.g., fractures, dislocations, burns) that are due to a patient accident, not directly related to medical or surgical procedures. Procedure-associated injuries are captured in Category D: Procedure-Associated Conditions.

C19: Patient Trauma

Concept

In-hospital injuries, such as fractures, dislocations, burns, etc., not related to medical or surgical procedures

Notes

This group does not include injuries associated with a surgical or medical procedure (refer to D19: Patient Trauma).

Selection criteria

Codes	Conditions
M96.6– **S00–T32** **T71**	Identified as diagnosis type (2) **not in a diagnosis cluster AND** U98.20*

Code descriptions

Codes	Code descriptions
M96.6–	Fracture of bone following insertion of orthopaedic implant, joint prosthesis, or bone plate
S00–S09	Injuries to the head
S10–S19	Injuries to the neck
S20–S29	Injuries to the thorax
S30–S39	Injuries to the abdomen, lower back, lumbar spine and pelvis
S40–S49	Injuries to the shoulder and upper arm
S50–S59	Injuries to the elbow and forearm
S60–S69	Injuries to the wrist and hand
S70–S79	Injuries to the hip and thigh
S80–S89	Injuries to the knee and lower leg
S90–S99	Injuries to the ankle and foot

Codes	Code descriptions
T00–T07	Injuries involving multiple body regions
T08–T14	Injuries to unspecified parts of trunk, limb or body region
T15–T19	Effects of foreign body entering through natural orifice
T20–T32	Burns and corrosions
T71	Asphyxiation
U98.20	Place of occurrence, hospital

* Applicable to DAD abstracts from fiscal year 2015–2016 onward.

Category D: Procedure-Associated Conditions

This category includes conditions associated with medical or surgical procedures. These include misadventures to patients during surgical and medical procedures, events associated with medical devices used for diagnosis and treatment, and abnormal reactions to or complications of surgical or medical procedures. Post-procedural infections are not included in Category D. Refer to Category B: Health Care–Associated Infections.

D01: Anemia — Hemorrhage

Concept

Hemorrhage or hemorrhagic anemia associated with a medical or surgical procedure

Notes

1. This clinical group does not include obstetric hemorrhage (refer to A02: Obstetric Hemorrhage and D02: Obstetric Hemorrhage) and hemorrhage or hemorrhagic anemia associated with the delivery of health care or related to the administration of anticoagulants (refer to A01: Anemia — Hemorrhage).
2. Prior to 2018–2019, the blood transfusion indicator was optional to code in British Columbia.

Selection criteria

Codes	Conditions
D62 **T81.0**	Identified as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster AND** documentation of blood transfusion (blood received indicator = 1)

Code descriptions

Codes	Code descriptions
D62	Acute posthaemorrhagic anaemia
T81.0	Hemorrhage and haematoma complicating a procedure, not elsewhere classified

Additional codes: Inclusions

Codes	Code descriptions
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

D02: Obstetric Hemorrhage

Concept

Hemorrhage from the pelvic area, genital tract, perineum or surgical incision after an instrument-assisted delivery or Caesarean section delivery that requires blood transfusion

Notes

1. This clinical group includes hemorrhage due to episiotomy.
2. Refer to A02: Obstetric Hemorrhage for hemorrhage following vaginal delivery without the assistance of instruments.
3. The blood transfusion indicator is optional to code in British Columbia.

Selection criteria

Codes	Conditions
O72.002 **O72.102** **O72.202** **O90.202**	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y) **AND** intervention codes 5.MD.53.^^, 5.MD.54.^^, 5.MD.55.^^, 5.MD.56.NN, 5.MD.56.PC, 5.MD.56.NR, 5.MD.56.PF, 5.MD.56.NW, 5.MD.56.PJ or 5.MD.60.^^ **AND** documentation of blood transfusion (blood received indicator = 1)

Code descriptions

Codes	Code descriptions
O72.002	Third-stage hemorrhage; delivered with mention of postpartum complication
O72.102	Other immediate postpartum hemorrhage; delivered with mention of postpartum complication
O72.202	Delayed and secondary postpartum hemorrhage; delivered with mention of postpartum complication
O90.202	Hematoma of obstetric wound; delivered with mention of postpartum complication

Additional codes: Inclusions

Codes	Code descriptions
5.MD.53.^^	Forceps traction and rotation delivery
5.MD.54.^^	Vacuum traction delivery
5.MD.55.^^	Combination of vacuum and forceps delivery
5.MD.56.NN	Breech delivery without episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
5.MD.56.PC	Breech delivery with episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
5.MD.56.NR	Breech delivery without episiotomy, total breech extraction with forceps to aftercoming head
5.MD.56.PF	Breech delivery with episiotomy, total breech extraction with forceps to aftercoming head
5.MD.56.NW	Breech delivery without episiotomy, unspecified breech extraction with forceps to aftercoming head
5.MD.56.PJ	Breech delivery with episiotomy, unspecified breech extraction with forceps to aftercoming head
5.MD.60.^^	Caesarean section delivery

D03: Obstetric Trauma

Concept

Lacerations of third degree or greater severity, or other obstetric injury to pelvic organs during an instrument-assisted vaginal delivery

Notes

1. Refer to A03: Obstetric Trauma for obstetric trauma during a non-instrumented vaginal delivery.
2. This clinical group does not include obstetric trauma during Caesarean section delivery.

Selection criteria

Codes	Conditions
O70.201* **O70.211†** **O70.221†** **O70.231†** **O70.281†** **O70.291†** **O70.301** **O71.181** **O71.301** **O71.401** **O71.501** **O71.601**	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y) **AND** O10–O16, O21–O26, O28–O37, O40–O46, O48.–, O60–O75, O85–O92, O95.– or O98–O99 with a sixth digit of 1 or 2 or Z37.– **AND** intervention codes 5.MD.53.^^, 5.MD.54.^^, 5.MD.55.^^, 5.MD.56.NN, 5.MD.56.PC, 5.MD.56.NR, 5.MD.56.PF, 5.MD.56.NW or 5.MD.56.PJ **on the same abstract**
5.PC.80.JH **5.PC.80.JJ** **5.PC.80.JR** **5.PC.80.JQ** **5.PC.80.JU** **5.PC.80.JL**	Identified as an intervention **AND** O10–O16, O21–O26, O28–O37, O40–O46, O48.–, O60–, O75, O85–O92, O95.– or O98–O99 with a sixth digit of 1 or 2 or Z37.– **AND** intervention codes 5.MD.53.^^, 5.MD.54.^^, 5.MD.55.^^, 5.MD.56.NN, 5.MD.56.PC, 5.MD.56.NR, 5.MD.56.PF, 5.MD.56.NW or 5.MD.56.PJ **on the same abstract**

* Before 2018–2019 data.
† Starting with 2018–2019 data.

