BC INJURY research and prevention unit

Injury Hospitalization iDOT Tool

Injury Hospitalization Case Definition

The following is the criteria which was used to identify the injury hospitalization cases. The case definition is based on the case ascertainment collectively developed by the BC Injury Surveillance Methodology Working Group.

1. Only acute cases are included. Day surgery and rehab cases are excluded.

2. A diagnosis of injury is not always provided in a discharge abstract when an external cause of injury is recorded. Moreover, an external cause of injury code is not always provided when a diagnosis of injury code is coded in the discharge abstract record. Both an external cause of injury ICD-10 code along with a diagnosis of injury code ICD-10 code (S & T codes) were present in the discharge record before the record was included in case ascertainment.

3. A diagnosis type is used to differentiate “significant” conditions that have an effect on the care provided, the patient’s length of stay and resources used during a patient’s hospital stay, from those that do not influence hospitalization. Secondary diagnosis (type 3) was excluded from case ascertainment. All significant diagnosis types - most responsible diagnosis (type M), proxy most responsible diagnosis (type 6), pre-admission comorbid conditions (type 1), post-admission comorbid conditions (type 2) and service transfer diagnoses (types W, X and Y) – were included in case ascertainment.

4. Complications due to medical and surgical care are considered an external cause of injury (ICD-10 codes: Y40-Y84). However, trauma registries and surveillance of injuries for public health purposes generally exclude these events. Complications due to medical and surgical care were excluded from case ascertainment.

5. Sequelae are used to indicate late effects of injuries, which are themselves classified elsewhere. The "sequelae" include those specified as such, or as late effects, and those present one year or more after the acute injury. Hospitalizations involving injury exclude sequelae. It does not represent current injury, and the information is not captured that well.

6. A record can contain multiple external cause of injury ICD10-CA codes. Each hospital discharge rather than each listed external cause of injury will be counted and reported. The first listed external cause of injury ICD-10-CA code will be selected to represent the external cause of the injury-related hospitalization. The first listed code is the most appropriate to describe the cause of injury.

7. Some patients may incur multiple transfers to hospitals based on the treatments required, other patients may also be transferred to various trauma centres based on their injuries. If examined without regard for the episode, a patient with a series of hospitalizations (an initial hospitalization, a nested hospitalization, a transfer hospitalization, and a readmission hospitalization) would be identified as having 4 hospitalizations when they had one hospitalization episode spanning multiple

facilities. Transfers and/or episode of care will be taken into account when looking at injury hospitalizations. It will consider:

- Admission to an acute care institution occurs less than 7 hours after discharge from another acute care institution, regardless of whether either institution codes the transfer; or
- Admission to an acute care institution occurs between 7 and 12 hours after discharge from another acute care institution and at least one of the institutions codes the transfer.

BC INJURY research and prevention unit

Injury Emergency Department (Lower Mainland) iDOT Tool

Injury Emergency Department Visits Case Definition

The following are the criteria that was used to identify the injury ED visit cases captured in the injury ED visit iDOT tool.

1. Includes ED visits for injuries, identified by diagnosis codes S00–T89 in any of the three diagnosis columns.

2. Includes ED visits from hospitals in the Lower Mainland, including Fraser Health, Vancouver Coastal Health, and PHSA, covering both BC residents and non-BC residents. Hospitals in Interior Health, Northern Health, and Island Health are excluded due to low reporting compliance in NACRS.

3. The analysis does not account for episodes of care, meaning each ED visit is counted separately, regardless of whether multiple visits are from the same patient in the same day.

4. The injury diagnosis codes provide detailed information on:

a. Affected body region (e.g., head, spine, extremities)

b. Nature of the injury (e.g., fracture, laceration)

5. Each record can contain multiple affected body regions and injury natures. Each occurrence is recorded separately, so when requesting a breakdown by injury nature or body region, each is counted in the total ED visit count.

6. Excludes adverse effects (T78) and complications due to certain early complications of trauma or medical and surgical care (T79 – T88) are excluded in injury case ascertainment.

7. In the absence of external cause codes (V01–Y98) in NACRS, we use ICD-10-CA injury diagnosis codes (S00–T89) to infer the mechanisms of injury, labelled as “Type of Injury” on the iDOT tool. The codes provide the following information:

   a. Type of injury (e.g., poisoning, burns)

   b. Subtype of Injury (e.g., alcohol poisoning, narcotic poisoning)

8. A record can contain multiple injury mechanisms contributing to an ED visit. To determine the main injury mechanism for an ED visit, the first listed ICD-10-CA injury diagnosis code will be used.