Current and future potential of CARE and the European Road Safety Observatory

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Road accident data - The questions

Do we have the data we need?

Do we need the data we have?
Road Accident Data

Usefulness and availability of Data

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CARE Database
Community database on Accidents on the Roads in Europe

Objectives

Provide a powerful tool which would make it possible to:

i) Identify and quantify road safety problems throughout Europe

ii) Evaluate the efficiency of road safety measures

iii) Determine the relevance of Community actions

iv) Facilitate the exchange of experience in this field
CARE Database - Description

- A European Commission initiative to create a database on road accidents recorded in the European Roads.

- **High level of disaggregation of the data** (i.e. CARE comprises detailed data on individual accidents as collected by the Member States.

- **Maximum flexibility and potential** with regard to analysing the information contained in the system and opens up a whole set of new possibilities in the field of accident analysis.
CARE database development started in 1988, as a result of the combined effort of the European Commission competent services (DG - TREN, Eurostat, Informatics Directorate) under the coordination of DG - TREN.

- **First phase** (1988 - 1993): feasibility study for the creation of CARE led to a positive result and thus, to the European Council decision of December 1993 for the creation of a disaggregate road accident database.

- **Second phase** (1993 - 1996): pilot operation of CARE, during which all operational problems were dealt and overall evaluation took place. Results of the evaluation were positive and the European Commission opened the way for the further development of CARE into an integrated information system.
- **Third phase** (1996 -1999): harmonisation of data contained inside the database allowing international comparisons and exchange of experience. CAREPLUS I and II projects thoroughly examined the compatibility of data variables and values and proposed a set of 38 variables containing 488 common-definition values (17 variables and 217 values from CAREPLUS I and 19 variables and 271 values from CAREPLUS II).

- **Fourth phase** (1999 - 2002): full operation of the system and the migration to a modern and efficient software platform (Oracle). Today, the CARE users can exploit a user-friendly interface to produce detailed multi-dimension reports.

- **Fifth phase** (2002 - ): full operation of the system and progressive extension to the 10 new Member States. Users and queries continuously increase.
### CARE Database - Availability

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- Data received and uploaded
- Data received and being processed
- Data missing

- Data from the **10 new Member States** will be progressively incorporated into CARE database.
CARE Database - List of variables

CAREPLUS 1
- month
- hour
- day of month
- day of week
- person class
- injury severity (person)
- sex (person)
- age (person)
- lighting
- natural light
- street light
- accident severity
- person type
- area type
- vehicle type
- motorway
- collision type
- junction
- junction type
- weather

CAREPLUS 2
- registration country
- nationality
- vehicle age
- driving licence age
- road surface condition
- region/province
- speed limit
- alcohol test
- psychophysical circumstances
- alcohol level
- movement (pedestrian)
- carriageway type
- number of lanes
- manoeuvre (driver)
- manoeuvre (vehicle)
- junction control
- security equipment
- road markings
- hit and run
CARE Database - List of Variables and Values
CARE Database - Basic Fact Sheet
Risk/Exposure data incorporation in CARE will allow more useful road accident analyses and better description of the road accident phenomenon.

- **Types** of Risk/Exposure Data:
  - Vehicle-kilometers
  - Person-kilometers
  - Fuel consumption
  - Road network length
  - Population's pyramid of users
  - Fleet of vehicles by category
  - Driver's population by category and age of driving license

- Better exploitation of existing road accident data by developing appropriate road accident rates (i.e. fatalities per million veh-kms).
Road safety performance in EU Member States: Car occupant **fatality rate** per **billion vehicle-kilometers** in 2002 (Source: CARE, Sartre 3)
CARE Database - Road Safety Performance Indicators (1)

- Variables used complementary to existing road accident data to measure changes in the operational conditions of traffic system, allowing **better understanding** of road accidents and underlying processes, enabling **policy interventions monitoring** and facilitating **decision making**.

- **Types** of Road Safety Performance Indicators:
  - Alcohol and drug use
  - Speeds
  - Protection systems
  - Daytime running lights
  - Vehicle's passive safety
  - Road network
  - Trauma management
- **Interrelations** in road safety policy

- Development of a concrete picture of **road safety level** and detection of the **emergence of road safety problems** at an early stage.

- Use of **qualitative** and **quantitative** information to help determine a road safety programmes’ success in achieving its objectives.
Objectives

Assemble a coordinated set of data resources that together will meet the European Commission needs for policy support and enable to:

i) Monitor progress towards road safety targets

ii) Identify best practice

iii) Ensure that new regulatory and other safety actions will result in the maximum casualty reduction.
CARE Data Base - The way forward

Development of a **European Road Safety Observatory** with:

- Disaggregate road accident data (accidents, casualties)
- Risk/Exposure data (vehicle-kilometers, person-kilometers etc)
- Road environment data (road network data, risk sites, etc.)
- Road Safety Action Plans
- Data on enforcement (number of infringements etc)
- In-depth data (accident/casualty causation, accident cost)
- Road safety legislative frameworks
- Links with other databases (i.e. medical) and information systems
- Knowledge database (studies on road safety)

**Road Safety is a major societal issue for this decade**