Exclusions

1. Abstracts with intervention codes for Caesarean section delivery (5.MD.60.^^)
2. Abstracts indicating a pregnancy with abortive outcome (O04.– **OR** 5.CA.20.^^, 5.CA.24.^^, 5.CA.88.^^, 5.CA.89.^^ or 5.CA.93.^^, not abandoned)

Code descriptions

Codes	Code descriptions
O70.201	Third degree perineal laceration during delivery; delivered with or without mention of antepartum condition
O70.211	Third degree perineal laceration during delivery, type 3a, so described, delivered, with or without mention of antepartum condition
O70.221	Third degree perineal laceration during delivery, type 3b, so described, delivered, with or without mention of antepartum condition
O70.231	Third degree perineal laceration during delivery, type 3c, so described, delivered, with or without mention of antepartum condition
O70.281	Third degree perineal laceration during delivery, other specified type, delivered, with or without mention of antepartum condition
O70.291	Third degree perineal laceration during delivery, unspecified type, delivered, with or without mention of antepartum condition

Codes	Code descriptions
O70.301	Fourth degree perineal laceration during delivery; delivered with or without mention of antepartum condition
O71.181	Other rupture of uterus during labour; delivered with or without mention of antepartum condition
O71.301	Obstetric laceration of cervix; delivered with or without mention of antepartum condition
O71.401	Obstetric high vaginal laceration; delivered with or without mention of antepartum condition
O71.501	Other obstetric injury to pelvic organs; delivered with or without mention of antepartum condition
O71.601	Obstetric damage to pelvic joints and ligaments; delivered with or without mention of antepartum condition
5.PC.80.JH	Surgical repair, postpartum of obstetric laceration of corpus uteri [body of uterus]
5.PC.80.JJ	Surgical repair, postpartum of current obstetric laceration of cervix occurring at vaginal delivery
5.PC.80.JR	Surgical repair, postpartum of current obstetric laceration of bladder and urethra
5.PC.80.JQ	Surgical repair, postpartum of current obstetric laceration of rectum and sphincter ani
5.PC.80.JU	Surgical repair, postpartum of current obstetric high vaginal laceration
5.PC.80.JL	Surgical repair, postpartum of current obstetric laceration of broad ligament(s) of uterus

Additional codes: Inclusions

Codes	Code descriptions
5.MD.53.^^	Forceps traction and rotation delivery
5.MD.54.^^	Vacuum traction delivery
5.MD.55.^^	Combination of vacuum and forceps delivery
5.MD.56.NN	Breech delivery without episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head

Additional codes: Exclusions

Codes	Code descriptions
5.MD.60.^^	Caesarean section delivery
O10–O16 **O21–O26** **O28–O37** **O40–O46** **O48.–** **O60–O75** **O85–O92** **O95.–** **O98–O99** **Z37.–**	Outcome of delivery (refer to Appendix A)

D04: Birth Trauma

Concept

Injuries to the newborn during an instrument-assisted or Caesarean section delivery

Notes

Refer to A04: Birth Trauma for injuries during vaginal delivery without the assistance of instruments.

Selection criteria

Codes	Conditions
P10–P15	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y) **AND** Entry Code N* **AND** Newborns whose mother's abstract has intervention codes for instrument-assisted or Caesarean section delivery,† (5.MD.53.^^, 5.MD.54.^^, 5.MD.55.^^, 5.MD.56.NN, 5.MD.56.PC, 5.MD.56.NR, 5.MD.56.PF, 5.MD.56.NW, 5MD.56.PJ or 5.MD.60.^^)‡

Exclusions

1. Newborn abstracts with brain damage due to birth injury (P10.–, P11.1 or P11.2) as diagnosis type (M) or (1) **AND** preterm and low birth weight (P07.–) as diagnosis type (M), (1) or (2) **OR**
2. Newborn abstracts with termination of pregnancy affecting fetuses and newborns (P96.4) **OR**
3. Newborn abstracts with congenital malformations of the central nervous system (Q00–Q07) as diagnosis type (M) or (1) **OR**
4. Newborn abstracts with congenital malformations and deformations of the musculoskeletal system (Q65–Q79) as diagnosis type (M) or (1)

Code descriptions

Codes	Code descriptions
P10.–	Intracranial laceration and hemorrhage due to birth injury
P11.–	Other birth injuries to central nervous system
P12.–	Birth injury to scalp
P13.–	Birth injury to skeleton
P14.–	Birth injury to peripheral nervous system
P15.–	Other birth injuries

Additional codes: Inclusions

Codes	Code descriptions
5.MD.53.^^	Forceps traction and rotation delivery
5.MD.54.^^	Vacuum traction delivery
5.MD.55.^^	Combination of vacuum and forceps delivery
5.MD.56.NN	Breech delivery without episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
5.MD.56.PC	Breech delivery with episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
5.MD.56.NR	Breech delivery without episiotomy, total breech extraction with forceps to aftercoming head
5.MD.56.PF	Breech delivery with episiotomy, total breech extraction with forceps to aftercoming head
5.MD.56.NW	Breech delivery without episiotomy, unspecified breech extraction with forceps to aftercoming head
5.MD.56.PJ	Breech delivery with episiotomy, unspecified breech extraction with forceps to aftercoming head
5.MD.60.^^	Caesarean section delivery

Additional codes: Exclusions

Codes	Code descriptions
P07.–	Disorders related to short gestation and low birth weight, not elsewhere classified
P10.–§	Intracranial laceration and hemorrhage due to birth injury
P11.1§	Other specified brain damage due to birth injury
P11.2§	Unspecified brain damage due to birth injury
P96.4	Termination of pregnancy, affecting fetus and newborn
Q00–Q07	Congenital malformations of the nervous system (refer to Appendix A)
Q65–Q79	Congenital malformations and deformations of the musculoskeletal system (refer to Appendix A)

* Entry Code N indicates an infant was born alive in the reporting facility.

† Due to the unavailability of chart numbers for Prince Edward Island, birth trauma with and without the assistance of instruments cannot be differentiated; therefore, all birth trauma in P.E.I. is included in A04: Birth Trauma regardless of the use of instruments or method of delivery.

‡ Newborns whose mothers are discharged from acute care facilities in a different fiscal year cannot be linked to the mothers' records; therefore, a few birth trauma cases that belong to D04 could be misclassified to A04, as the linkage is done within a fiscal year. A fiscal year is defined based on discharged date from April 1 of the current year to March 31 of the subsequent year.

§ These codes are part of the selection criteria, except when preterm and low birth weight is also coded. See the exclusion terms in the selection criteria section above.

D19: Patient Trauma

Concept

Injuries, fractures, dislocations, burns, etc., associated with a medical or surgical procedure identified during the hospital stay

Note

Refer to C19: Patient Trauma for injuries, fractures, dislocations, burns, etc., that are not related to medical or surgical procedures.

Selection criteria

Codes	Conditions
S00–T19 **T71**	Identified as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster** **OR** Identified as diagnosis type (3) **AND** T80–T88 as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**
M96.6– **T20–T32**	Identified as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**

Code descriptions

Codes	Code descriptions
M96.6–	Fracture of bone following insertion of orthopaedic implant, joint prosthesis, or bone plate
S00–S09	Injuries to the head
S10–S19	Injuries to the neck
S20–S29	Injuries to the thorax
S30–S39	Injuries to the abdomen, lower back, lumbar spine and pelvis
S40–S49	Injuries to the shoulder and upper arm
S50–S59	Injuries to the elbow and forearm
S60–S69	Injuries to the wrist and hand
S70–S79	Injuries to the hip and thigh
S80–S89	Injuries to the knee and lower leg
S90–S99	Injuries to the ankle and foot
T00–T07	Injuries involving multiple body regions
T08–T14	Injuries to unspecified parts of trunk, limb or body region
T15–T19	Effects of foreign body entering through natural orifice
T20–T32	Burns and corrosions
T71	Asphyxiation

Additional codes: Inclusions

Codes	Code descriptions
T80–T88	Complications of surgical and medical care, not elsewhere classified (refer to Appendix A)
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

D20: Device Failure

Concept

Mechanical complications of devices, catheters, grafts, implants or prostheses associated with a medical or surgical procedure

Note

This clinical group includes mechanical failure and complications of devices: breakdown, displacement, leakage, malposition, obstruction, perforation or protrusion of devices, catheters, grafts, implants or prostheses associated with a medical or surgical procedure.

