

## **Minimum Basic Data Set (MBDS), Unintentional Injuries**

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### **Introduction**

Good morning. I was chosen from the group to be the presenter of our discussion and conclusions. I will do my best to give a report from the discussion in these two workshops, which were very creative. Our discussions might be divided into the following topics:

1. What do we understand with a MBDS
  - for describing?
  - for intervention?
  - for evaluation?
2. Which severities ought to be surveilled: Deaths, inpatients, handicaps etc.? Which are the data sources?
3. Which variables belong to the MBDS?
4. Which event types (accident types) and injury types should be defined for trend analyses which might be utilized in international comparisons?

I noticed, when the group on MBDS for intentional injuries gave their report, they told us that they were driven by the need of which data is desirable to get. In our group, we were also to a great extent driven by the respect about the difficulties in collecting reliable data. A lot of the members in our group had worked with this question for many years, for instance how to collect data in an emergency department. Many of us from the Nordic countries also have presented extensive lists of variables in a MBDS to our health authorities, asking them to collect this MBDS. They then tell us to forget our wishes, because such a list of variables would be impossible to collect in the daily routine in one of our hospitals without special resources in man-power and money. In our group were also representatives from developing countries, some with a rather low level in the infrastructure needed for collecting data in a national health system. Due to this experiences and situation, we need to be realistic about how detailed this MBDS should be and can be in order to be collected in a routine national system for international comparisons.

### **What Do We Understand With a MBDS?**

A figure was presented in the group clarify the difference between a MBDS and other data sets (see figure 1). We might divide the data sets in three groups:

1. A Minimum Basic Data Set (MBDS), also called a Core Set. The variables in this MBDS ought to be very general case indicators. The purpose for collecting a MBDS as this might be for policy setting, for identifying "hot spots," to follow trends on the main accident/injury types locally, regionally and centrally and for international comparisons. For being able to follow trends, the collection of a MBDS ought to be as close to 100 percent as possible in the group and in the area we want to monitor.
2. A Standard Data Set (SDS) consists of more detailed indicators, and eventually a free text. The data set collected in most of the existing hospitalbased injury surveillance and registration systems in the world today might be a SDS: NEISS in USA, NOMESCO in the Nordic countries, EHLASS in many European countries, PORS in the Netherlands, HASS in United Kingdom. We might also consider the chapters XIX and XX in the ICD-10 as a SDS, since they are rather detailed. And I have to admit that in my country we doubt that it is possible to collect this information from our hospitals in a routine system, with a quality good enough to enable us to make good and reliable statistics.

A SDS is collected for defining more detailed "hot spots", to identify some preventive means, and for making some research. However, to really get information which makes it possible for you to understand why the accident/injury happened, and hence will give you possibilities to propose efficient preventive means, you have to go to the third level of details:

3. Expanded Data Set (EDS) contains more or less case stories from the different accidents/injuries. There might be modules created for the most important accident/injury types you want to investigate, for instance traffic accidents, burns, occupational accident, spinal cord injuries etc. These modules might contain a set of standardized questions.

**Figure 1. Different data sets for collecting data on unintentional injuries with regard to the level of detail of the information and the purpose of collecting the data set**

Level of detail of information	Different data sets	The purpose of collecting the data set
General case indicators	MBDS (A Core Set)	Policy Setting Identify "hot spots" Follow trends International comparisons
More detailed indicators + evt. free text	Standard data set (SDS) ICD – X, chapter XIX, XX NEISS, NOMESCO, EHLASS, HASS, PORS	Identify more detailed "hot spots" Identify preventive means (Research, to some extent)
Case stories	Expanded data sets (EDS) Modules on: Traffic, Burns, Falls, Products etc.	Identify preventive means Research

One very important characteristic of this figure is that the cost for collecting the information will increase the more downwards to the bottom of the figure you get.

**Which Severities Ought to Be Surveilled: Deaths, Inpatients, Handicaps Etc.? Which Are the Data Sources?**

We put up a list of the different consequences or severities of an accident which we think is important to surveill:

1. Deaths
2. In-patients, number and days
3. Handicaps, impairments, disabilities
4. Rehabilitation, number and days
5. Sick leaves, numbers and days
6. Economic consequences

If we are able to monitor these consequences with a MBDS in a continuously running system, then we really are able to show the burden of accidents and injury to the society, and to monitor how this develops over the years. This will also be very useful for evaluation of preventive efforts.

We identified two main types of data sources. The numbers in the margin show which kind of severities or consequences are found in the different sources:

- Primary – mostly within the health system
  1. Death certificates
  2. Hospital admission and discharge registrations
- Emergency department registrations
  - 3-5 Population surveys
- Family practitioners and other primary care providers
- Secondary, mostly outside the health system:
  - 3? Trauma registers
  - 2 Other surveillance systems
  - 3-6 Insurance registers
  - 3-6- National insurance registers, social security registers

#### **Which Variables Belong to the MBDS?**

This question was the most important in our group to discuss. We developed the following list, where the variables are placed in some sort of priority. We think that a surveillance or monitoring system should start on the top and go down as far you get your system to register with the resources available. As one of us said: You will have a meaningful system also when you register just age and sex. But of course, the meaning will increase the longer down you will come on the list (but also the cost)

We have also connected these variables to the important W's in this business: Who, Where, When and What.

The variable to start with is the *intent*. We have to know if the injury was intentionally or unintentionally.

#### **Who:**

Demographic data as: Age, sex, race, residence

#### **For defining main accident type:**

Activity when injury occurred (as the fifth digit in ICD-X, chapter XX or one digit in activity code in NOMESCO)

#### **Where:**

Place of occurrence (as the sixth digit in ICD-X, chapter XX or one digit in the place of occurrence in NOMESCO)

- this is also important for defining main accident type.

Address/municipality where accident happened

#### **When:**

Date when injury occurred

#### **Outcome of injury, to measure the consequences:**

Type of outcome will depend on your data source: Days in hospital, approx. costs involved, degree of disability etc.

**What:**

Mechanism of accident/event (as 1–4 digit in ICD–X, chapt XX)

Type of injury/body location (as ICD–10, chapt. XIX)

We think that the activity and place of occurrence are important variables because they will make it possible to define the main accident/event types according to the authorities responsible for the prevention of accident, and those accident types are important to monitor.

**Which Event Types (Accident Types) and Injury Types Should Be Followed for Trends Which Might Be Utilized for International Comparison?**

In our groups, we also tried to define which event or accident types and injury types we want to register for being able to follow the development of these groups in the different countries, and also for international comparisons. The definition of these types could be a task for this ICE (International Collaborative Effort) or some other group.

There are at least three important variables which enables us to construct or define the main accident/event types and injury types:

- Activity when accident happened
- Place of occurrence
- Nature of injury

Different activities are: Work, education, sport etc.

Places of occurrence are: Home, school, road etc.

A combination of these two variables will create the different main accident/event types as: Occupational accidents, Home accident, School accidents, Sport accidents, Traffic accidents etc. Here international standardization/definition work is necessary.

The nature of injury define important injury types which we should be able to monitor: Burns, drowning, spinal cord injuries etc. Also here international standardization/definition work is necessary.

Well, this was more or less our contribution to answer the question about a minimum basic data set for unintentional injuries. If we are able to define a MBDS which can be used by most countries, and we are able to find some way of reporting the main types, then we would come a great step forward in getting what we all are looking for, a better picture of the situation. Thank you.