

Statistical annex



Background

Each year, over 100 countries send detailed information on the number of deaths from various diseases, illnesses or injuries to WHO. Around half of these are the more developed countries of the Americas, Asia and Europe. The less developed countries in the Americas account for nearly a further third, with the less developed countries of Asia contributing most of the remainder. Only a few African countries contribute mortality data to WHO (1). Data from these WHO Member States are compiled from vital registration systems using the International Classification of Diseases (ICD) codes (2, 3). National vital registration systems capture about 18 million deaths that occur annually throughout the world. Data from these registration systems, as well as from surveys, censuses, epidemiological studies and health service systems, are analysed by WHO to determine patterns of causes of death for countries, regions and the world.

WHO also uses these data, along with other information, to assess the global burden of disease. The first assessment of the global burden of disease was published in 1996 (4), and at the time represented the most comprehensive examination of global mortality and morbidity ever produced.

The methodologies employed for estimating the global burden of disease have since been refined and improved, and in 2000 a new assessment was undertaken. The Global Burden of Disease project for 2000 (GBD 2000 project) makes use of all available and relevant information to generate the best possible population-based data on mortality and morbidity that is available today. Even for regions and causes of death where data are sparse, the GBD uses all the evidence at hand and the best available methods to make inferences (5). Estimates of the global burden of injury for the year 2002 are presented here. These data are based on the most recent WHO cause of death analyses and on previously unanalysed health service data from 18 Member States. Details of the recency, coverage and source of the health service data are summarized in Table A.1 for each of the 18 Member States which contributed such data.

Types of tables

The statistical annex includes three types of tables:

- global and regional estimates of road traffic injury mortality;
- the 12 leading causes of death and disability-adjusted life years (DALYs) for all WHO Member States combined and for each of the

TABLE A.1

Health facility data received by WHO from Member States

Country	Description of data
Australia	Data from unit records coded by the cause and nature of injury, 2000–2001 (complete coverage)
Canada	Data from unit records coded by the cause and nature of injury, 2000–2001 (complete coverage)
Cuba	Tabulations by broad categories of nature of injury, by age and sex
Ghana	Community survey unit record data
Israel	Data from unit records coded by the cause and nature of injury, from all trauma centres, 2000
Kenya	Tabulations by nature of injury, age and sex
Latvia	Tabulations by nature of injury, 2000
Malaysia	Data from unit records coded by the cause and nature of injury, 2000 (unknown coverage)
Mauritius	Data from unit records coded by the cause and nature of injury, 1994–1995
Mozambique	Unit record data from one urban hospital
New Zealand	Data from unit records coded by the cause and nature of injury, 2000 (public hospitals only)
Papua New Guinea	Unit record data, 1998 (unknown coverage)
Singapore	Tabulations by cause, age and sex
South Africa	Surveillance unit record data coded by the cause and nature of injury
Thailand	Data from unit records coded by the cause and nature of injury, 1999 (65–75% coverage)
Uganda	Surveillance data from seven districts
United Kingdom	Separate nature of injury and cause tabulations by age and sex, 2000
United States of America	Data from unit records coded by the cause and nature of injury, from four states, 1996 (complete coverage)

- WHO regions;
- country-level rates of mortality due to road traffic injuries.

Global and regional estimates of mortality

Table A.2 contains estimates of road traffic injury-related mortality for the year 2002 by sex, age group, WHO region and income level.

Cause of death and DALY rankings

Table A.3 presents rankings for the 12 leading causes of death and DALYs for the year 2002, as well as the rankings for road traffic injury-related deaths and DALYs if not included in the top 12. These rankings are given for all WHO Member States combined and for each of the WHO regions.

Country-level rates of mortality

Table A.4 presents the numbers and rates of deaths due to road traffic injuries. In this table, the absolute numbers and rates per 100 000 population are given by sex and age group for countries reporting vital registration mortality data to WHO.

Methods

Global burden of disease analysis categories

Deaths and non-fatal injuries are categorically attributed to one underlying cause using the rules and conventions of ICD (2, 3). The cause list used for the GBD 2000 project has four levels of disaggregation and includes 135 specific diseases and injuries (5). Overall mortality is divided into three broad groups of causes, as follows:

- Group I: communicable diseases, maternal causes, conditions arising in the perinatal period and nutritional deficiencies;
- Group II: noncommunicable diseases;
- Group III: intentional and unintentional injuries.

Injury categories within Group III are defined in terms of external cause codes. The codes for road traffic injuries are as follows:

- ICD-9 codes: E810–E819, E826–E829, E929.0.
- ICD-9 basic tabulation list codes: B471–B472.
- ICD-10 codes: V01–V04, V06, V09–V80, V87, V89, V99.