Selection criteria

Codes	Conditions
T82.0–T82.5 **T83.0–T83.4** **T84.0–T84.4** **T85.0–T85.6**	Identified as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**

Code descriptions

Codes	Code descriptions
T82.0	Mechanical complication of heart valve prosthesis
T82.1	Mechanical complication of cardiac electronic device
T82.2	Mechanical complication of coronary artery bypass and valve grafts
T82.3	Mechanical complication of other vascular grafts
T82.4	Mechanical complication of vascular dialysis catheter
T82.5	Mechanical complication of other cardiac and vascular devices and implants
T83.0	Mechanical complication of urinary (indwelling) catheter
T83.1	Mechanical complication of other urinary devices and implants
T83.2	Mechanical complication of graft of urinary organ
T83.3	Mechanical complication of intrauterine contraceptive device

Codes	Code descriptions
T83.4	Mechanical complication of other prosthetic devices, implants and grafts in genital tract
T84.0–	Mechanical complication of internal joint prosthesis
T84.1–	Mechanical complication of internal fixation device of bones of limb
T84.2–	Mechanical complication of internal fixation device of other bones
T84.3	Mechanical complication of other bone devices, implants and grafts
T84.4	Mechanical complication of other internal orthopaedic devices, implants and grafts
T85.0	Mechanical complication of ventricular intracranial (communicating) shunt
T85.1	Mechanical complication of implanted electronic stimulator of nervous system
T85.2	Mechanical complication of intraocular lens
T85.3	Mechanical complication of other ocular prosthetic devices, implants and grafts
T85.4	Mechanical complication of breast prosthesis and implant
T85.5	Mechanical complication of gastrointestinal prosthetic devices, implants and grafts
T85.6	Mechanical complication of other specified internal prosthetic devices, implants and grafts

Additional codes: Inclusions

Codes	Code descriptions
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

D21: Laceration/Puncture

Concept

Unintentional or accidental cut, puncture or perforation during a medical or surgical procedure

Selection criteria

Codes	Conditions
T81.2	Identified as diagnosis type (2)

Code descriptions

Codes	Code descriptions
T81.2	Accidental puncture and laceration during a procedure, not elsewhere classified

D22: Pneumothorax

Concept

Pneumothorax associated with a medical or surgical procedure

Selection criteria

Codes	Conditions
J95.80	Identified as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**
S27.0– **S27.2–**	Identified as diagnosis type (3) **AND** T80–T88 as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster** **OR** Identified as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**

Code descriptions

Codes	Code descriptions
J95.80	Post-procedural pneumothorax
S27.0–	Traumatic pneumothorax
S27.2–	Traumatic haemopneumothorax

Additional codes: Inclusions

Codes	Code descriptions
T80–T88	Complications of surgical and medical care, not elsewhere classified (refer to Appendix A)
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

D23: Wound Disruption

Concept

Disruption of surgical wound during the same hospital stay or an obstetric wound during the delivery episode of care

Selection criteria

Codes	Conditions
O90.002 **O90.102**	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y)
T81.3 **T81.83***	Identified as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**

Code descriptions

Codes	Code descriptions
O90.002	Disruption of Caesarean section wound; delivered with mention of postpartum complication
O90.102	Disruption of perineal obstetric wound; delivered with mention of postpartum complication
T81.3	Disruption of operation wound, not elsewhere classified
T81.83	Postoperative leak

Additional codes: Inclusions

Codes	Code descriptions
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

* Applicable to DAD abstracts from fiscal year 2015–2016 onward.

D24: Retained Foreign Body

Concept

Foreign object or substance unintentionally left in the body during a medical or surgical procedure

Selection criteria

Codes	Conditions
T81.5– T81.6	Identified as diagnosis type (2)

Code descriptions

Codes	Code descriptions
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

D25: Procedure-Associated Shock

Concept

Shock during or resulting from a procedure

Selection criteria

Codes	Conditions
T81.1	Identified as diagnosis type (2) **AND** Y60–Y84 **in the same diagnosis cluster**

Code descriptions

Codes	Code descriptions
T81.1	Shock during or resulting from a procedure, not elsewhere classified

Additional codes: Inclusions

Codes	Code descriptions
Y60–Y84	Complications of medical and surgical care (refer to Appendix A)

D26: Selected Serious Events

Concept

Harm to patients resulting from failure of sterile precautions, contaminated medical or biological substances, failure in suture or ligature, wrong placement of endotracheal tube or performance of inappropriate operation

Note

This clinical group includes serious, largely preventable patient safety events that should not occur.

Selection criteria

Codes	Conditions
Y62.0 **Y62.1** **Y62.2** **Y62.3** **Y62.4** **Y62.5** **Y62.6** **Y64.–** **Y65.2** **Y65.3** **Y65.5**	Identified as diagnosis type (9) **AND** at least 1 additional diagnosis coded as diagnosis type (2) **in the same diagnosis cluster**

Code descriptions

Codes	Code descriptions
Y62.0	Failure of sterile precautions during surgical and medical care; during surgical operation
Y62.1	Failure of sterile precautions during surgical and medical care; during infusion or transfusion
Y62.2	Failure of sterile precautions during surgical and medical care; during kidney dialysis or other perfusion
Y62.3	Failure of sterile precautions during surgical and medical care; during injection or immunization
Y62.4	Failure of sterile precautions during surgical and medical care; during endoscopic examination
Y62.5	Failure of sterile precautions during surgical and medical care; during heart catheterization
Y62.6	Failure of sterile precautions during surgical and medical care; during aspiration, puncture and other catheterization
Y64.–	Contaminated medical or biological substances
Y65.2	Failure in suture or ligature during surgical operation
Y65.3	Endotracheal tube wrongly placed during anaesthetic procedure
Y65.5	Performance of inappropriate operation

4. Definition of diagnosis type and diagnosis cluster

Definitions

A **diagnosis type** is an alpha or numeric code signifying the impact the condition had on the patient's care, as evidenced in the physician documentation.

A **diagnosis cluster** is a group of 2 or more ICD-10-CA codes that relate to one another. Assigning the same diagnosis cluster character (uppercase alpha A to Y) to each of the codes in the cluster links these codes together on the abstract.

Diagnosis clustering was made mandatory in 2009–2010 for ICD-10-CA codes used to describe external causes related to complications of medical and surgical care (U07.7, Y40–Y84) and to resistance to antibiotics (U82 and U83) or other antimicrobial drugs (U84).

The following table describes the diagnosis types used throughout the HHI definitions:

Diagnosis types	Descriptions
M	The 1 diagnosis or condition that can be described as being most responsible for the patient's stay in hospital. If there is more than one such condition, the one held most responsible for the greatest portion of the length of stay or greatest use of resources is selected.
1	A condition that impacted care (i.e., a significant comorbidity) and was present prior to hospital admission.
2	A condition that impacted care (i.e., a significant comorbidity) and arose post-admission. If a post-admit comorbidity qualifies as the most responsible diagnosis (MRDx), it must be recorded as both the MRDx and as a diagnosis type (2).
3	A condition that did not impact care (i.e., not a significant comorbidity) or that is recorded to provide detail. A diagnosis type (3) in certain appropriate code combinations — for example, with another code as diagnosis type (2) in a cluster — can be used to determine a significant condition that arose post-admission.
9	A supplementary code (external cause code) used with another diagnosis code that indicates the nature of the condition. A diagnosis type (9) code is accompanied by codes indicating injuries, poisoning or other certain consequences of external causes.
W, X, Y	A condition that is associated with the first/second/third service transfer, respectively.

