A classification system is a tool for the organization of facts within a framework and is aimed at reducing the complexity of diffuse information. The Patient Safety Incident Classification will be developed for the collection and analysis of patient safety data derived from various sources but originating in primary care. The object of this classificatory process is the patient safety incident, defined as follows:

“A patient safety incident in primary care is any unintended event or hazardous condition resulting from the process of care, rather than due to the patient’s underlying disease, that led or could have led to unintended health consequences for the patient.”

To classify patient safety data it is recommended that every applicable class be selected. The user should avoid speculating about what happened and it is strongly recommended that he or she rely on facts from the original data source.

The classification system presented here is based on recommendations that have been made regarding the context and structure of a classification system for patient safety incidents in primary care, as well as on already existing classification systems. The following systems played a particularly important role in its development:

- International Taxonomy of Medical Errors in Primary Care
- Patient Safety Event Taxonomy
- Eindhoven Classification Model
- Applied Strategies for Improving Patient Safety
- Diagnostic Error Evaluation and Research Taxonomy
- NCC MERP Taxonomy of Medication Errors
- International Classification for Patient Safety

Our classification system is still work in progress. Some classes and subclasses still lack definitions and / or need to be populated with further attributes. The missing information is indicated by three dots “…” on the relevant level of the classification system. Last changes are indicated by red letters.

The classification structure is:
(Definitions for all levels are written in italics.)

A. **Dimension (level 1)**
   
   A discrete module to describe a well-defined aspect of the incident. It is populated with classes and subclasses to specify the aspect in question and can be used separately as well as in combination with other dimensions according to the purpose.

   o **Class (level 2)**
     
     A general category to collect objects with similar attributes.

     • **Subclass (level 3)**
       
       A more specific category to collect objects that differentiates according to the value of an attribute and specifies objects summarized on the superior level.

       • **Subclass (level 4)**
         
         A very specific category to differentiate objects summarized on the superior level.
A. Incident type

A descriptive term for an incident according to the relevant episode in the care process (and related activities) during which the incident occurred.

- Incident related to access
  Occurrence related to the faulty feasibility of patient to enter or to use the health care system.
  - Availability related incident
    Occurrence related to the faulty relationship of the volume and type of existing services (and resources) to the client's volume and types of needs.
    - ...
  - Accessibility related incident
    Occurrence related to the faulty relationship between the location of the supply and the location of clients, taking account of client transportation resources and travel time, distance and cost.
    - ...
  - Accommodation related incident
    Occurrence related to the faulty relationship between the manner in which the supply resources are organized to accept clients and the client's ability to accommodate to these factors.
    - ...
  - Affordability related incident
    Occurrence related to the faulty relationship of prices of services and provider's insurance or deposit requirements to the client's income, ability to pay, and existing health insurance.
    - ...
  - Acceptability related incident
    Occurrence related to the faulty relationship of client's attitudes about personal and practice characteristics of providers to the actual characteristics of existing providers, as well as to provide attitudes about acceptable personal characteristics of clients.
    - ...

- Other incident related to access

- Incident related to clinical task
  Occurrences related to faulty tasks constituting the type of medical activity
  - History taking related incident
    - ...
  - Examination/ problem identification related incident
    - ...
  - Diagnostic related incident
    - ...
  - Treatment related incident
- Acut care related incident
- Chronic disease management related incident
- Palliative care related incident
- Delivery related incident
  - ...
- Rehabilitation related incident
  - ...
- Prevention related incident
  - ...
- Research related incident
  - ...
- Other incident related to clinical task

- Incident related to organizational task
  Occurrences related to faulty tasks involved in running an organization.
  - Administration related incident
    - ...
  - Supervision/management related incident
    Occurrences related to internal guidelines and safety/quality improvement.
    - ...
  - Maintenance related incident
    Occurrences related to servicing and repair of equipment, as well as the necessary resources to care for the organizational environment.
    - ...
  - Payment related incident
    - ...
  - Other incident related to organizational task
B. Incident characteristic
Selected attributes of an incident that describe the who, where and when of an incident’s origination and its discovery or detection.