Absolute numbers and rates per 100 000 in the population are presented by sex and WHO region for the age groups: 0–4 years, 5–14 years, 15–29 years, 30–44 years, 45–59 years and 60 years or older.

WHO regions

WHO Member States are grouped in six regions: the African Region, the Region of the Americas, the South-East Asia Region, the European Region, the Eastern Mediterranean Region and the Western Pacific Region. The countries included in each of these regions are indicated in Table A.5.

Countries within the six WHO regions are further divided by income level according to 2002 estimates of gross national income (GNI) per capita as compiled by the World Bank (6). On the basis of the GNI per capita, economies are classified as low income (US\$ 735 or less), middle income (US\$ 736–9075) or high income (US\$ 9076 or more).

Global estimates of mortality due to injury

The GBD 2000 project uses the latest population estimates for WHO Member States prepared by the United Nations Population Division (7). WHO has worked extensively with Member States in an effort to verify the best sources of recent data on vital registration and cause of death, and new life tables for the year 2000 have been constructed for all 192 WHO Member States (8, 9). The results for road traffic injuries reported in Table A.2 are derived from Version 1 of the GBD calculations for 2002 and are based on extensive analysis of mortality data for all regions of the world, together with systematic reviews of epidemiological studies and health service data (5). Complete or incomplete vital registration data together with sample registration systems cover 72% of global mortality. Survey data and indirect demographic techniques provide information on levels of child and adult mortality for the remaining 28% of estimated global mortality.

Data on causes of death have been analysed to take into account incomplete coverage of vital registration in countries and the likely differences in cause-of-death patterns that would be expected in the uncovered and often poorer subpopulations (5).

For example, the patterns of causes of death in China and India were based on existing mortality registration systems. In China, the disease surveillance points system and the vital registration system of the Ministry of Health were used. In India, mortality data from the medical certificate of cause of death were used for urban areas and the annual survey of cause of death was employed for rural areas.

For all other countries lacking vital registration data, cause-of-death models were used to generate an initial estimate of the maximum likelihood distribution of deaths across the broad categories of communicable and noncommunicable diseases and injuries, based on estimated total mortality rates and income. A regional model pattern of specific causes of death was then constructed from local vital registration data and data from verbal autopsies (a method of medically determining the cause of death based on interviews with the next of kin or caregivers). This proportionate distribution was then applied within each broad group of causes. Finally, the resulting estimates were adjusted according to other epidemiological evidence from studies on specific diseases and injuries.

Special attention has been paid to problems of misattribution or miscoding of causes of death in cardiovascular diseases, cancer, injuries and general ill-defined categories. The category “Injury undetermined whether accidentally or purposely inflicted” (E980–E989 in the 3-digit ICD-9 codes or Y10–Y34 in ICD-10) can often include a significant share of deaths due to injury. Except where more detailed local information is available, these deaths have been proportionately allocated to the other injury causes of death. Deaths coded to the 4-digit ICD-9 code E928.9, “Unspecified accidents”, have also been redistributed proportionally across the other unintentional injury categories. There is no corresponding ICD-10 code for unspecified accidents, forcing coders to specify at least a broad category of injury.

Global and regional ranking of deaths and DALYs

The DALY measure is used to quantify the burden of disease (4, 10). The DALY is a health-gap measure

that combines information on the number of years of life lost from premature death with the loss of health from disability.

Years lived with disability (YLDs) are the disability component of DALYs. YLDs measure the equivalent healthy years of life lost as a result of disabling sequelae of diseases and injuries. They require estimation of incidence, average duration of disability and severity of disability.

The analysis of the burden of injury in the GBD 2000 project is based on the methods developed for the 1990 project. A decision was made to retain all 1990 disability weights relating to injury in the GBD 2000 project until more refined methods for this aspect of the burden of disease calculations are developed (11). The GBD 1990 project methods define a case of injury as one severe enough to warrant medical attention or one that leads to death.

Many sources of information were used to estimate YLDs for diseases and injuries in the GBD 2000 project. These included national and international surveillance data and disease registries, health survey data, data on use of hospital and medical services, and international and country-specific epidemiological studies (5).

The results reported here rely on new analyses of health facility data obtained after an extensive period of negotiation and consultation with selected Member States (Table A.1). These data were used to develop ratios of death to incidence. The ratios were then applied to extrapolate YLDs from injury deaths for all regions of the world. The death-to-incidence ratios were quite consistent across developed and developing countries. The proportion of incident cases resulting in long-term disabling sequelae was estimated for each nature of injury category from a review of long-term epidemiological studies of injury outcomes.