Appendices

Appendix A: ICD-10-CA code descriptions

Diagnosis codes	Descriptions
Poisoning by drugs, medicaments and biological substances (T36–T50)	
T36.–	Poisoning by systemic antibiotics
T37.–	Poisoning by other systemic anti-infectives and antiparasitics
T38.–	Poisoning by hormones and their synthetic substitutes and antagonists, not elsewhere classified
T39.–	Poisoning by nonopioid analgesics, antipyretics and antirheumatics
T40.–	Poisoning by narcotics and psychodysleptics [hallucinogens]
T41.–	Poisoning by anaesthetics and therapeutic gases
T42.–	Poisoning by antiepileptic, sedative-hypnotic and antiparkinsonism drugs
T43.–	Poisoning by psychotropic drugs, not elsewhere classified
T44.–	Poisoning by drugs primarily affecting the autonomic nervous system
T45.–	Poisoning by primarily systemic and haematological agents, not elsewhere classified
T46.–	Poisoning by agents primarily affecting the cardiovascular system
T47.–	Poisoning by agents primarily affecting the gastrointestinal system
T48.–	Poisoning by agents primarily acting on smooth and skeletal muscles and the respiratory system
T49.–	Poisoning by topical agents primarily affecting skin and mucous membrane and by ophthalmological, otorhinolaryngological and dental drugs
T50.–	Poisoning by diuretics and other and unspecified drugs, medicaments and biological substances
Complications of surgical and medical care, not elsewhere classified (T80–T88)	
T80.–	Complications following infusion, transfusion and therapeutic injection
T81.–	Complications of procedures, not elsewhere classified
T82.–	Complications of cardiac and vascular prosthetic devices, implants and grafts
T83.–	Complications of genitourinary prosthetic devices, implants and grafts
T84.–	Complications of internal orthopedic prosthetic devices, implants and grafts
T85.–	Complications of other internal prosthetic devices, implants and grafts
T86.–	Failure and rejection of transplanted organs and tissues
T87.–	Complications peculiar to reattachment and amputation
T88.–	Other complications of surgical and medical care, not elsewhere classified

Diagnosis codes	Descriptions
Resistance to antibiotics and other antimicrobial drugs (U82–U84)	
U82.–	Resistance to betalactam antibiotics
U83.–	Resistance to other antibiotics
U84.–	Resistance to other antimicrobial drugs
Outcome of delivery (with a sixth digit of 1 or 2)	
O10.–	Pre-existing hypertension complicating pregnancy, childbirth and the puerperium
O11.–	Pre-eclampsia superimposed on chronic hypertension
O12.–	Gestational [pregnancy-induced] oedema and proteinuria without hypertension
O13.–	Gestational [pregnancy-induced] hypertension
O14.–	Pre-eclampsia
O15.–	Eclampsia
O16.–	Unspecified maternal hypertension
O21.–	Excessive vomiting in pregnancy
O22.–	Venous complications and haemorrhoids in pregnancy
O23.–	Infections of genitourinary tract in pregnancy
O24.–	Diabetes mellitus in pregnancy
O25.–	Malnutrition in pregnancy
O26.–	Maternal care for other conditions predominantly related to pregnancy
O28.–	Abnormal findings on antenatal screening of mother
O29.–	Complications of anaesthesia during pregnancy
O30.–	Multiple gestation
O31.–	Complications specific to multiple gestation
O32.–	Maternal care for known or suspected malpresentation of fetus
O33.–	Maternal care for known or suspected disproportion
O34.–	Maternal care for known or suspected abnormality of pelvic organs
O35.–	Maternal care for known or suspected fetal abnormality and damage
O36.–	Maternal care for other known or suspected fetal problems
O37.–	Maternal care for decreased fetal movements

Diagnosis codes	Descriptions
Outcome of delivery (with a sixth digit of 1 or 2) (continued)	
O40.–	Polyhydramnios
O41.–	Other disorders of amniotic fluid and membranes
O42.–	Premature rupture of membranes
O43.–	Placental disorders
O44.–	Placenta praevia
O45.–	Premature separation of placenta [abruptio placentae]
O46.–	Antepartum haemorrhage, not elsewhere classified
O48.–	Prolonged pregnancy
O60.–	Preterm labour and delivery
O61.–	Failed induction of labour
O62.–	Abnormalities of forces of labour
O63.–	Long labour
O64.–	Obstructed labour due to malposition and malpresentation of fetus
O65.–	Obstructed labour due to maternal pelvic abnormality
O66.–	Other obstructed labour
O67.–	Labour and delivery complicated by intrapartum haemorrhage, not elsewhere classified
O68.–	Labour and delivery complicated by fetal stress [distress]
O69.–	Labour and delivery complicated by umbilical cord complications
O70.–	Perineal laceration during delivery
O71.–	Other obstetric trauma
O72.–	Postpartum haemorrhage
O73.–	Retained placenta and membranes, without haemorrhage
O74.–	Complications of anaesthesia during labour and delivery
O75.–	Other complications of labour and delivery, not elsewhere classified
O85.–	Puerperal sepsis
O86.–	Other puerperal infections
O87.–	Venous complications and haemorrhoids in the puerperium
O88.–	Obstetric embolism

Diagnosis codes	Descriptions
Outcome of delivery (with a sixth digit of 1 or 2) (continued)	
O89.–	Complications of anaesthesia during the puerperium
O90.–	Complications of the puerperium, not elsewhere classified
O91.–	Infections of breast associated with childbirth
O92.–	Other disorders of breast and lactation associated with childbirth
O95.–	Obstetric death of unspecified cause
O98.–	Maternal infectious and parasitic diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium
O99.–	Other maternal diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium
Z37.–	Outcome of delivery
Congenital malformations of the nervous system (Q00–Q07)	
Q00.–	Anencephaly and similar malformations
Q01.–	Encephalocele
Q02.–	Microcephaly
Q03.–	Congenital hydrocephalus
Q04.–	Other congenital malformations of brain
Q05.–	Spina bifida
Q06.–	Other congenital malformations of spinal cord
Q07.–	Other congenital malformations of nervous system
Congenital malformations and deformations of the musculoskeletal system (Q65–Q79)	
Q65.–	Congenital deformities of hip
Q66.–	Congenital deformities of feet
Q67.–	Congenital musculoskeletal deformities of head, face, spine and chest
Q68.–	Other congenital musculoskeletal deformities
Q69.–	Polydactyly
Q70.–	Syndactyly
Q71.–	Reduction defects of upper limb
Q72.–	Reduction defects of lower limb
Q73.–	Reduction defects of unspecified limb