- Patient characteristic
  Selected features of a patient and the original reason for seeking care.
  - Patient demographics
    Description of the patient in terms of age and sex.
  - Familiarity patient-provider
    To describe if the provider has previously seen the patient.
  - Socio-economic status
    An individual's or family's economic and social position relative to others, based on income, education, and occupation.
  - Reason for encounter – patient perspective
    Motive of the patient for seeking health related help or advice.
  - Co-morbidities and chronic conditions
  - ...

- Person involved other than patient
  Persons involved in the origin of incident.
  - Relative, representative or friend of the patient
  - Physician
    A doctor of medicine who, by virtue of education, training and demonstrated competence, is fully licensed to practice medicine and may be granted clinical privileges by a healthcare organization to perform specific diagnostic or therapeutic procedures.
    - General practitioner
    - Paediatrician
    - Specialist
    - Dentist
    - ...
  - Pharmacist
    A person trained and licensed to dispense drugs – a druggist.
- Assistant pharmacist
- Chemist
- ...

- Non-physician carer
  - Psychologist
  - Midwife
  - Therapist
  - Nurse
  - Social worker
  - ...

- Practice staff
  - Health care assistant
  - Health visitor
  - Receptionist
  - Practice manager
  - Technical assistant

- Healer
  - Homeopath
  - ...

- Carer at the interface between hospital and primary care
  - ...

- Other person
- Person unknown

- **Setting**
  
  *Type of health care organization where the incident occurred.*

- Midwifery/Obstetrics
- Dental care
- Acute medical care
- Emergency care
- Nursing care
- Pharmacy
- Rehabilitation
- Assisted living
- ...
- Other setting
- Setting unknown

- **Facility**
  *Actual location where the incident occurred*
  - Medical practice
  - Nursing home
  - Rehabilitation centre
  - Dental practice
  - Birth centre
  - Hospital
  - Pharmacy
  - Patient’s home
  - ...
  - Other facility
  - Facility unknown

- **Frequency of occurrence or reoccurrence**
  *The commonness of this kind of incident in the facility the event took place.*
  - **Frequency, discrete**
    *A single event, occurring for the first time.*
  - **Frequency, recurring**
    *An event, occurring for at least the second time.*
  - Frequency indeterminable
  - ...

- **Discovery/detection characteristic**
  *Selected attributes of an incident that describe the who, where and when of an incident’s discovery or detection.*
  - **Who discovered/detected the incident**
    *The person who discovered the incident.*
    - ...

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• Where was the incident discovered/detected
  *The location where the incident was discovered.*
  - ...

• When was the incident discovered/detected
  *The time when the incident was discovered.*
  - ...

• How was the incident discovered/detected
  *The mechanism/process that led to the discovery of the incident.*
  - ...

• Discovery/detection indeterminable
C. Contributing factor

Circumstances, actions or influences which are thought to have played a part in the origin or development of an incident, or to increase the risk of an incident.

- Active failure
  The intended or unintended unsafe act or omission by front-line operators who are in direct contact with the patient or the system. This unsafe act or omission may result in errors or violations that can immediately impact safety.
  - Failure by a single health care professional
    Act or omission related to a single person working in the health care sector.
    - ...
  - Failure by the health care team
    Act or omission related to the interaction of two or more persons working together in a health care system facility
    - ...
  - Failure by the patient
    Act or omission related to the person seeking health care, support or advice and whose actions have influenced treatment and are beyond the control of staff.
    - ...
  - Failure by a relative, representative or friend of the patient
    - ...
  - Failure by a person not otherwise specified
    - ...
  - Failure indeterminable

- Latent condition
  A defect or flaw in the design, organization, training or maintenance of a system resulting from decisions and actions associated with persons at the “blunt” end. The defect facilitates active failure and its effects are typically delayed or lay dormant in the system for a lengthy period of time.
  - Condition in physical environment
    - ...
  - Condition in equipment
    Failures that involve technical instruments or other objects.
    - ...
  - Condition in regulation/payment
    Failure related to maintenance of organizational resources (e.g. selection, training, staffing) and safety budgets.
    - ...
• **Condition in** work organization
  Failures resulting from collective practices and approaches to risk and patient safety (e.g. formal accountability, processes, communication channels, safety culture, transfer of knowledge).
  - ...

• **Condition not otherwise specified**

• **Condition** indeterminable
D. **Outcome**

The potential or actual impact which is wholly or partially attributable to an incident.

