



CHILD SAFETY COUNTRY PROFILE

2012



Luxembourg

The Child Safety Country Profile 2012 for Luxembourg highlights the burden of child and adolescent injury and examines socio-demographic determinants to provide a starting point for interpreting the results of Luxembourg's Child Safety Report Card 2012 and for measuring progress toward and setting targets for reducing child and adolescent injury-related death and disability.

Injury is a leading cause of death in children and adolescents aged 0-19 years in Luxembourg. When compared to the 31 countries participating in the 2012 Child Safety Report Cards, Luxembourg's child and adolescent all injury mortality rates ranked 21/31 and 2/31 for males and females, respectively, using the most recent year for which data are available. Injury deaths in children and adolescents in Luxembourg in 2008 represented 599 potential years of life lost (PYLL), including 458 PYLL for unintentional injury – years where children and adolescents won't be growing, learning and eventually contributing to society.

Although the decline has not been constant, the child and adolescent injury death rate for males has dropped by more than 75% in Luxembourg since the early 1990s. Although the actual number of deaths is small, the male rate remains 1.5 times as high as the rate in the Netherlands, one of the safest countries in Europe (Figure A). Injuries were responsible for 30% of all child and adolescent deaths in Luxembourg in 2008, with unintentional injury accounting for two out of every seven deaths in males and one out of every nine deaths in females in this age group (Table 1).

Figure A. European age-standardised injury death rates in Luxembourg and the Netherlands (3 year moving averages for children and adolescents 0-19 years)

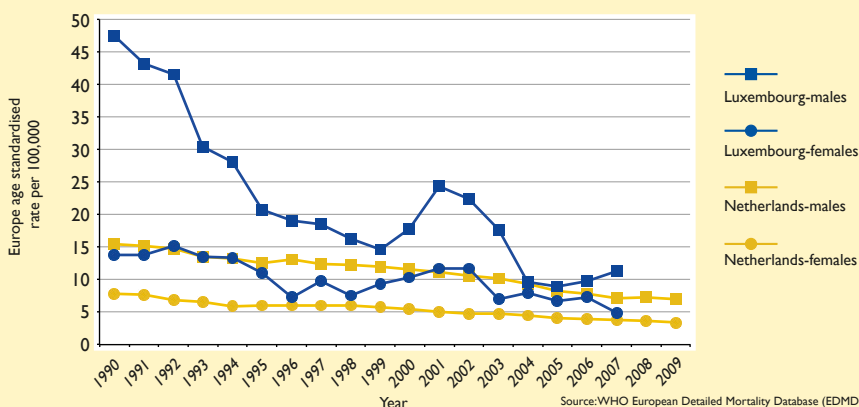


Table 1. Select measures of child and adolescent injury mortality

	Luxembourg (2008)			EU-27		
	Male	Female	Total	Male	Female	Total
Age standardised unintentional death rate per 100,000 0-19 year olds	9.77	2.01	5.98	10.20	4.59	7.46
Contribution of unintentional injuries to all child and adolescent mortality (%)	28.57	11.11	23.33	21.28	13.55	18.24
Age standardised intentional death rate per 100,000 0-19 year olds	3.51	0.00	1.81	3.08	1.09	2.11
Contribution of intentional injuries to all child and adolescent mortality (%)	9.52	0.00	6.67	7.10	3.51	5.71

Source: WHO European Detailed Mortality Database (EDMD)

A closer examination of age differences indicates that the highest rates of unintentional injury death occur in males aged 15-19 years followed by females aged 1-4 years. For intentional injury deaths the highest rates are males aged 1-4 and 15-19 years (Table 2).

Table 2. Age standardised injury mortality rates per 100,000 by age and gender

	Years	Luxembourg (2008)		EU-27	
		Male	Female	Male	Female
Unintentional deaths	<1	0.00	0.00	11.03	8.42
	1-4	0.00	9.09	5.48	5.05
	5-9	0.00	0.00	3.79	2.28
	10-14	0.00	0.00	5.84	3.08
	15-19	40.48	0.00	25.07	7.13
Intentional deaths	<1	0.00	0.00	1.30	1.42
	1-4	8.51	0.00	0.71	0.33
	5-9	0.00	0.00	0.17	0.20
	10-14	0.00	0.00	0.89	0.59
	15-19	6.75	0.00	10.75	3.11

Source: WHO European Detailed Mortality Database (EDMD)

A look at specific causes indicates that road traffic accidents continue to take the greatest toll, particularly in 15-19 year old males, however other causes of accidents also contribute significantly to injury deaths (Table 3). Of note are the rates of suicide and poisoning in females aged 15-19 years. However, deaths are just the tip of the 'injury iceberg' and many more children are hospitalised or seen

in ambulatory care settings because of an injury. For example, data on in-patient hospitalisations for burns and poisonings (Table 4) stress the need for attention to the prevention of these types of injuries in early childhood, but also illustrate that poisonings continue to be an issue across all the way up to 19 years of age.