Diagnosis codes	Descriptions
Congenital malformations and deformations of the musculoskeletal system (Q65–Q79) (continued)	
Q74.–	Other congenital malformations of limb(s)
Q75.–	Other congenital malformations of skull and face bones
Q76.–	Congenital malformations of spine and bony thorax
Q77.–	Osteochondrodysplasia with defects of growth of tubular bones and spine
Q78.–	Other osteochondrodysplasias
Q79.–	Congenital malformations of the musculoskeletal system, not elsewhere classified
Drugs, medicaments and biological substances causing adverse effects in therapeutic use (Y40–Y59)	
Y40.–	Systemic antibiotics
Y41.–	Other systemic anti-infectives and antiparasitics
Y42.–	Hormones and their synthetic substitutes and antagonists, not elsewhere classified
Y43.–	Primarily systemic agents
Y44.–	Agents primarily affecting blood constituents
Y45.–	Analgesics, antipyretics and anti-inflammatory drugs
Y46.–	Antiepileptics and antiparkinsonism drugs
Y47.–	Sedatives, hypnotics and antianxiety drugs
Y48.–	Anesthetics and therapeutic gases
Y49.–	Psychotropic drugs, not elsewhere classified
Y50.–	Central nervous system stimulants, not elsewhere classified
Y51.–	Drugs primarily affecting the autonomic nervous system
Y52.–	Agents primarily affecting the cardiovascular system
Y53.–	Agents primarily affecting the gastrointestinal system
Y54.–	Agents primarily affecting water-balance and mineral uric acid metabolism
Y55.–	Agents primarily acting on smooth and skeletal muscles and the respiratory system
Y56.–	Topical agents primarily affecting skin and mucous membrane and ophthalmological, otorhinolaryngological and dental drugs
Y57.–	Other and unspecified drugs and medicaments
Y58.–	Bacterial vaccines
Y59.–	Other and unspecified vaccines and biological substances

Diagnosis codes	Descriptions
Misadventures to patients during surgical and medical care (Y60–Y69)	
Y60.–	Unintentional cut, puncture, perforation or hemorrhage during surgical and medical care
Y61.–	Foreign object accidentally left in body during surgical and medical care
Y62.–	Failure of sterile precautions during surgical and medical care
Y63.–	Failure in dosage during surgical and medical care (excludes accidental overdose of drug or wrong drug given in error (X40–X44))
Y64.–	Contaminated medical or biological substances
Y65.–	Other misadventures during surgical and medical care
Y66	Nonadministration of surgical and medical care
Y69	Unspecified misadventure during surgical and medical care
Medical devices associated with adverse incidents in diagnostic and therapeutic use (Y70–Y82)	
Y70.–	Anesthesiology devices associated with adverse incidents
Y71.–	Cardiovascular devices associated with adverse incidents
Y72.–	Otorhinolaryngological devices associated with adverse incidents
Y73.–	Gastroenterology and urology devices associated with adverse incidents
Y74.–	General hospital and personal-use devices associated with adverse incidents
Y75.–	Neurological devices associated with adverse incidents
Y76.–	Obstetric and gynecological devices associated with adverse incidents
Y77.–	Ophthalmic devices associated with adverse incidents
Y78.–	Radiological devices associated with adverse incidents
Y79.–	Orthopedic devices associated with adverse incidents
Y80.–	Physical medicine devices associated with adverse incidents
Y81.–	General- and plastic-surgery devices associated with adverse incidents
Y82.–	Other and unspecified medical devices associated with adverse incidents
Surgical and other medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure (Y83–Y84)	
Y83.–	Surgical operation and other surgical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure
Y84.–	Other medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

Appendix B: List of ICD-10-CA infection codes

This list includes infection codes that have unspecified bacterial microorganisms, other bacterial microorganisms (that can include MRSA and VRE) or no microorganism in their descriptions (except for staphylococcal infections). This list is applicable to the definitions for MRSA and for VRE only.

Diagnosis codes	Descriptions
A04.8	Other specified bacterial intestinal infections
A04.9	Bacterial intestinal infection, unspecified
A05.0	Foodborne staphylococcal intoxication
A05.88	Other specified bacterial foodborne intoxications
A05.9	Bacterial foodborne intoxication, unspecified
A09.–	Other gastroenteritis and colitis of infectious and unspecified origin
A41.2	Sepsis due to unspecified *Staphylococcus*
A41.9	Sepsis, unspecified
A48.3	Toxic shock syndrome
A49.0	Staphylococcal infection, unspecified site
A49.8	Other bacterial infections of unspecified site
A49.9	Bacterial infection, unspecified
D73.3	Abscess of spleen
E06.0	Acute thyroiditis
E06.1	Subacute thyroiditis
E06.9	Thyroiditis, unspecified
E10.51	Type 1 diabetes mellitus with peripheral angiopathy with gangrene
E10.71	Type 1 diabetes mellitus with foot ulcer (angiopathic) (neuropathic) with gangrene
E11.51	Type 2 diabetes mellitus with peripheral angiopathy with gangrene
E11.71	Type 2 diabetes mellitus with foot ulcer (angiopathic) (neuropathic) with gangrene
E13.51	Other specified diabetes mellitus with peripheral angiopathy with gangrene
E13.71	Other specified diabetes mellitus with foot ulcer (angiopathic) (neuropathic) with gangrene
E14.51	Unspecified diabetes mellitus with peripheral angiopathy with gangrene

Diagnosis codes	Descriptions
E14.71	Unspecified diabetes mellitus with foot ulcer (angiopathic) (neuropathic) with gangrene
E32.1	Abscess of thymus
G00.3	Staphylococcal meningitis
G00.8	Other bacterial meningitis
G00.9	Bacterial meningitis, unspecified
G04.0	Acute disseminated encephalitis
G04.2	Bacterial meningoencephalitis and meningomyelitis, not elsewhere classified
G04.8	Other encephalitis, myelitis and encephalomyelitis
G04.9	Encephalitis, myelitis and encephalomyelitis, unspecified
G06.–	Intracranial and intraspinal abscess and granuloma
G07	Intracranial and intraspinal abscess and granuloma in diseases classified elsewhere
G08	Intracranial and intraspinal phlebitis and thrombophlebitis
G37.3	Acute transverse myelitis in demyelinating disease of central nervous system
H00.0	Hordeolum and other deep inflammation of eyelid
H00.1	Chalazion
H01.0	Blepharitis
H03.1	Involvement of eyelid in other infectious diseases classified elsewhere
H04.0	Dacryoadenitis
H04.3	Acute and unspecified inflammation of lacrimal passages
H05.0	Acute inflammation of orbit
H10.0	Mucopurulent conjunctivitis
H10.2	Other acute conjunctivitis
H10.3	Acute conjunctivitis, unspecified
H10.5	Blepharoconjunctivitis
H10.8	Other conjunctivitis
H10.9	Conjunctivitis, unspecified
H13.1	Conjunctivitis in infectious and parasitic diseases classified elsewhere
H13.2	Conjunctivitis in other diseases classified elsewhere
H15.0	Scleritis

Diagnosis codes	Descriptions
H15.1	Episcleritis
H16.–	Keratitis
H19.0	Scleritis and episcleritis in diseases classified elsewhere
H19.2	Keratitis and keratoconjunctivitis in other infectious and parasitic diseases classified elsewhere
H20.0	Acute and subacute iridocyclitis
H20.8	Other iridocyclitis
H20.9	Iridocyclitis, unspecified
H22.0	Iridocyclitis in infectious and parasitic diseases classified elsewhere
H30.2	Posterior cyclitis
H32.0	Chorioretinal inflammation in infectious and parasitic diseases classified elsewhere
H44.0	Purulent endophthalmitis
H45.1	Endophthalmitis in diseases classified elsewhere
H48.1	Retrobulbar neuritis in diseases classified elsewhere
H60.0	Abscess of external ear
H60.1	Cellulitis of external ear
H60.2	Malignant otitis externa
H60.3	Other infective otitis externa
H60.9	Otitis externa, unspecified
H62.0	Otitis externa in bacterial diseases classified elsewhere
H62.3	Otitis externa in other infectious and parasitic diseases classified elsewhere
H66.0	Acute suppurative otitis media
H66.4	Suppurative otitis media, unspecified
H66.9	Otitis media, unspecified
H67.0	Otitis media in bacterial diseases classified elsewhere
H68.0	Eustachian salpingitis
H70.0	Acute mastoiditis
H70.2	Petrositis
H70.8	Other mastoiditis and related conditions