- **Outcome for patient**
  
  The potential or actual impact upon the patient which is wholly or partially attributable to an incident.

  - **No Harm**
    
    The absence of any impairment of body function/structure or mental disturbance requiring intervention, or of any non-medical impairment.

  - **Harm**
    
    Any impairment of body function/structure or mental disturbance requiring intervention, or of any non-medical impairment.

    - **Harm – Type**
      
      A description of the harm in terms of a clinical or non-clinical outcome.

    - **Harm – Degree**
      
      The severity of harm described by the additional efforts necessary to reach a desirable state of well-being.

    - **Harm – Duration**
      
      The severity of harm described by the length of time it is detectable.

  - **Harm indeterminable**

- **Outcome for relative, representative or friend of patient**

  The potential or actual impact upon the family which is wholly or partially attributable to an incident.

  - **No Harm**
    
    The absence of any impairment of body function/structure or mental disturbance requiring intervention, or of any non-medical impairment.

  - **Harm**
    
    Any impairment of body function/structure or mental disturbance requiring intervention, or of any non-medical impairment.

    - **Harm – Type**
      
      A description of the harm in terms of a clinical or non-clinical outcome.

    - **Harm – Degree**
      
      The severity of harm described by the additional efforts necessary to reach a desirable state of well-being.

    - **Harm – Duration**
      
      The severity of harm described by the length of time it is detectable.

  - **Harm indeterminable**
• **Outcome for health care provider**

  *The potential or actual impact on a health care provider that is wholly or partially attributable to an incident.*

  - **No Harm**
    *The absence of any impairment of body function/structure or mental disturbance requiring intervention or of any non-medical impairment.*

  - **Harm**
    *Any impairment of body function/structure or mental disturbance requiring intervention, or of any non-medical impairment.*

    - **Harm – Type**
      *A description of the harm in terms of a clinical or non-clinical outcome.*

    - **Harm – Degree**
      *The severity of harm described by the additional efforts necessary to reach a desirable state of well-being.*

    - **Harm – Duration**
      *The severity of harm described by the length of time it is detectable.*

  - **Harm indeterminable**

• **Outcome for organization**

  *The potential or actual impact on an organization that is wholly or partially attributable to an incident.*

  - **No Harm**
    *The absence of any non-medical impairment.*

  - **Harm**
    *Any non-medical impairment.*

    - **Harm – Type**
      *A description of the harm in terms of financial, social or legal outcome.*

    - **Harm – Degree**
      *The severity of harm described by the additional efforts necessary to reach a desirable state of well-functioning.*

    - **Harm – Duration**
      *The severity of harm described by the length of time it is detectable.*

  - **Harm indeterminable**
E. Action taken
   Measure taken either to minimise the adverse effects of incidents or proposed to reduce the probability of the re-occurrence of incidents and adverse effects.

   • Action taken for mitigation
     Action taken to prevent or moderate the progression of an incident towards harming a patient. Action taken before the incident can unroll his full potential to harm the patient.
     - Action directed to patient
     - ...  
     - Action directed to family
     - ...
     - Action directed to staff
     - ...
     - Action directed to organization
     - Action directed to agent
       Action aimed at affecting the chemical substance or biological substance responsible for the harm.
     - Other action
     - Action unknown

   • Action taken for amelioration
     Action taken or circumstance altered to make better or compensate any harm succeeding an incident. Action taken after the incident harmed the patient.
     - Action directed to patient
     - ...
     - Action directed to family
     - ...
     - Action directed to staff
     - ...
     - Action directed to organization
     - Action directed to agent
       Action aimed at affecting the chemical substance or biological substance responsible for the harm.
     - Other action
     - Action unknown

   • Action taken for prevention
Step taken or proposed at the facility where the incident occurred or originated aiming at prevention of reoccurrence of the same or a similar patient safety incident or at reducing the probability of harm due to a future similar patient safety incident. Prevention is independent from an actual incident. It refers to setting up or improving barriers in the system to avoid reoccurrence.

- Action directed to patient
  - ...
- Action directed to family
  - ...
- Action directed to staff
  - ...
- Action directed to organization
  - ...
- Action directed to agent or environment
  - Step aimed at affecting the chemical substance or biological substance responsible for the harm...
- Other action
- Action unknown