



## Injury Surveillance System

### Case study: injury data from Lithuania

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Raimundas Lunevicius, MD PhD

Johns Hopkins University, Humphrey Program 2008-2009  
University of Vilnius  
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## Overview

- Country Profile
- Social responses to controlling injury problem
- Injury Surveillance Guidelines: story
- Data sources
- Injury data
- Conclusions


### LITHUANIA

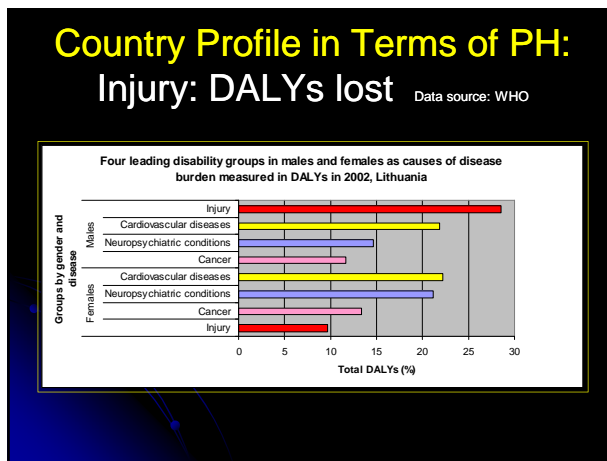
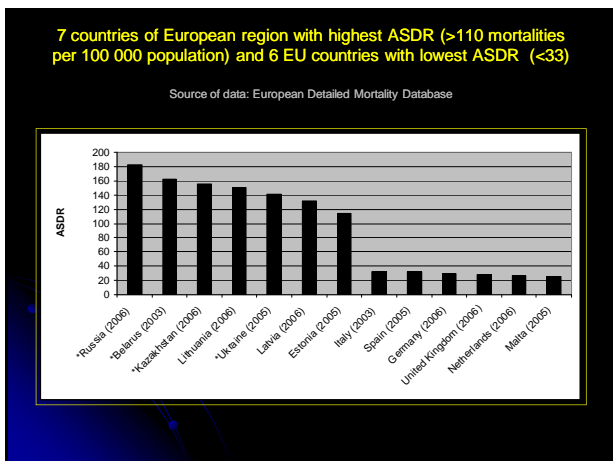
- EU: from 2004
- Multiparty Republic
- Territory: 65 300 km<sup>2</sup>
- Population: 3,4 MM (↓)
- Language: Lithuanian
- Upper middle / high incomes
- Compulsory health insurance
- Male life expectancy at birth: 65y, female: 77y.

### Country Profile in Terms of PH

Indicator (Year=2005 or last available year)	Lithuania	WHO European Region	European Union*
SDR, all causes, all ages, per 100 000	1081.6	930.2	678.1
SDR, diseases of circulatory system, all ages per 100 000	562.8	457.6	272.7
SDR, malignant neoplasms, all ages per 100 000	194.7	175	184.1
SDR, external cause injury and poison, all ages per 100 000	156.4	83.2	42.4

- Injuries are the **3rd leading** cause of death
  - Cardiovascular diseases: appr 50% (23 800 deaths)
  - Cancer: appr 20% (8 000)
  - Injury: appr 13% (5 500)
- Injury SDR irrespective of the cause are > than those of the Eur Region
- SDR for all injuries are almost **4 times** as high as the values for the EU

Source: <http://www.euro.who.int/hfadb>, <http://www.stat.gov.lt>



## Social responses to controlling Injury problem

1. Lithuanian Health Program, 1998–2010
    - reduce injury morbidity and mortality rates by 30%
  2. National Injury Prevention Program, 2000–2010
    - develop sustained, coordinated safety systems and
    - injury preventive strategies
- Effective systems to collect reliable information
    - Lithuanian Ministry of Health partnership with WHO/Eu
      - National health policy development
      - Injury surveillance system (WHO guidelines 2001, 2004)



## Injury Surveillance Guidelines: a story from LT

- 2005: Decision to set up an ISS in a hospital setting using the WHO guidelines
- Pilot site chosen was the **Vilnius Emergency Hospital**

