Agenda

• SafetyCube and work on Serious road injuries
• Introduction to the guidelines
• Preliminary results of data analyses
• Data collection in all EU Member States and EFTA countries
• Discussion
SafetyCube project

Funded by the European Commission under the Horizon 2020 research framework programme

Coordinator: Pete Thomas, Loughborough University

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Finish: April 2018

www.SafetyCube-project.eu
SafetyCube primary objective

Road Safety Decision Support System

Risks

Measures

- strategies
- measures
- cost-effective approaches

Reduce casualties
- All road users
- All severities

Policy-makers & stakeholders
Serious road injuries (WP7)

Support the objective set by the EC to reduce the number of serious road injuries.

Main objectives:
• Assess and improve estimation of serious road injuries
• Determine and quantify health impacts
• Estimate economic and immaterial costs
• Identify key risk factors related to (health impacts of) serious injuries
Task 7.1

- Overview of data and procedures that are applied across EU member states and EFTA countries

- Guidelines for the registration and monitoring of serious road injuries for each of the three ways for collecting data identified by the High Level Group
Guidelines (1)

Applying correction coefficients on police data

- *Data sources*
- *Methods for deriving coefficients*
- *How to apply coefficients to police data*

• Examples from France and Belgium

• Questionable if it is possible to transfer correction factors from one country to another
Guidelines (2)

Using hospital data alone

• Criteria for case selection/inclusion
  – Exclude fatalities within 30 days
  – Exclude readmissions
  – Selection of E-codes/V codes
  – Traumatic injury in any diagnosis

• Comparison of different methods for deriving MAIS3+
  – Direct coding vs different conversion tools + different versions of AIS
  – Effect of using a limited number of injuries
  – Effect of truncation of injury codes (less than 5 digits)
Guidelines (3)

Using linked/matched police and hospital data

- Examples for Rhône region, the Netherlands and Slovenia
- Intersection and remainders (capture/recapture)
Differences in reporting according the method used

1. To compare estimations of serious injuries depending on the method used
   a. by applying a correction on police data,
   b. by using hospital data alone, and
   c. by using linked police and hospital data

• The Netherlands
• United Kingdom
Data collection under Task 7.1

- Overview of data and procedures that are applied across EU Member States
- Guidelines...

The SafetyCube data collection sheet
Data collection topics (EU & EFTA)

- **Prime contact** in the country
- **General information** on collection practices, responsibilities, ...
- **MAIS3+ methodology**: 1, 2 or 3 (or none of them)?
- Information on **hospital data**
- Detailed **information on Method 1 / 2 / 3**
- **Concrete figures**: fatalities & serious injuries
Questions in detail 1

Responsibilities in the police & health data sector

- Collection
- Analysis
- Publication
Questions in detail 2

MAIS3+ methodology
- Which of the method proposed by EC is in use?
- Changes in methodology planned?
Questions in detail 3

Information of health/hospital data

• Data sources
• Inclusion criteria (e.g. outpatients, day care patients, re-admissions, scheduled admissions, fatalities within 30 days)
• ICD version
• Nr. of diagnoses & nr. of digits
• Conversion algorithm
• Proportion of failed transformations (ICD > MAIS)
• ICD injury codes
• Codes on external causes
• ...
Questions in detail 4

Details on EC methods 1, 2, 3

• Correction coefficient on police data
  – *Estimation & application of coefficient*
  – *Available by age, gender, road user type, ...*

• Use of hospital data alone
  – *Description of method*
  – *Representative?*

• Link police / hospital data
  – *Which databases?*
  – *Method?*
  – *Assessment of underreporting?*
Questions in detail 5

Crash & Serious injury figures

- Nr. of fatalities
- (serious) injuries
  - Police
  - MAIS$^3$+
- Gender?
- Age groups?
- Different MAIS levels available?
Experts contacted

1. Inside SafetyCube
2. Respondents to FERSI questionnaire
3. Further FERSI & IRTAD contacts
4. Care Experts (meeting 8 March)
Responses

- From 16 countries, as of 8 March
  - Austria
  - Belgium
  - Czech Republic
  - Denmark
  - Finland
  - France
  - Germany
  - Greece
  - Hungary
  - Italy
  - Netherlands
  - Portugal
  - Slovenia
  - Spain
  - Switzerland
  - UK
Some first results: big spread!

• Varied methods to determine MAIS$_3^+$ across the countries
  – 1: AT (formerly), BE (based on method 2 for years 08-11), UK
  – 2: AT (now), NL, PT, ES, England,
  – 3: FIN, SLO, CH,
  – Other: FR (combination of 1 and 3 and 4), DE (GIDAS)
• Number of diagnoses: 1 (AT, BE, IT) .. 9/10/14/20.
• Number of digits: 4 (AT, PT, SLO) .. 5
• Conversion algorithm: AAAM!, ICDPIC (BE), ICDmap90 (NL), AGU (CH)
• MAIS$_3^+$ per fatalities: 2.3 (FIN) to 13.2 (NL)
• Several countries are only in early phases of the process
Towards 28 + 4 countries …

- We look for your input for completing the overview!
- How can we support you in the process?
- Your requirements and needs?
- What are your expectations & needs from the SafetyCube guidelines?

Discussion
Selection of External causes

1. **ICD9-CM**
   - Inclusion of E-codes E810-E819 + E826, E827, E829
   - E-code E849 can indicate if the accident occurred on a public road, or use a correction for not on a public road for E826-E829
   - Exclude E820-E825 (not on a public road) and E828 (horse)

2. **ICD10**
   - V00-V89
   - 4th digit indicates whether or not it is a road traffic accident (if this is reliable, otherwise apply a correction factor)