

## Study on Serious Road Traffic Injuries in the EU

Letty Aarts 27 November 2015



## Aim of the study

- Understanding factors that contribute to serious injury
  - Main accident circumstances
  - Injury factors
- Focus
  - Pedestrians
  - Cyclists
  - Motorcyclists
  - Car occupants
- Final aim: to help countries with effective measures



#### Consortium



# Loughborough University





Study on Serious Road Traffic Injuries in the EU

## Approach

- Technical tasks:
  - 1. Gathering of data and information
  - 2. Identification of accident types and accident scenarios
  - 3. Assessment of factors influencing the severity of injuries



## **Task 1: Data and information**

Macroscopic data

CountriesIn-depth sourcesHospital dischargesTrauma registerLinked police- hospital dataAustriaCases via IGLADCases via IGLADImage: Cases via IGLADImage: Cases via IGLADImage: Cases via IGLADCraceCases via IGLADCases via IGLADRhône registerImage: Cases via IGLADImage: Cases via IGLADFranceCases via IGLADCases via IGLADDGU Trauma RegisterImage: Cases via IGLADImage: Cases via IGLADGermanyGIDAS Cases via IGLAD Cases via IGLAD Cases via IGLAD Cases via IGLADHospital registerImage: Cases via IGLADItalyCases via IGLAD Cases via IGLAD Cases via IGLAD Cases via IGLAD Cases via IGLADLMR-traffic registerBRON-LMR Real numbers databasePolandCases via IGLAD Cases via IGLADSTRADAUKRAIDSRAIDSStrada Cases via IGLAD Cases via IGLADStrada Cases Via IGLAD Cases Via IGLAD Cases Via IGLADStrada Cases Via IGLAD					
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## **Task 1: Data and information**

- Macroscopic data
  - Large number of cases
  - Low number of variables and missing data
- In-depth data:
  - Small number of cases
  - Large number of variables
- Relationships
  - Number of cases: level of confidence of results
  - Number of variables: explanatory value
- Meta-data

## Task 1: Data and information

- Case inclusion criteria;
- Geographical scope;
- Purpose of data;
- Collection method;
- Level of under-reporting;
- Field specifications;
- Availability of CADAS variables;
- Date range of accidents;
- Injury details;
- Data completeness;
- Data accuracy;
- Validity of any data matching procedures;
- Suitability for specific analysis in Tasks 2 and 3;
- Impact on the reliability of the final results.

## Task 2: Accident types and scenarios

- Analysis of macroscopic and in-depth data
- Main accident types and scenarios for:
  - Pedestrians,
  - Cyclists,
  - Motorcyclist,
  - Car occupants.



- EU-extrapolation
  - Extrapolation of relationship between deaths and MAIS3+
  - Imputation based on country specific characteristics

## Task 2: Accident types and scenarios

- Factors that will be addressed:
  - Accident opponent(s)
  - Accident type
  - Demography
  - Road type
  - Location details
  - Contributing factors
  - Injury type
- Suppression of low numbers
- Statistical clustering of scenarios





## Task 3: Injury factors

- Macroscopic data
  - Descriptive methods of contributing factors to injury levels
  - Multivariate methods to assess combinations of contributing factors



#### Task 3: Injury factors

#### • In-depth data

- Detailed analyses on injury factors
- Several methods (descriptive and multivariate)



## **Delivery of results**

- Final report: Oktober 2016
- Interaction during project
  - EC
  - CARE-experts
- Contact
  - EC: Susanne Lindahl
  - Project team: Letty Aarts