Information provided by Dinesh Sethi (WHO) and Ramune Mieziene (LT)



## Injury Surveillance Guidelines: a story

- 7329 cases were included into analysis in 2 months, 2005, LT:
  - 0.3% (n=23) of patients died because of trauma,
  - 3.4% (n=249) were hospitalized,
  - 67.5% (n=4947) left the hospital: minor procedures
    - The injury pyramid:
      - 1 death : 11 hospital admissions : 215 outpatient attendances
      - Success rate: 91% of patients admitted due to major trauma
- Recommendation
  - to implement ISS in selected hospitals, 2008-2013

Source: information provided by Dinesh Sethi (WHO) and Ramune Mieziene (LT) based on report of D. Valkaitis (LT)

## Injury surveillance: a health policy priority

[http://www.rospa.com/europe/childsafety/info/policy\\_briefing\\_7.pdf](http://www.rospa.com/europe/childsafety/info/policy_briefing_7.pdf)

### Box: IDB – Injury Surveillance in the EU

By 2008, already twelve countries – AT, CY, DK, FR, IE, IT, LV, NL, MT, PT, SE and UK/ Wales - have implemented the IDB and made their data available on the web via the internet, though at still varying levels of detail and completeness of the IDB data set.

### Injury surveillance: a health policy priority

APOLLIC Policy briefing 'Injury surveillance: a health policy priority'

## Sources of injury related data

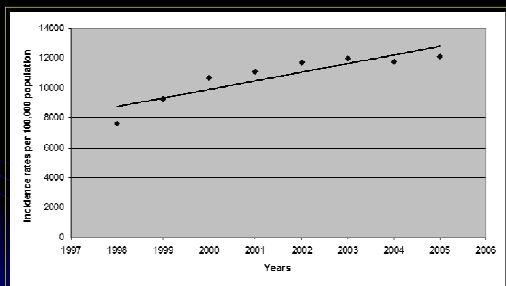
- LT Health Info Center summaries data (ICD-10) from all health care facilities and major national databasis <http://www.lsic.lt>
- LT Health Info Center: WHO collaborating center: <http://www.euro.who.int>
  - **European Detailed Mortality Database**  
<http://data.euro.who.int/dmdb>
- Other sources of injury related data:
  - LT Police Traffic Supervision Service. <http://www.lpeot.lt>
  - LT State Enterprise 'Regitra'. [www.regitra.lt/statistika](http://www.regitra.lt/statistika)
  - LT Road Administration, <http://www.tra.lt>
  - LT Fire and Rescue Department <http://www.vpgt.lt/>
  - Department of Statistics, LT <http://www.stat.gov.lt>, etc.
  - Research papers, projects (IDB, ANAMORT) <http://www.eurosafe.eu.com>  
[www.invs.sante](http://www.invs.sante)

## Injury data: from the Republic of Lithuania



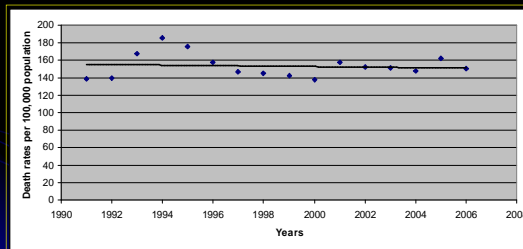
### Injury Incidence: Linear time trend based on injury incidence rates per 100 000 population in Lithuania in 1998-2005

Source of data: Lithuanian Health Information Center



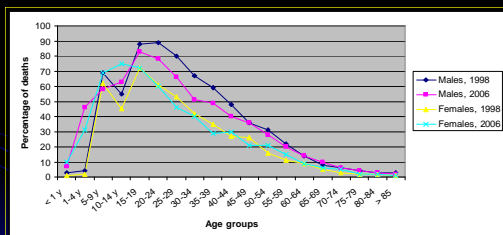
### Overall Mortality: Linear time trend based on ASDR per 100 000 population in LT in 1991-2006

