

Description of the Data and the procedure that has been followed

Injury Mortality Data

The data were derived from the WHO mortality database which was available on the Internet on **August 2004**. From this database, data for the last ten available years of each EU country and of the participating countries were separated with the presupposition that are coded under ICD9 or ICD10 classification. It was decided to use only these two coding versions in order to increase the comparability of the data among the countries and among the years in the same country.

In the selected ten-year period most of the countries have changed their coding version from the old ICD9 to the new ICD10. Due to this change some differences among the years have been observed in the frequencies of the different categories for the same country. These differences were not the same for all the countries, that have switched during the last decade from ICD9 to ICD10, but they are rather random and with different trends among the countries. In order to smooth these differences and to increase the accuracy of the data, the average data of the last three available years of each country was calculated and presented. For UK the average of the last two years was used as data for one of the last 3 years was missing. For the total of EU the last three available years of each country (two for UK) were separated and used at the calculations.

In Table1 the available years for the two coding versions by country are displayed. For Denmark the data are for seven years because before 1994 the data were coded with ICD8. For UK and the year 2000 as well as for Poland and the years 1997-1998 data were not available and so the created database contains data for 9 and 8 years respectively.

Population data

The respective population data for each country and for each year by age group and gender have been retrieved from WHO mortality database available on the Internet on August 2004.

The available age groups of the population, as well as, of the mortality data among the different countries and through the years are not stable. The variation concerned the first 5 years of life where data were provided either for each age separately (0, 1, 2, 3, 4) or in two groups (0, 1-4) and the elderly ages where some data were explicit in 5 years groups until 95 years old and other were combined from 85 years and over. A harmonization of the data according to the age groups was performed before the analysis.

The reference population of the Europe, provided by WHO, have been used for the calculation of the age adjusted mortality rates restricted to the ages of interest (65+ years) (Table 2).

Countries with population less than a million have been excluded from the analysis as the respective mortality figures are very small and changeable and so, the results

derived from the comparison with the figures of the countries with larger population can mislead the researcher.

Injury categories

The categories that have been constructed for the purposes of this project were common for both coding versions and were formed according:

a) to the general categories that are available for the data coded with ICD9 coding version and

b) to the provided information by WHO in the mortality database (WHO statistics, statistics by country or region, Mortality database, Table 1).

The range of the codes which were included in each category was mostly based on the information provided by WHO in the mortality database and to the need to have homogeneous categories among the two different coding versions. In table 3 the separation of the codes of the two different coding versions among the categories is displayed.

Concerning the data that have been coded with ICD10, these were available in 3 different formats. Some countries and for some years have used a format of ICD10 with 3 digits whereas others have used a combination of 3 and 4 digits but with all the records being mutually exclusive and without duplications. Most of the records (around 82%) are coded following a detailed list of ICD10 with 4 digits. These differences were taken into account in the formation of the categories and the possibility of a misclassification is negligible.

Comparing the data of the two different coding versions as well as data that have been coded with the same version, the results must be interpreted with caution, as the way of coding between the countries can be different.

Country	ICD-9	ICD-10
Austria	1993-2001	2002
Belgium	1988-1997	-
Czech Republic	1993	1994-2002
Denmark	-	1994-2000
Estonia	1993-1996	1997-2002
Finland	1993-1995	1996-2002
France	1991-1999	2000
Germany	1992-1997	1998-2001
Greece	1992-2001	-
Hungary	1993-1995	1996-2002
Ireland	1992-2001	-
Italy	1992-2001	-
Latvia	1993-1995	1996-2002
Lithuania	1993-1997	1998-2002
Netherlands	1991-1995	1996-2000
Norway	1992-1995	1996-2001
Poland	1993-1996	1999-2002
Portugal	1993-2001	2002
Slovakia	1992-1993	1994-2001
Slovenia	1993-1996	1997-2002
Spain	1992-1998	1999-2001
Sweden	1992-1996	1997-2001
United Kingdom	1993-1999	2001-2002

Table 1: Distribution of the last 10 available years of each country by coding version in WHO mortality database

Age group (years)	European standard population
0	1,600
1–4	6,400
5–9	7,000
10–14	7,000
15–19	7,000
20–24	7,000
25–29	7,000
30–34	7,000
35–39	7,000
40–44	7,000
45–49	7,000
50–54	7,000
55–59	6,000
60–64	5,000
65–69	4,000
70–74	3,000
75–79	2,000
80–84	1,000
85 +	1,000
Total	100,000

Table 2: Structure of the European standard population provided by WHO¹

¹ (<http://hfadb.who.dk/hfa/newonlinehelp.htm> technical notes)

Table 3: Basic categories of mortality and the corresponding codes of the two different coding versions