Table 3. Injury-related deaths by specific cause in children and adolescents 0-19 years, 3-year average age standardised death rates 2006-2008

	Injury death rate /100,000									
	Males					Females				
	<1	1-4	5-9	10-14	15-19	<1	1-4	5-9	10-14	15-19
Pedestrians	0.00	0.00	2.21	0.00	2.30	0.00	0.00	0.00	0.00	0.00
Motor vehicle drivers / passengers	0.00	2.85	0.00	0.00	16.02	0.00	0.00	0.00	0.00	4.89
Motorcycle drivers	0.00	0.00	0.00	0.00	2.30	0.00	0.00	0.00	0.00	0.00
Cyclists (traffic and non-traffic)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drowning	0.00	0.00	0.00	0.00	2.25	0.00	0.00	0.00	0.00	0.00
Falls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fires, burns and scalds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Poisoning	0.00	0.00	0.00	0.00	4.66	0.00	0.00	0.00	0.00	4.89
Choking/strangulation	0.00	2.85	0.00	0.00	2.25	0.00	6.13	0.00	0.00	0.00
Suicide/self-inflicted	0.00	0.00	0.00	0.00	2.30	0.00	0.00	0.00	0.00	4.83
Homicide	0.00	2.84	0.00	0.00	2.25	0.00	0.00	0.00	0.00	0.00

Source:WHO European Detailed Mortality Database (EDMD)

Table 4. Unintentional injury-related in-patient hospitalisation rate for select causes (S&T codes) in children and adolescents 0-19 years, adjusted to represent 100% coverage, 2010

	Injury in-patient hospitalisation rate / 100,000									
	Males					Females				
	<1	1-4	5-9	10-14	15-19	<1	1-4	5-9	10-14	15-19
Long bone fractures	17.42	158.56	474.48	609.43	591.95	0.00	93.54	290.14	287.21	139.48
Intercranial injury	330.98	300.43	190.44	161.04	109.13	162.02	236.08	143.36	105.64	76.71
Burns and corrosions	0.00	37.55	3.23	15.78	3.31	18.00	31.18	0.00	3.30	10.46
Poisonings	34.84	108.49	9.68	9.47	9.92	18.00	84.63	13.65	6.60	24.41
Toxic effects of alcohol	0.00	0.00	0.00	15.78	39.68	0.00	0.00	3.41	9.90	17.43

Source:WHO European hospital morbidity database

Injuries disproportionately affect the most vulnerable children and adolescents in society and in many ways health relates to the wealth of the individual as well as the country.* More children and adolescents are injured when families are of lower income, have less education and are less literate, live in more crowded conditions and when adequate funding is not provided for public health as part of healthcare. In addition the continued loss of children and adolescents to injury is a critical demographic and economic issue.

It is important to look at these factors to help interpret Luxembourg's response to the child and adolescent injury problem and Table 5 provides information on select socio-demographic measures and determinants of injury. However, it is also important to note that the influence of socio-economic inequality is complicated by evidence that inequalities in injury incidence to children seem to be widening, despite the fact that injury incidence overall is reducing.**

Table 5. Select socio-demographic measures and determinants of injury

	Luxembourg	EU-27
Total population (2011)	509,074	502,486,499
Average population density (population/square kilometer, 2011)	194.1	116.2
Percent living in densely-populated areas (≥ 500 inhabitants/Km ² , 2010)	41.3%	47%
Percent population under 14 years of age (2011)	17.6%	15.6%
Natural population change (live births – deaths, EuroStat 2010)	4.170	1.029
Adult illiteracy rate (% ages 15 and older, 2009)	N/A	1.3%
Gross Domestic Product (GDP) per capita PPS (EU-27=100, 2010)	271	100
Total health expenditure as percent of GDP (WHO estimates 2009)	7.8	9.76%
Percent at-risk-of-poverty or social exclusion (EuroStat 2010)	17.1%	23.5%
Percent children and adolescents aged 0-17 years living in jobless households (EuroStat 2010)	2.8%	10.6%
Human Development Index (HDI, 2011)	0.867	N/A
HDI Global Ranking (2011)	25	—
GINI index (2010)	27.9	30.5