Source of data: European Detailed Mortality Database and Lithuanian Health Information Center



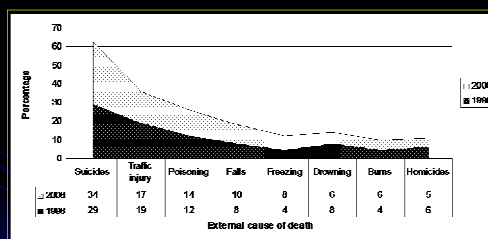
### Percentage of deaths from external causes out of all causes in males and females in 1998 and 2006, LT

Source of data: European Detailed Mortality Database



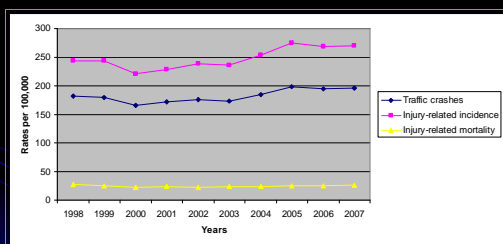
### Fatal injuries distribution by cause in 1998 and 2006, Lithuania

Source of data: European Detailed Mortality Database



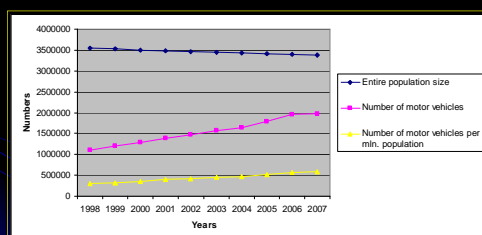
### Traffic crashes related incidence, and mortality rates per 100,000 entire population in 1998-2007, Lithuania

Sources of data: Lithuanian Police Traffic Supervision Service databasis, Lithuanian Health Information Center, European Detailed Mortality Database



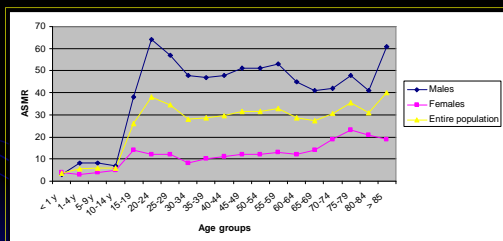
### Entire population and motor vehicles, 1998-2007, Lithuania

Source of data: Lithuanian Police Traffic Supervision Service databasis, etc.



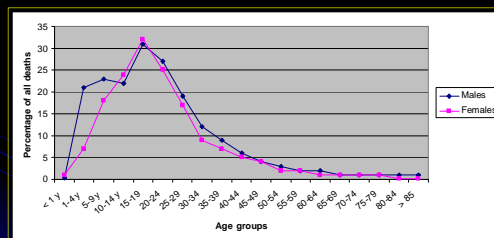
**Traffic crash related age-specific mortality rates (ASMR) per 100,000 males, females, and entire population as averages within 1998-2006, Lithuania**

Source of data: European Detailed Mortality Database

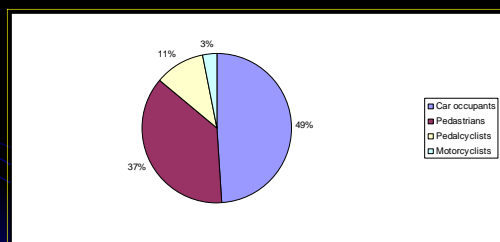


**Average percentage distribution of deaths due to traffic crashes of all deaths in defined age groups of males and females within 1998-2006, Lithuania**

Source of data: European Detailed Mortality Database



**Distribution of fatalities in car occupants, pedestrians, pedal cyclists, and motorcyclists within 1998-2006, Lithuania**



**Conclusions**

1. Lithuanian data regarding injury related mortality are more less reliable
2. There is not enough data regarding
  - Injury incidence
  - Causality
  - Disability
  - Injury severity
3. An Injury Surveillance System needs to be established in Lithuania

**THANK YOU**

Developing a Coding Manual for an Injury Surveillance System at Emergency Departments:  
The ISS coding manual