Diagnosis codes	Descriptions
H70.9	Mastoiditis, unspecified
H73.0	Acute myringitis
H75.0	Mastoiditis in infectious and parasitic diseases classified elsewhere
H81.2	Vestibular neuronitis
H83.0	Labyrinthitis
H94.0	Acoustic neuritis in infectious and parasitic diseases classified elsewhere
I30.1	Infective pericarditis
I30.9	Acute pericarditis, unspecified
I32.0	Pericarditis in bacterial diseases classified elsewhere
I32.1	Pericarditis in other infectious and parasitic diseases classified elsewhere
I33.0	Acute and subacute infective endocarditis
I33.9	Acute endocarditis, unspecified
I38	Endocarditis, valve unspecified
I39.8	Endocarditis, valve unspecified, in diseases classified elsewhere
I40.0	Infective myocarditis
I40.9	Acute myocarditis, unspecified
I51.4	Myocarditis, unspecified
I77.6	Arteritis, unspecified
I79.1	Aortitis in diseases classified elsewhere
I80.–	Phlebitis and thrombophlebitis
I88.0	Nonspecific mesenteric lymphadenitis
I88.8	Other nonspecific lymphadenitis
I88.9	Nonspecific lymphadenitis, unspecified
I89.1	Lymphangitis
J01.–	Acute sinusitis
J02.8	Acute pharyngitis due to other specified organisms
J02.9	Acute pharyngitis, unspecified
J03.8	Acute tonsillitis due to other specified organisms
J03.9	Acute tonsillitis, unspecified

Diagnosis codes	Descriptions
J04.–	Acute laryngitis and tracheitis
J05.–	Acute obstructive laryngitis [croup] and epiglottitis
J06.–	Acute upper respiratory infections of multiple and unspecified sites
J15.2	Pneumonia due to *Staphylococcus*
J15.8	Other bacterial pneumonia
J15.9	Bacterial pneumonia, unspecified
J16.8	Pneumonia due to other specified infectious organisms
J18.–	Pneumonia, organism unspecified
J20.88	Acute bronchitis due to other specified organisms
J20.9	Acute bronchitis, unspecified
J21.8	Acute bronchiolitis due to other specified organisms
J21.9	Acute bronchiolitis, unspecified
J22	Unspecified acute lower respiratory infection
J34.0	Abscess, furuncle and carbuncle of nose
J36	Peritonsillar abscess
J39.0	Retropharyngeal and parapharyngeal abscess
J39.1	Other abscess of pharynx
J40	Bronchitis, not specified as acute or chronic
J44.0	Chronic obstructive pulmonary disease with acute lower respiratory infection
J47	Bronchiectasis
J69.–	Pneumonitis due to solids and liquids
J85.–	Abscess of lung and mediastinum
J86.–	Pyothorax
J95.01	Infection of tracheostomy stoma
J95.88	Other postprocedural respiratory disorders
J98.5	Diseases of mediastinum, not elsewhere classified
K04.0	Pulpitis
K04.4	Acute apical periodontitis of pulpal origin
K04.6	Periapical abscess with sinus

Diagnosis codes	Descriptions
K04.7	Periapical abscess without sinus
K05.0	Acute gingivitis
K05.2	Acute periodontitis
K10.2	Inflammatory conditions of jaws
K11.2	Sialoadenitis
K11.3	Abscess of salivary gland
K12.2	Cellulitis and abscess of mouth
K14.0	Glossitis
K14.2	Median rhomboid glossitis
K20	Oesophagitis
K35.–	Acute appendicitis
K36	Other appendicitis
K37	Unspecified appendicitis
K57.0	Diverticular disease of small intestine with perforation and abscess
K57.2	Diverticular disease of large intestine with perforation and abscess
K57.4	Diverticular disease of both small and large intestine with perforation and abscess
K57.8	Diverticular disease of intestine, part unspecified, with perforation and abscess
K61.–	Abscess of anal and rectal regions
K62.8	Other specified diseases of anus and rectum
K63.0	Abscess of intestine
K65.–	Peritonitis
K75.0	Abscess of liver
K75.1	Phlebitis of portal vein
K75.3	Granulomatous hepatitis, not elsewhere classified
K77.0	Liver disorders in infectious and parasitic diseases classified elsewhere
K80.0–	Calculus of gallbladder with acute cholecystitis
K80.1–	Calculus of gallbladder with other cholecystitis
K80.3–	Calculus of bile duct with cholangitis
K80.4–	Calculus of bile duct with cholecystitis

Diagnosis codes	Descriptions
K81.–	Cholecystitis
K82.2	Perforation of gallbladder
K83.0–	Cholangitis
K83.2	Perforation of bile duct
K85.8	Other acute pancreatitis
K85.9	Acute pancreatitis, unspecified
K91.41	Infection of colostomy stoma
K91.44	Infection of enterostomy stoma
K91.61	Infection of gastrostomy stoma
L00	Staphylococcal scalded skin syndrome
L01.–	Impetigo
L02.–	Cutaneous abscess, furuncle and carbuncle
L03.–	Cellulitis
L04.–	Acute lymphadenitis
L05.0	Pilonidal cyst with abscess
L08.–	Other local infections of skin and subcutaneous tissue
L30.3	Infective dermatitis
L30.9	Dermatitis, unspecified
M00.0–	Staphylococcal arthritis and polyarthritis
M00.8–	Arthritis and polyarthritis due to other specified bacterial agents
M00.9–	Pyogenic arthritis, unspecified
M01.3–	Arthritis in other bacterial diseases classified elsewhere
M46.2–	Osteomyelitis of vertebra
M46.3–	Infection of intervertebral disc (pyogenic)
M46.4–	Discitis, unspecified
M46.5–	Other infective spondylopathies
M60.0–	Infective myositis
M60.9–	Myositis, unspecified
M65.0–	Abscess of tendon sheath

Diagnosis codes	Descriptions
M65.1–	Other infective (teno)synovitis
M71.0–	Abscess of bursa
M71.1–	Other infective bursitis
M72.6–	Necrotizing fasciitis
M86.0–	Acute haematogenous osteomyelitis
M86.1–	Other acute osteomyelitis
M86.2–	Subacute osteomyelitis
M86.8–	Other osteomyelitis
M86.9–	Osteomyelitis, unspecified
M90.1	Periostitis in other infectious diseases classified elsewhere
M90.2	Osteopathy in other infectious diseases classified elsewhere
N08.0	Glomerular disorders in infectious and parasitic diseases classified elsewhere
N10	Acute tubulo-interstitial nephritis
N12	Tubulo-interstitial nephritis, not specified as acute or chronic
N13.6	Pyonephrosis
N15.1	Renal and perinephric abscess
N16.0	Renal tubulo-interstitial disorders in infectious and parasitic diseases classified elsewhere
N29.1	Other disorders of kidney and ureter in infectious and parasitic diseases classified elsewhere
N30.0	Acute cystitis
N30.8	Other cystitis
N30.9	Cystitis, unspecified
N33.8	Bladder disorders in other diseases classified elsewhere
N34.–	Urethritis and urethral syndrome
N37.0	Urethritis in diseases classified elsewhere
N39.0	Urinary tract infection, site not specified
N41.0	Acute prostatitis
N41.2	Abscess of prostate
N41.3	Prostatocystitis

