

## External Causes chapter ICD-11 – initial review and points for raising

We have started to look at the External causes chapter in ICD11. It was always planned to do this one later since it was undergoing extensive work at the WHO end and not deemed fit for us to look at.

There are a number of key points emerging:

1. This chapter consists of a number of repeating sections relating to collisions, toxins, weapons, forces etc. As such they are Events

- ▼ External causes of morbidity or mortality
  - ▼ Unintentional Causes
    - ▶ Transport injury events
    - ▶ Falls
    - ▶ Exposure to object
    - ▶ Exposure to person, animal or plant
    - ▶ Exposure to weapon
    - ▶ Unintentional Drowning or submersion
    - ▶ Threat to breathing
    - ▶ Exposure to thermal mechanism
    - ▶ Unintentional harmful effects of or exposure to noxious substances
    - ▶ Unintentional privation, neglect or maltreatment
    - ▶ Unintentional exposure to other or unspecified mechanism
    - ▶ Exposure to forces of nature
    - ▶ Sequelae of unintentional external causes
  - ▼ Intentional Self Harm
    - ▶ Intentional self harm by transport
    - ▶ Intentional self harm by fall
    - ▶ Intentional Self Harm: Contact with object
    - ▶ Intentional Self Harm: Contact with person, animal or plant
    - ▶ Intentional Self Harm: Contact with weapon
    - ▶ Intentional Self Harm: Drowning or submersion
    - ▶ Intentional Self Harm: Threat to breathing
    - ▶ Intentional Self Harm: Thermal mechanism
    - ▶ Intentional self poisoning or exposure to noxious substances
    - ▶ Intentional self privation, neglect or maltreatment
    - ▶ Intentional Self Harm by other and unspecified mechanism
  - ▶ Assault
  - ▶ Undetermined intent
  - ▶ Operations of war or armed conflict
  - ▶ Legal intervention
  - ▶ Causes of healthcare related harm or injury

2. While it is not always explicit in the rubrics the codes may also represent who is injured.

Foundation Id : <http://id.who.int/icd/entity/625609065>

## **Pedal cycle traffic accident**

---

### **Parent(s)**

- Pedal cycle transport accident
- Special tabulation list of traffic accidents

### **Fully Specified Name**

Pedal cyclist injured in unintentional traffic crash

### **Intent**

- C.1.1 Unintentional

### **Mechanism of Injury**

- C.2.1.1.3 Pedal cyclist

3. SNOMED CT does not appear to represent these events in anything like as much detail as ICD11

This is most likely due to 2 main factors

- i) WHO has reorganized this chapter in relation to ICD10
  - ii) The concepts that were in SNOMED CT, having migrated from CTV3, have been returned to the UK extension. These concepts were originally added to CTV3 when a similar reorganization was undertaken in the move from ICD9 to ICD10, they have an [X] suffix to the term. The motivation for this was partly to enable all ICD10 codes to be reached from CTV3.
4. We have examined one section, Pedal cycle accidents in detail. There are 2 sub-sections traffic & non-traffic

- ▼ Pedal cycle transport accident
  - ▶ Pedal cycle traffic accident
  - ▶ Pedal cycle non-traffic accident

And within each section more detailed sections

▼ Pedal cycle traffic accident

Unintentional Causes: Pedal cycle: Traffic: Driver: Counterpart: Pedestrian  
Unintentional Causes: Pedal cycle: Traffic: Driver: Counterpart: Pedestrian conveyance  
Unintentional Causes: Pedal cycle: Traffic: Driver: Counterpart: Pedal cycle  
Unintentional Causes: Pedal cycle: Traffic: Driver: Counterpart: Motorcycle  
Unintentional Causes: Pedal cycle: Traffic: Driver: Counterpart: Car or light goods vehicle  
Unintentional Causes: Pedal cycle: Traffic: Driver: Counterpart: Bus or coach or heavy goods vehicle  
Unintentional Causes: Pedal cycle: Traffic: Driver: Counterpart: Animal or animal powered vehicle  
Unintentional Causes: Pedal cycle: Traffic: Driver: Counterpart: Railway vehicle  
Unintentional Causes: Pedal cycle: Traffic: Driver: Counterpart: Fixed object  
Unintentional Causes: Pedal cycle: Traffic: Driver: No counterpart: Fall from mode of transport  
Unintentional Causes: Pedal cycle: Traffic: Driver: No counterpart: Other mechanism  
Unintentional Causes: Pedal cycle: Traffic: Passenger: Counterpart: Pedestrian  
Unintentional Causes: Pedal cycle: Traffic: Passenger: Counterpart: Pedestrian conveyance  
Unintentional Causes: Pedal cycle: Traffic: Passenger: Counterpart: Pedal cycle  
Unintentional Causes: Pedal cycle: Traffic: Passenger: Counterpart: Motorcycle  
Unintentional Causes: Pedal cycle: Traffic: Passenger: Counterpart: Car or light goods vehicle  
Unintentional Causes: Pedal cycle: Traffic: Passenger: Counterpart: Bus or coach or heavy goods vehicle  
Unintentional Causes: Pedal cycle: Traffic: Passenger: Counterpart: Animal or animal powered vehicle  
Unintentional Causes: Pedal cycle: Traffic: Passenger: Counterpart: Railway vehicle