To produce the rankings in Table A.3, deaths and disabilities were first divided into the three broad groups of causes mentioned earlier. Next, deaths and disabilities within each of these broad groupings were divided into categories. For example, injuries were divided between unintentional and intentional injuries. Following this

level of disaggregation, deaths and disabilities were further divided into subcategories. Unintentional injuries, for example, were subdivided into road traffic injuries, poisonings, falls, fires, and drowning. The same procedure was followed for the other two broad groups of causes of deaths and disabilities. The rankings were produced by ordering the subcategories.

The 12 leading causes of death and DALYs are reported in Table A.3 for all WHO Member States and for each of the six WHO regions. In regions where road traffic injury-related deaths and DALYs rank below the 12 leading causes, the actual rank order is reported.

Country-level rates of mortality

The numbers and rates of mortality related to road traffic injuries presented in Table A.4 are for the most recent year between 1992 and 2002 reported to WHO by Member States. Considerable differences exist in the degree of completeness of the vital registration data submitted by countries. In some countries, the vital registration data system covers only a part of the country (for example, urban areas or some provinces). In others, although the vital registration data system covers the whole country, not all deaths are registered. For China and India, death registration covers only part of the population, and a sample registration system provides a representative sample of deaths for the rest of the population, allowing WHO to estimate the total numbers of deaths by cause for the whole population of each country.

For Member States with incomplete vital registration systems, WHO has used demographic techniques to estimate the level of completeness of death recording for the specified population, so as to be able to calculate death rates. These estimates of completeness are available on the WHO web site as part of the WHO mortality database. The numbers and rates of mortality related to road traffic injuries reported in Table A.4 have been adjusted for incompleteness where the estimated completeness is less than 100%. A simple numerical adjustment applying the fractional completeness has been used, rather than the more complex cause-

of-death modelled adjustments used in the GBD computations for 2002.

Rates are not calculated where the number of deaths in a particular category was less than 20, though the absolute number of deaths is reported. Age-specific and age-standardized rates are reported, with the latter calculated by applying the age-specific rates to the World Standard Population figures (12). Age-standardized rates enable a comparison of rates in populations with different age structures.

The population counts used to estimate the rates of mortality for each country listed in Table A.4 are available from WHO (http://www3.who.int/whosis/mort/table1.cfm?path=whosis,mort,mort_table1&language=english).

World Bank data sources

Estimates of levels of motorization (Table A.6) and several of the tables and figures that appear in chapters 2 and 3 are derived from World Bank data sources rather than WHO data.

The World Bank obtains its data from several sources. Data on the number of traffic fatalities and vehicle numbers (including all passenger cars, buses, trucks and motorized two-wheelers) are taken from various editions of the International Road Federation's (IRF) *World road statistics* yearbook, which date back to the late 1960s. Since each IRF yearbook contains data for the previous five years, each series can be compared across editions to check for accuracy and to ensure that all revisions have been properly recorded.

In constructing the data sets presented in this report, selected IRF data spanning the period 1968–2000 were compared with numerous regional and country-specific road safety studies. Population figures came from the US Census Bureau's international database and income data were taken from the World Bank Global Development Network Growth Database Macro Time Series. To account for differences in purchasing power across countries and to allow comparisons over time, real per capita GDP is measured in 1985 international prices. This series was created from the Penn World Tables 5.6, real per capita GDP variables for 1960–1992 and then extended to 1999 using GDP per capita

growth rates from the Global Development Finance and World Development Indicators.

Supplementary data were added from several sources, including studies published by the following organizations:

- American Automobile Manufacturers' Association;
- Bangladesh Bureau of Statistics;
- Cross-National Time Series Database (CNTS);
- Danish Road Directorate (1998);
- European Conference of Ministers of Transport (ECMT);
- Global Road Safety Partnership;
- Inter-American Development Bank (1998);
- Ministry of Transport of Israel (2000);
- OECD International Road Traffic Accident Database (IRTAD);
- Statistical Bureau of the People's Republic of China;
- Statistical Economic and Social Research and Training Centre for Islamic Countries (SES-RTCIC);
- Transportation Research Laboratory (2000);
- United Nations Economic and Social Commission for Asia and the Pacific (1997).