Diagnosis codes	Descriptions
N41.4	Granulomatous prostatitis
N41.8	Other inflammatory diseases of prostate
N41.9	Inflammatory disease of prostate, unspecified
N43.1	Infected hydrocele
N45.–	Orchitis and epididymitis
N48.1	Balanoposthitis
N48.2–	Other inflammatory disorders of penis
N49.–	Inflammatory disorders of male genital organs, not elsewhere classified
N61	Inflammatory disorders of breast
N70.0	Acute salpingitis and oophoritis
N70.9	Salpingitis and oophoritis, unspecified
N71.0	Acute inflammatory disease of uterus
N71.9	Inflammatory disease of uterus, unspecified
N72	Inflammatory disease of cervix uteri
N73.0	Acute parametritis and pelvic cellulitis
N73.2	Unspecified parametritis and pelvic cellulitis
N73.3	Female acute pelvic peritonitis
N73.5	Female pelvic peritonitis, unspecified
N73.6	Female pelvic peritoneal adhesions
N73.8	Other specified female pelvic inflammatory diseases
N73.9	Female pelvic inflammatory disease, unspecified
N74.8	Female pelvic inflammatory disorders in other diseases classified elsewhere
N75.1	Abscess of Bartholin’s gland
N76.0	Acute vaginitis
N76.1	Subacute and chronic vaginitis
N76.2	Acute vulvitis
N76.3	Subacute and chronic vulvitis
N76.4	Abscess of vulva
N76.88	Other specified inflammation of vagina and vulva

Diagnosis codes	Descriptions
N77.0	Ulceration of vulva in infectious and parasitic diseases classified elsewhere
N77.1	Vaginitis, vulvitis and vulvovaginitis in infectious and parasitic diseases classified elsewhere
N98.0	Infection associated with artificial insemination
N99.51	Infection of external stoma of urinary tract
O03.0	Spontaneous abortion, incomplete, complicated by genital tract and pelvic infection
O03.5	Spontaneous abortion, complete or unspecified, complicated by genital tract and pelvic infection
O04.0	Medical abortion, incomplete, complicated by genital tract and pelvic infection
O04.5	Medical abortion, complete or unspecified, complicated by genital tract and pelvic infection
O05.0	Other abortion, incomplete, complicated by genital tract and pelvic infection
O05.5	Other abortion, complete or unspecified, complicated by genital tract and pelvic infection
O08.0–	Complications following abortion and ectopic and molar pregnancy; genital tract and pelvic infection
O08.2	Complications following abortion and ectopic and molar pregnancy; embolism
O08.8	Complications following abortion and ectopic and molar pregnancy; other complications
O22.9	Venous complication in pregnancy, unspecified
O23.–	Infections of genitourinary tract in pregnancy
O41.1–	Infection of amniotic sac and membranes
O75.3–	Other infection during labour
O85.–	Puerperal sepsis
O86.–	Other puerperal infections
O87.0–	Superficial thrombophlebitis in the puerperium
O87.1–	Deep phlebothrombosis in the puerperium
O87.9–	Venous complication in the puerperium, unspecified
O88.3–	Obstetric pyaemic and septic embolism
O89.0–	Pulmonary complications of anaesthesia during the puerperium
O91.–	Infections of breast associated with childbirth
O98.8–	Other maternal infectious and parasitic diseases complicating pregnancy, childbirth and the puerperium

Diagnosis codes	Descriptions
O99.5–	Diseases of the respiratory system complicating pregnancy, childbirth and the puerperium
O99.8–	Other specified diseases and conditions complicating pregnancy, childbirth and the puerperium
P00.2	Fetus and newborn affected by maternal infectious and parasitic diseases
P02.7	Fetus and newborn affected by chorioamnionitis
P23.2	Congenital pneumonia due to *Staphylococcus*
P23.6	Congenital pneumonia due to other bacterial agents
P23.8	Congenital pneumonia due to other organisms
P23.9	Congenital pneumonia, unspecified
P36.2	Sepsis of newborn due to *Staphylococcus aureus*
P36.8	Other bacterial sepsis of newborn
P36.9	Bacterial sepsis of newborn, unspecified
P37.8	Other specified congenital infectious and parasitic diseases
P37.9	Congenital infectious and parasitic disease, unspecified
P38	Omphalitis of newborn with or without mild haemorrhage
P39.–	Other infections specific to the perinatal period
P58.2	Neonatal jaundice due to infection
P77	Necrotizing enterocolitis of fetus and newborn
P78.1	Other neonatal peritonitis
R02	Gangrene, not elsewhere classified
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 acute organ failure
S01.01	Open wound of scalp, complicated
S01.11	Open wound of eyelid and periocular area, complicated
S01.21	Open wound of nose, complicated
S01.31	Open wound of ear, complicated
S01.41	Open wound of cheek and temporomandibular area, complicated

Diagnosis codes	Descriptions
S01.51	Open wound of lip and oral cavity, complicated
S01.71	Multiple open wounds of head, complicated
S01.81	Open wounds of other parts of head, complicated
S01.91	Open wound of head, part unspecified, complicated
S11.01	Open wound involving larynx and trachea, complicated
S11.11	Open wound involving thyroid gland, complicated
S11.21	Open wound involving pharynx and cervical esophagus, complicated
S11.71	Multiple open wounds of neck, complicated
S11.81	Open wound of other parts of neck, complicated
S11.91	Open wound of neck, part unspecified, complicated
S21.01	Open wound of breast, complicated
S21.11	Open wound of front wall of thorax, complicated
S21.21	Open wound of back wall of thorax, complicated
S21.71	Multiple open wounds of thoracic wall, complicated
S21.81	Open wound of other parts of thorax, complicated
S21.91	Open wound of thorax, part unspecified, complicated
S31.001	Open wound of lower back and pelvis, complicated
S31.101	Open wound of upper abdominal wall, complicated
S31.111	Open wound of epigastric region of abdominal wall, complicated
S31.121	Open wound of periumbilical region of abdominal wall, complicated
S31.131	Open wound of lower abdominal wall, complicated
S31.191	Open wound of unspecified site of abdominal wall, complicated
S31.201	Open wound of penis, complicated
S31.301	Open wound of scrotum and testes, complicated
S31.401	Open wound of vagina and vulva, complicated
S31.501	Open wound of other and unspecified external genital organs, complicated
S31.701	Multiple open wounds of abdomen, lower back and pelvis, complicated
S31.801	Open wound of other and unspecified parts of abdomen, complicated
S41.01	Open wound of shoulder, complicated