etc,

We have provisionally termed these in a more clinical format e.g.

Pedal cycle traffic accident involving collision with light goods vehicle, pedal cyclist injured

Pedal cycle traffic accident involving collision with bus, pedal cyclist injured

These could easily be altered using SQL if a different style is required, e.g.

Pedal cyclist injured in pedal cycle traffic accident involving collision with light goods vehicle

Pedal cyclist injured in pedal cycle traffic accident involving collision with bus

etc.

In total there are 90 ICD11 codes in each section and this pattern is repeated for each mode of transport

▼ Transport injury events

- ▶ Pedestrian transport accident
- ▶ Mobility scooter transport accident
- ▶ Other pedestrian conveyance transport accident
- ▶ Pedal cycle transport accident
- ▶ Motorcycle transport accident
- ▶ Unintentional Causes: Three-wheeler: Transport
- ▶ Car transport accident
- ▶ Bus or coach transport accident
- ▶ Light goods vehicle transport accident
- ▶ Heavy goods vehicle transport accident
- ▶ Horse transport
- ▶ Animal drawn vehicle transport accident
- ▶ Railway vehicle transport accident
- ▶ Streetcar or tram transport accident
- ▶ Agricultural tractor transport accident
- ▶ Special agricultural vehicle transport, except tractor, transport accident
- ▶ Special vehicle mainly used on industrial premises transport accident
- ▶ Special construction vehicle transport accident
- ▶ All-terrain wheeled vehicle transport accident
- ▶ Other special all-terrain vehicle transport accident

etc.

Having examined the pedal cycle section almost all of the ICD11 codes will require new SNOMED CT concepts if SNOMED CT is to map to all of them.

With the need for 1 to many maps to allow for disjunctive ICD11 rubrics we think 147 SNOMED CT concepts are required for the 90 ICD11 codes in the pedal cycle accidents section.

There are 3149 codes in the chapter and if extrapolated across the rest of the chapter this could result in approximately 5200 new SCT concepts from this chapter alone.

If the distribution of the rest of the chapters had been the same we would have expected about 750 additions, so while we had expected a different distribution there is a significant impact from this chapter, and the final total for accessing all codes within the MMS would be 8,000 new concepts.

We will not be certain of a final total until we have looked at some other sections as these may be better represented in SNOMED CT than transport accidents, but given the potential numbers involved we feel it is important to raise the issues now given the implications not only for our work but also the authoring and mapping teams.

5. There are some factors that make this section potentially easier, despite the numbers involved.
  - i) Repeating sections mean the modeling and terming can be semi-automated. This is an approach we have taken with the Injury chapter, which has similar repeating patterns. It would need checking with more sections but we believe we could still do this in the timescales, if the current funding bid is available;
  - ii) Concepts should be easier to inspect in SCA as all are primitive with no attributes so only terms and parents would need to be inspected;
  - iii) The task for the mapping team would be relatively easy as these are all 1:1 maps.
  
6. In order to facilitate decision-making some further information might be required.
  - i) From this brief investigation SNOMED CT does not appear to reach all codes within ICD10 – is there an explicit policy on this?
  - ii) If a defined policy exists on what codes are and are not within scope to be reached by SNOMED CT, is this the same policy that will be taken forward to ICD11? Is there a political imperative to reach every ICD11 code from SNOMED CT?

This last question has a wider impact than just the External causes chapter as there are currently 900 ICD11 codes within scope of ICD11 MMS that are flagged not to be added, these will be reviewed as part of our work plan but we need to know the principles.