ANNEX 1
DATA SOURCES

WHO European mortality databases

The WHO Regional Office for Europe developed the European detailed mortality database (DMDB) and the European mortality database (HFA-MDB), supplementing the generic European Health for All database (HFA-DB) (1–3). Mortality indicators in the HFA-MDB are presented for 67 selected causes or groups of causes of death, defined by age groups. Member States submit raw data to the WHO Regional Office for Europe or WHO headquarters. Member States report official mortality data according to the 9th and 10th revisions of the International Statistical Classification of Diseases and Health Related Problems (ICD) (4). Table 1 shows the ICD codes used for the external causes of injury. Data available in these databases are from 1979 onwards.

The HFA-MDB has the advantage of having consistent, longer time series and coverage while the DMDB can provide more specific information. For the purposes of this report, data were downloaded for the years 2003–2005 (or the most recent three years). Data from the DMDB are available in five-year age bands, and age-standardized mortality rates were calculated for the 0–19 year age group. Although the United Nations defines children as being from 0 to 17 years, this breakdown of the data is not available from this source, and the age band 0–19 years was used instead. In the HFA-MDB, age-standardized trend data are available for the age group 0–19 years from 1979 onwards and are presented in this report. Raw mortality data from the DMDB were used for calculating mortality rates from unintentional injury in children. The use of the standardized calculation methods and denominators allows comparison between countries and further detailed statistical elaborations.

Table 1
External causes of injury and their corresponding ICD codes

Type of injury	Code		
	ICD-9	ICD-9 BTL	ICD-10
All injuries	E800–E999	B47–B56	V01–Y98
Unintentional injuries	E800–E949	B47–B53	V01–X59, Y40–Y86, Y88, Y89
Road traffic injuries	E810–E819, E826–E829, E929	B471–B472	V01–V89, V99, Y850
Poisoning	E850–E869	B48	X40–X49
Falls	E880–E888	B50	W00–W19
Fires	E890–E899	B51	X00–X09
Drowning	E910	B521	W65–W74
Other unintentional injuries[a]	E800–E807, E820–E848, E870–E879, E900–E909, E911–E949	B49, B52 (excluding B521), B53, B47 (excluding B560)	V90–V98, W20–W64, W75–W99, X10–X39, X50–X59, Y40–Y86, Y88, Y89

[a] The DMDB does not differentiate between other unintentional injuries and all other injuries (including intentional injuries). Since intentional injuries comprise less than 2% of total injuries and because of the way they are collated on the detailed mortality database, all other injuries have been assumed to be unintentional.

United Nations Economic Commission for Europe transport database

The United Nations Economic Commission for Europe (UNECE) annually collects data on road traffic crashes resulting in death or injury, based on replies submitted by Member States and official national and international sources (5). Of the UNECE's 55 Member States, 52 are Member States of WHO in the European Region. Data for Liechtenstein are consolidated with those for Switzerland. These data are available for the age groups 0–9 and 10–17 years and have been presented accordingly.

WHO Global Burden of Disease, 2004 update

WHO Global Burden of Disease analysis provides a comprehensive and comparable assessment of mortality and loss of health due to diseases, injuries and risk factors for all regions of the world. The overall burden of disease is assessed using the disability-adjusted life-year (DALY), a time-based measure that combines years of life lost due to premature mortality and years of life lost due to time lived in states of less than full health. The WHO Global Burden of Disease project draws on a wide range of data sources to develop internally consistent national, regional and global estimates for more than 130 major diseases. WHO participation in developing and finalizing these estimates ensures that estimates reflect all information and knowledge available to WHO. The latest assessment of the global burden of disease for 2004, which includes revisions, new data and methods, was published in 2008 *(6)*.

APOLLO Hospital Discharge Database

The APOLLO Hospital Discharge Database *(7)* is part of a project partly funded by the European Commission within the current European Union Public Health Programme. It is a web-based query passive surveillance system based on patient-level hospital discharge data from 17 voluntarily participating countries.

   This report included hospital discharge cases with at least one injury diagnosis. Eligible injury diagnoses based on the tenth or ninth revisions of the International Statistical Classification of Diseases and Related Health Problems (ICD) *(4)* were ICD-10 S00.0–T98.3 (excluding T36.0–T39.9, T41.0–T50.9 and T80–T88) or ICD-9 N codes 800–909.2, 909.4, 909.9–994.9, 995.5–995.59 and 995.80–995.85. Unintentional injuries were identified using the respective coding for injury mechanism or cause, and age-standardized admission rates were calculated. Data for the year 2004 (or the most recent year) are presented. Despite standardization procedures, hospital discharge data participating countries collected for administrative purposes may not be directly comparable. This relates to a variety of factors, such as differences in hospitalization practices, health financing and completeness of coding practices *(8)*.

Eurocosts

Part of the APOLLO project, Eurocosts uses a uniform method and a software application to derive the direct health care costs of injuries treated in emergency departments and/or admitted to hospitals and indirect costs of these injuries for selected countries. Unit costs (cost per injury) are combined with incidence data to derive population-based costs. However, the unit costs are not specific to intentional or unintentional injuries, nor are they age- or sex-specific *(9)*.

Classification of countries in the WHO European Region by income per capita

Economies are categorized by income level according to 2004 gross national income per capita, calculated using the World Bank Atlas method *(10)*. Based on gross national income per capita in 2007, economies are classified as low income (US$ 935 or less), middle income (US$ 936 to US$ 11 455) and high income (US$ 11 456 or more). For the Global Burden of Disease 2004 study, countries are divided into high-income countries and low- and middle-income countries (Table 2).

Table 2
Categorization of countries in the WHO European Region by gross national income per capita, 2004

Low- and middle-income countries (n = 28)	High-income countries (n = 25)
Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Montenegro, Poland, Republic of Moldova, Romania, Russian Federation, Serbia, Slovakia, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine, Uzbekistan	Andorra, Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Monaco, Netherlands, Norway, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland, United Kingdom

Source: World Bank *(10)*.

European Union countries

Twenty-seven countries belong to the European Union: Austria, Belgium, Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Cyprus, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Poland, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

Commonwealth of Independent States (CIS)

Twelve countries belong to the CIS: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation, Tajikistan, Turkmenistan (associate member), Ukraine and Uzbekistan.

Geographical classification by subregion

Countries are associated in a practical way by geographical subregions. Underlying considerations are that countries in the same geographical area often have similar health conditions and similar trends in mortality. Classification by geographical area is as follows:

- Nordic countries: Denmark, Finland, Iceland, Norway and Sweden;
- western European countries: Austria, Belgium, France, Germany, Ireland, Luxembourg, the Netherlands, Switzerland and the United Kingdom;
- southern European countries: Greece, Israel, Italy, Malta, Portugal and Spain;
- central European countries: the Czech Republic, Hungary, Poland, Slovakia and Slovenia;
- south-eastern European countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, Romania, Serbia and the former Yugoslav Republic of Macedonia;
- Baltic countries: Estonia, Latvia and Lithuania;
- north-western CIS countries: Belarus, Georgia, the Republic of Moldova, the Russian Federation and Ukraine;
- southern CIS countries: Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

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