Diagnosis codes	Descriptions
S41.11	Open wound of upper arm, complicated
S41.71	Multiple open wounds of shoulder and upper arm, complicated
S41.81	Open wound of other and unspecified parts of shoulder girdle, complicated
S51.01	Open wound of elbow, complicated
S51.71	Open wound of forearm, multiple, complicated
S51.81	Open wound of other parts of forearm, complicated
S51.91	Open wound of forearm, part unspecified, complicated
S61.01	Open wound of finger(s) without damage to nail, complicated
S61.11	Open wound of finger(s) with damage to nail, complicated
S61.71	Multiple open wounds of wrist and hand, complicated
S61.81	Open wound of other parts of wrist and hand, complicated
S61.91	Open wound of wrist and hand, part unspecified, complicated
S71.01	Open wound of hip, complicated
S71.11	Open wound of thigh, complicated
S71.71	Multiple open wounds of hip and thigh, complicated
S71.81	Open wound of other and unspecified parts of pelvic girdle, complicated
S81.01	Open wound of knee, complicated
S81.71	Multiple open wounds of lower leg, complicated
S81.81	Open wounds of other parts of lower leg, complicated
S81.91	Open wound of lower leg, part unspecified, complicated
S91.01	Open wound of ankle, complicated
S91.11	Open wound of toe(s) without damage to nail, complicated
S91.21	Open wound of toe(s) with damage to nail, complicated
S91.31	Open wound of other parts of foot, complicated
S91.71	Multiple open wounds of ankle and foot, complicated
T01.01	Open wound involving head with neck, complicated
T01.11	Open wounds involving thorax with abdomen, lower back and pelvis, complicated
T01.21	Open wounds involving multiple regions of upper limb(s), complicated
T01.31	Open wounds of multiple regions of lower limb(s), complicated

Diagnosis codes	Descriptions
T01.61	Open wounds involving multiple regions of upper limb(s) with lower limb(s), complicated
T01.81	Open wounds involving other combinations of body regions, complicated
T01.91	Multiple open wounds of unspecified site, complicated
T79.3	Post-traumatic wound infection, not elsewhere classified
T80.2	Infections following infusion, transfusion and therapeutic injection
T81.4	Infection following a procedure, not elsewhere classified
T82.6	Infection and inflammatory reaction due to cardiac valve prosthesis
T82.7–	Infection and inflammatory reaction due to other cardiac and vascular devices, implants and grafts
T83.5	Infection and inflammatory reaction due to prosthetic device, implant and graft in urinary system
T83.6	Infection and inflammatory reaction due to prosthetic device, implant and graft in genital tract
T84.5–	Infection and inflammatory reaction due to internal joint prosthesis
T84.6–	Infection and inflammatory reaction due to internal fixation device [any site]
T84.7	Infection and inflammatory reaction due to other internal orthopaedic prosthetic devices, implants and grafts
T85.7	Infection and inflammatory reaction due to other internal prosthetic devices, implants and grafts
T87.001	Complication of above elbow reattachment, infection
T87.011	Complication of below elbow reattachment, infection
T87.021	Complication of below wrist reattachment, infection
T87.091	Complication of upper extremity reattachment, level (of attachment) unspecified, infection
T87.101	Complications of above knee reattachment, infection
T87.111	Complication of below knee reattachment, infection
T87.121	Complication of below ankle reattachment, infection
T87.191	Complication of lower extremity reattachment, level (of attachment) unspecified, infection
T87.201	Infection of other reattached body part
T87.4–	Infection of amputation stump
T88.0	Infection following immunization

Appendix C: Calculation of crude rates

To facilitate monitoring of changes over time, crude rates for the overall Hospital Harm indicator, as well as for each category of harm and clinical group, are provided in the Excel file *Hospital Harm Results*, available on the Hospital Harm Project web page.

The overall denominator is used to calculate the overall crude rate and the crude rate for each category of harm. The denominator for each of the 31 clinical groups is based on numerator inclusion criteria and clinical considerations, as specified in the table below. For example, selection of harmful events for the Sepsis (B17) group is for patients age 1 year and older; thus the same age restriction is applied to the denominator cases. Another example is Delirium (A05); clinically, this does not apply to newborns, so newborns are removed from the denominator. While the crude rates are presented to show trends over time, the actual rates should be interpreted with caution due to the challenge of identifying relevant denominators for each of the clinical groups.

Clinical group	Denominator
A06 Venous Thromboembolism	All
A08 Pressure Ulcer	All
A09 Electrolyte and Fluid Imbalance	All
A10 Medication Incidents	All
A11 Infusion, Transfusion and Injection Complications	All
A12 Aspiration Pneumonitis	All
B13 Urinary Tract Infections	All
B14 Post-Procedural Infections	All
B15 Viral Gastroenteritis	All
B16 Pneumonia	All
C19 Patient Trauma	All
D19 Patient Trauma	All
D20 Device Failure	All
D21 Laceration/Puncture	All
D22 Pneumothorax	All
D23 Wound Disruption	All
D24 Retained Foreign Body	All
D25 Procedure-Associated Shock	All

Clinical group	Denominator
D26 Selected Serious Events	All
A05 Delirium	All except newborns*
A07 Hypoglycemia	All except newborns*
B17 Sepsis	All except younger than age 1
B18 Infections Due to *Clostridium difficile*, MRSA or VRE	All except younger than age 1
A01 Anemia — Hemorrhage	All except obstetric patients†
D01 Anemia — Hemorrhage	All except obstetric patients†
A04 Birth Trauma	Newborns* only
D04 Birth Trauma	Newborns* only
A02 Obstetric Hemorrhage	Obstetric patients† only
A03 Obstetric Trauma	Obstetric patients† only
D02 Obstetric Hemorrhage	Obstetric patients† only
D03 Obstetric Trauma	Obstetric patients† only

Notes

* Newborns are defined by entry code (Entry_code = N).

† Obstetric patients are defined as those with an inpatient record with major clinical category (MCC) of Pregnancy and Childbirth (MCC = 13).

Appendix D: Text alternative for the Hospital Harm Framework

The Hospital Harm Framework includes 4 broad categories of harm, which are further broken down into 31 clinical groups.

The first category is Health Care–/Medication-Associated Conditions, which includes the following clinical groups: A01 Anemia — Hemorrhage; A02 Obstetric Hemorrhage; A03 Obstetric Trauma; A04 Birth Trauma; A05 Delirium; A06 Venous Thromboembolism; A07 Hypoglycemia; A08 Pressure Ulcer; A09 Electrolyte and Fluid Imbalance; A10 Medication Incidents; A11 Infusion, Transfusion and Injection Complications; and A12 Aspiration Pneumonitis.

The second category is Health Care–Associated Infections, which includes the following clinical groups: B13 Urinary Tract Infections; B14 Post-Procedural Infections; B15 Viral Gastroenteritis; B16 Pneumonia; B17 Sepsis; and B18 Infections Due to *Clostridium difficile*, MRSA or VRE.

The third category is Patient Accidents, which includes the C19 Patient Trauma clinical group.

The fourth category is Procedure-Associated Conditions, which includes the following clinical groups: D01 Anemia — Hemorrhage; D02 Obstetric Hemorrhage; D03 Obstetric Trauma; D04 Birth Trauma; D19 Patient Trauma; D20 Device Failure; D21 Laceration/Puncture; D22 Pneumothorax; D23 Wound Disruption; D24 Retained Foreign Body; D25 Procedure-Associated Shock; and D26 Selected Serious Events.

The framework has 3 levels:

1. Hospital Harm: The rate of hospitalizations where at least 1 harmful event occurred.
2. Category: The number of hospitalizations with at least 1 harmful event in that category.
3. Clinical group: The number of hospitalizations with at least 1 harmful event in that clinical group.

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