Category	Codes based on ICD10	Codes based on ICD9 (Basic Tabulation List)	Codes based on ICD9 (Detailed list Numbers)
Motor vehicle traffic	V2-V4, V9, V12-V14, V19-V79, V803-V805, V821, V830-V833, V840-V843, V850-V853, V86-V89	B471	E810-E819
Motor vehicle traffic Common	V2-V4, V9, V12-V14, V19-V79, V86-V89		
Motor vehicle traffic Special	V803-V805, V821, V830-V833, V840-V843, V850-V853		
Transport non M.V.	V1, V5-V6, V10-V11, V15-V18, V80 (or V801-V802, V806-V809), V81, V82 (or V820, V822-V829), V83 (or V834-V839), V84 (or V844-V849), V85 (or V854-V859), V90-V99	B470, B472- B474, B479	E800-E807, E826-E845, E846-E848
Transport non M.V. railway accident	V5, V15, V806, V81	B470	E800-E807
Transport non M.V. water accident	V90-V94	B473	E830-E838
Transport non M.V. air accident	V95-V97	B474	E840-E845
Transport non M.V. other	V1, V6, V10-V11, V16-V18, V80 (or V801-V802, V807-V809), V82 (or V820, V822-V829), V83 (or V834-V839), V84 (or V844-V849), V85 (or V854-V859), V98-V99	B472, B479	E826-E829, E846-E848
Transport non M.V. other (pedestrian)	V1, V6		
Transport non M.V. other (bicyclist)	V10-V11, V16-V18,		
Transport non M.V. other (other)	V80 (or V801-V802, V807-V809), V82 (or V820, V822-V829), V83 (or V834-V839), V84 (or V844-V849), V85 (or V854-V859), V97-V99		
Accidental poisoning	X40-X49	B48	E850-E869
Accidental poisoning by any pharmaceutical	X40-X44	B480	E850-E858
Accidental poisoning by any pharmaceutical (narcotics)	X42		
Accidental poisoning by any pharmaceutical (other)	X40-X41, X43-X44		
Accidental poisoning other	X45-X49	B481-B482	E860-E869
Accidental poisoning other (alcohol)	X45		
Accidental poisoning other (other)	X46-X49		
Misadventure during medical care	Y60-Y84, Y88	B49	E870-E879
Accidental falls	W00-W19	B50	E880-E888
Accidental falls on the same level	W00-W04, W18		
Accidental falls from furniture, wheel-chair	W05-W08		
Accidental falls from stairs - step	W10-W12		
Accidental falls from playground equipment	W09		
Accidental falls other	W13-W17, W19		
Smoke fire and flames	X00-X09	B51	E890-E899

Category	Codes based on ICD10	Codes based on ICD9 (Basic Tabulation List)	Codes based on ICD9 (Detailed list Numbers)
Continued on Next Page			
Environmental factors	W53-W60, W64, W92-W99, X20-X39, X51, X53-X57	B520	E900-E909
Environmental factors contact/bite by animal - plant - insect	W53-W60, X20-X29		
Environmental factors nature forces except cold	X30, X32-X39		
Environmental factors nature forces cold	X31		
Environmental factors other	W64, W92-W99, X51, X53-X57		
Accidental drowning and submersion	W65-W74	B521	E910
Machinery cutting piercing instruments	W24-W31, W45	B523	E919, E920
Firearm missile	W32-W34	B524	E922
Suicide and self inflicted	X60-X84, Y87 (or Y870)	B54	E950-E959
Suicide and self inflicted by poisoning	X60-X69		
Suicide and self inflicted by drowning/suffocation	X70-X71		
Suicide and self inflicted by firearm	X72-X74		
Suicide and self inflicted by other	X75-X84, Y87 (or Y870)		
Homicide and purposely inflicted	X85-Y09, Y871	B55	E960-E969
Legal intervention, war	Y35-Y36, Y890-Y891	B561, B569	E970-E979, E990-E999
Undetermined to intent	Y10-Y34, Y872	B560	E980-E989
Other or unspecified	W20-W23, W35-W44, W49, W50-W52, W75-W87, X10-X19, X50, X52, X58-X59, Y40-Y59, Y85-Y86, Y89 (or Y899)	B522, B529, B53	E911-E918, E921, E923-E929, E930-E949
Other or unspecified accidental suffocation other	W75-W78, W80-84		
Other or unspecified accidental suffocation from food	W79		
Other or unspecified explosive materials	W35-W40		
Other or unspecified electric current	W85-W87		
Other or unspecified contact with hot object	X10-X19		
Other or unspecified misadventures due medicines	Y40-Y59		
Other or unspecified sequale of transport or other injuries	Y85-Y86, Y89 (or Y899)		
Other or unspecified other	W20-W23, W41-W44, W49, W50-W52, X50, X52, X58-X59		