Comparative Analysis of Road Safety of the Elderly in Europe

George Yannis, Petros Evgenikos, Panagiotis Papantoniou
Jeremy Broughton
Pete Thomas, Alan Kirk
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Introduction

- Elderly people (> 64 years old) are vulnerable road users

- In 2010, over 6,500 elderly people died in road traffic accidents in 24 European countries

- The number of elderly people who died in the EU-19 countries fell by 30% between 2001 and 2010

- Elderly fatalities constitute 22% of fatalities of all ages

- Among the larger countries, the proportion of elderly fatalities ranged between 17% in Poland and 29% in the Netherlands
Objectives

- Macroscopic analysis of basic road safety parameters related to elderly people, using data from the EU CARE database with disaggregate data on road accidents, together with data from other international data files.

- Comparative analysis among countries will allow for drawing an overall picture of the safety level of elderly people in Europe.

- Provide useful support to all decision makers working for the improvement of safety in the European road network.

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Methodology

- Road accident data from the EU-CARE database:
  - 24 EU countries (BE, CZ, DK, DE, IE, EE, EL, ES, FR, IT, LV, LU, HU, MT, NL, AT, PL, PT, RO, SI, SK, SE, FI, UK)
  - Data for the period 2001-2010
  - Road accident data on elderly people and other age groups correlated with basic safety parameters:
    - mode of transport
    - casualty age & road user type
    - road network type
    - day of week and time of day
    - seasonality
  - Available risk exposure data from other international datafiles (Eurostat, etc)
Number of fatalities and fatality rate by age group

- The elderly suffered fewer fatalities than the younger adult groups, but their fatality rates were amongst the highest.
- The rate of road traffic fatalities per million population begins to rise about the age of 65.
The number of elderly people who died in the EU-19 countries fell by 30% between 2001 and 2010.

Although the number of elderly fatalities has decreased over the last decade, the total number has fallen faster and the proportion of all fatalities who were elderly has tended to rise.
Elderly fatalities by age group and gender

- The highest proportions of female elderly fatalities occur in Denmark (52%) and Slovakia (48%)
- The highest proportions of elderly fatalities aged 65-74 occur in Ireland (60%) and Estonia (61%)
Elderly fatalities by road user type

- 38% of elderly fatalities were pedestrians in the EU-24 countries
- Among the larger countries, the percentage of elderly fatalities who were pedestrians is greatest in Romania (62%) and least in the Netherlands (14%)
- The proportion of elderly fatalities who were car drivers ranged between 6% in Romania and 50% in Ireland
Elderly fatalities by type of road

- By comparison with the middle-aged fatalities, there are fewer elderly fatalities on motorways and on rural roads, but more on urban roads.
- The national distributions vary greatly between the member states.
Fatalities by day of week and time of day

- More than 80% of all elderly fatalities occur between 8am and 8pm
- The greatest number of elderly fatalities occurs on Fridays, and the lowest on Sundays
- The peak of the fatality distribution occurs earlier in the afternoon for the elderly than for middle-aged, with a secondary peak before noon
Distribution of fatalities by month

- There are relatively few elderly fatalities between May and August, and relatively many between October and December.
- The lowest number of fatalities in 2010 occurred in February.
- The number of elderly fatalities rose steadily to a peak in November, then declined in December.
- Specific critical events under the general category of ‘timing’, no action, premature action and late action, are important for both the elderly and middle-aged groups.
- Specific critical events relating to ‘timing’ are recorded for 55% of elderly drivers and riders in the sample.
Road accident health indicators

- By 2012, thirteen member states routinely collected data in a sample of hospitals and contributed them to the EU injury Database (EU IDB)

- According to estimates based on the EU IDB more than four million people are injured annually in road traffic accidents, one million of whom have to be admitted to hospital

- 32% of road accident casualties recorded in the IDB were admitted to the hospital overall, and 43% for older people.

- The average length of stay was eight days overall, and twelve for older people.
Conclusions & Recommendations

- The results of the analysis allow for an overall picture of the safety level of elderly people in Europe, providing thus useful support to all decision makers working for the improvement of safety in the European road network.

- The elderly road fatalities patterns reflect also their exposure patterns. Exposure data are needed for a more complete picture.

- Significant decrease in elderly fatalities in 2010 compared to 2001, but less than in other ages.

- Elderly people between 80 and 84 years old are at greater risk of being killed than the average person.

- 38% of elderly fatalities were pedestrians and elderly people are proportionately more likely than middle-aged people to be killed in an accident in urban roads.
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George Yannis
National Technical University of Athens
geyannis@central.ntua.gr
www.nrso.ntua.gr/geyannis