N/A - not available

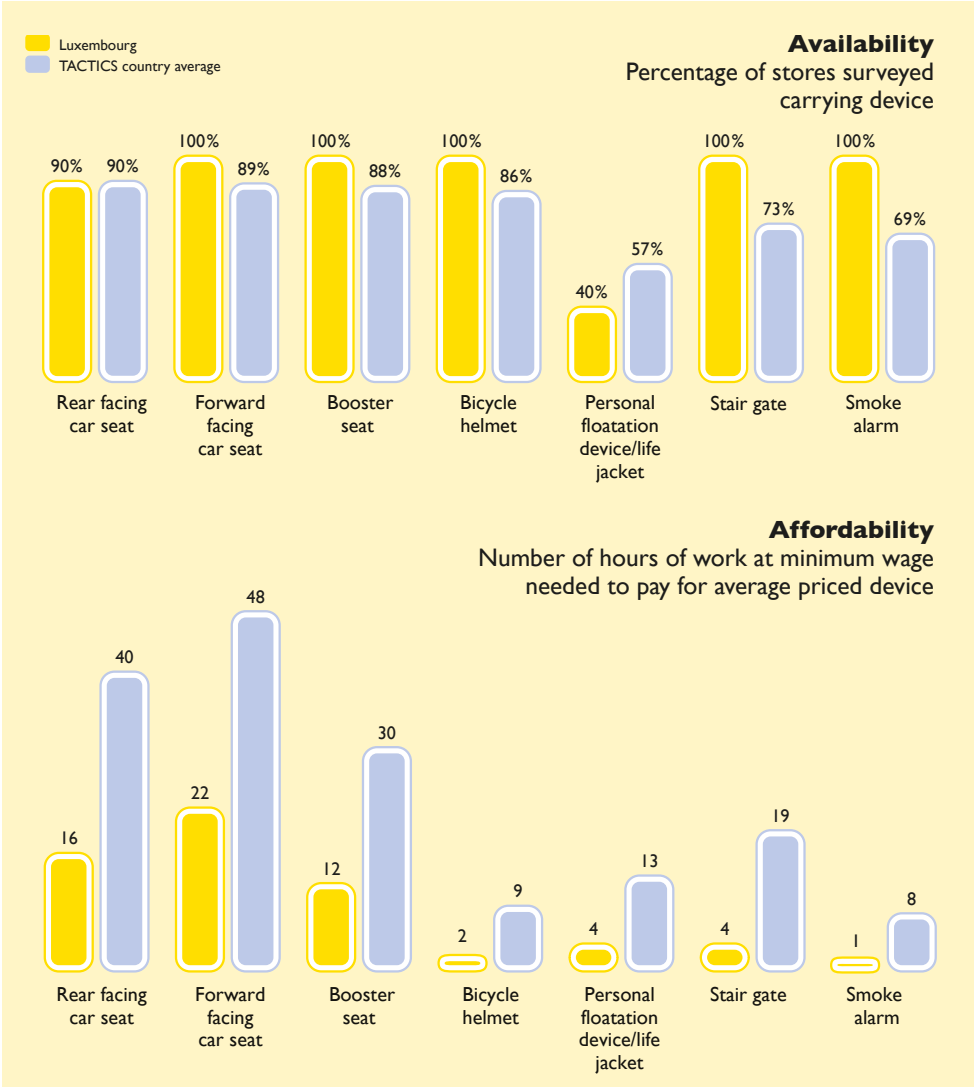
Source: WHO HFA database, EurStat, UNHDP

* UNICEF Innocenti Research Centre. A league table of child death by injury in rich nations. UNICEF; 2001. Report Card No. 2. Florence.

** Laflamme L, Burrows, S, Hasselberg M. (2009) Socioeconomic Differences in Injury Risks: A review of findings and a discussion of potential countermeasures. Karolinska Institute / WHO Regional Office for Europe, Copenhagen, Denmark; Reimers AM, deLeon AP, Laflamme L. (2008) The area-based social patterning of injuries among 10 to 19 year olds. Changes over time in the Stockholm County. BMC Public Health Apr 23; 8:131.

Figure B provides a comparison of the availability and affordability of safety devices whose use is recommended to reduce the risk of child and adolescent injury. Results suggest that recommended safety equipment is both reasonably available and affordable for families in lower socioeconomic strata in Luxembourg. This should continue to ensure the likelihood that every child born is provided with a safe environment to live, learn and play and help ensure they grow up to be contributing members to society.

Figure B. Availability and affordability of select safety devices



Definitions for select items included in Child Safety Profiles

At-risk-of-poverty rate after social transfers

– the share of persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income.

(Eurostat)

Children and adolescents aged 0-17 living in jobless households

– the share of children and adolescents aged 0-17 who are living in households where no one is working. Both the numerators and the denominators come from the EU Labour force survey. (Eurostat)

Gini index

– a quantitative index measuring inequality over the entire distribution of income or consumption; the GINI coefficient expressed as a percentage. A value of 0 represents perfect equality, and a value of 100 perfect inequality, thus the higher the coefficient, the higher the inequality of the income distribution. (Eurostat)

Gross domestic product (GDP)

– a measure of economic activity; the value of all goods and services produced less the value of any goods or services used in their creation. The volume index of GDP per capita in Purchasing Power Standards (PPS) is expressed in relation to the European Union (EU-27) average set to equal 100. If the index of a country is higher than 100 this country's level of GDP per head is higher than the EU average and vice versa. (Eurostat)

Human Development Index

– a summary measure of human development.

It measures the average achievements in a country in three basic dimensions of human development: 1) A long and healthy life, as measured by life expectancy at birth; 2) Knowledge, as measured by the adult literacy rate (with two-thirds weight) and the combined primary, secondary and tertiary gross enrolment ratio (with one-third weight) and 3) a decent standard of living, as measured by GDP per capita in purchasing power parity (PPP) terms in US dollars. (United Nations Human Development Project)

Natural population change

– the difference between the number of live births and the number of deaths during the year. A negative number means the number of deaths exceeds the number of births. (EuroStat)

Potential Years of Life Lost (PYLL)

– an indicator of premature mortality representing the total number of years NOT lived by an individual who died before average life expectancy at birth. For this profile Global Burden of Disease (GBD) life expectancies were used minus discounting and age weighting.

More information at:

www.childsafetyeurope.org

The findings and views expressed are those of the authors and do not necessarily reflect the views of the partner organisations.

Methods to prepare child safety profile

- The Child Safety Profiles 2012 are produced as part of the Tools to Address Childhood Trauma, Injury and Children's Safety (TACTICS) project to provide a starting point for interpreting the results of the Child Safety Report Card 2012 and to facilitate setting of targets for and measurement of progress toward reductions in injury-related death and disability amongst children and adolescents. The Profile highlights the burden of child and adolescent injury using mortality and, as available, morbidity data and examines socio-demographic determinants of child and adolescent injury that may impact both burden and prevention efforts.
- Data on injury deaths and socio-demographic determinants were obtained from existing international databases managed by several organisations including WHO, Eurostat and the United Nations Development Programme in early 2012. The exception is data for Wales and England, which were obtained from

Public Health Wales and the Office for National Statistics, respectively. Mortality and morbidity indicators were compiled and/or calculated by Collaboration for Accident Prevention and Injury Control (CAPIC) at Swansea University in Wales. Data presented are for the most recent year(s) available from the data sources at the time of data collection. Mortality data are for ages 0-19 as data for ages 0-17 are not available. All rates are European age-standardised and morbidity rates for countries with less than 100% coverage of collection of data from hospitals were adjusted up to 100% coverage. In addition, three-year age adjusted average rates were used to examine mortality trends and the rates of external causes of injury (e.g., falls, drowning) where because of small numbers less stable rates were anticipated.

- Country partners in the participating countries collected data on safety device availability and affordability in 2011 and the indicators were calculated at the European Child Safety Alliance.

Co-funding and partnership with



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Nordic School of Public Health
NHH



Maastricht University



Swansea University
Prifysgol Abertawe



Ollscoil Chathair Bhaile Átha Cliath
Dublin City University



The Child Safety Profiles 2012 are produced as part of the Tools to Address Childhood Trauma, Injury and Children's Safety (TACTICS) project, a large scale multi-year initiative that is working to provide better information, practical tools and resources to support the adoption and implementation of evidence-based good practices for the prevention of injury to children and youth in Europe. The initiative is led by the European Child Safety Alliance of EuroSafe, with co-funding and partnership from the European Commission, the Nordic School of Public Health, Maastricht University, Swansea University, Dublin City University, the European Public Health Alliance, and partners in over 30 countries including the Center for Health Education and Disease Prevention under the Ministry of Health in Luxembourg.

One of the objectives of the project was to review and expand the set of Child Safety Action Plan indicators and standardised data collection tools to continue to monitoring and benchmarking progress in reducing child and adolescent injury as countries moved from planning to implementation. The Child Safety Report Cards 2012, Child Safety Profiles 2012 and Child Safety Report Card 2012 – Europe Summary for 31 countries are the result of this activity.

For more information on the TACTICS project, the Child Safety Report Cards 2012 for the other participating countries and the European summary go to the European Child Safety Alliance website at: www.childsafetyeurope.org

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