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TABLE A.2

Estimated mortality caused by road traffic injury,^a by sex, age group, WHO region and income level, 2002Absolute numbers^b

WHO region	Income level	Total ^c	Males						
			All ages	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
All	all	1 183 492	862 784	27 808	82 337	242 584	222 286	160 518	127 251
	high	117 504	83 839	953	2 157	27 443	19 632	14 993	18 661
	low/middle	1 065 988	778 945	26 855	80 179	215 141	202 654	145 526	108 590
African Region ^d	low/middle	190 191	131 240	10 488	39 116	25 829	26 526	17 458	11 823
Region of the Americas	all	133 783	100 378	1 950	4 613	33 772	26 675	18 436	14 933
	high	47 865	32 610	455	999	11 369	8 010	6 029	5 747
	low/middle	85 918	67 768	1 495	3 614	22 403	18 665	12 407	9 185
South-East Asia Region ^d	low/middle	296 141	225 363	3 790	15 082	64 119	65 311	45 383	31 678
European Region	all	127 129	94 529	893	3 084	29 559	25 536	18 995	16 462
	high	43 902	32 753	203	697	11 536	7 847	5 204	7 265
	low/middle	83 227	61 775	690	2 387	18 023	17 689	13 790	9 197
Eastern Mediterranean Region	all	132 207	96 020	7 127	11 887	25 201	19 663	15 916	16 226
	high	1 425	1 196	61	49	390	359	239	98
	low/middle	130 782	94 824	7 066	11 838	24 811	19 304	15 677	16 128
Western Pacific Region	all	304 042	215 253	3 560	8 555	64 104	58 574	44 330	36 129
	high	24 313	17 279	234	412	4 148	3 416	3 520	5 550
	low/middle	279 729	197 974	3 326	8 143	59 957	55 159	40 810	30 579

Rate per 100 000 population

WHO region	Income level	Total ^{c,e}	Males						
			All ages ^e	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
All	all	19.0	27.6	8.8	13.2	29.7	33.5	37.6	45.1
	high	12.6	18.3	3.4	3.6	28.8	18.3	16.7	23.7
	low/middle	20.2	29.2	9.3	14.3	29.9	36.5	43.2	53.3
African Region ^d	low/middle	28.3	39.3	18.6	42.6	27.2	53.4	65.7	81.9
Region of the Americas	all	15.7	23.9	4.9	5.8	31.2	29.8	29.9	35.2
	high	14.8	20.5	4.0	4.2	33.5	22.0	20.0	25.0
	low/middle	16.2	25.9	5.3	6.5	30.2	35.1	39.4	47.4
South-East Asia Region ^d	low/middle	18.6	27.7	4.1	8.5	28.6	39.3	46.9	55.7
European Region	all	14.5	22.2	3.5	5.1	30.0	26.1	24.8	25.0
	high	11.0	16.8	1.9	3.0	29.8	16.8	13.6	19.4
	low/middle	17.4	26.9	4.6	6.5	30.1	34.5	35.9	32.3
Eastern Mediterranean Region	all	26.3	37.4	20.3	18.7	34.2	43.3	62.9	116.3
	high	19.0	26.2	17.9	7.5	38.4	21.7	32.1	59.1
	low/middle	26.4	37.6	20.3	18.8	34.2	44.1	63.9	117.0
Western Pacific Region	all	17.7	24.6	5.3	5.7	29.6	27.4	31.8	40.8
	high	12.0	17.3	4.2	3.5	19.1	15.1	17.1	31.0
	low/middle	18.5	25.5	5.4	5.9	30.8	28.8	34.3	43.3

Absolute numbers ^b								
WHO region	Income level	Females						
		All ages	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
All	all	320 709	21 928	48 499	59 625	63 171	61 258	66 227
	high	33 665	687	1 435	8 112	5 919	5 742	11 770
	low/middle	287 043	21 241	47 064	51 512	57 252	55 516	54 457
African Region ^d	low/middle	58 951	6 114	23 071	9 490	7 692	6 326	6 258
Region of the Americas	all	33 405	1 417	2 716	9 266	6 751	5 562	7 692
	high	15 255	361	734	4 296	3 074	2 755	4 034
	low/middle	18 150	1 056	1 982	4 970	3 677	2 807	3 658
South-East Asia Region ^d	low/middle	70 777	5 945	8 434	13 139	11 833	16 383	15 044
European Region	all	32 600	824	1 684	7 578	5 917	5 923	10 674
	high	11 148	160	419	2 806	1 960	1 728	4 075
	low/middle	21 452	664	1 265	4 772	3 957	4 194	6 599
Eastern Mediterranean Region	all	36 187	5 242	6 711	7 272	5 359	4 758	6 846
	high	229	15	27	57	59	40	31
	low/middle	35 958	5 227	6 684	7 215	5 300	4 718	6 815
Western Pacific Region	all	88 789	2 387	5 884	12 880	25 618	22 307	19 713
	high	7 034	152	255	954	826	1 218	3 629
	low/middle	81 755	2 236	5 629	11 926	24 792	21 088	16 084

Rate per 100 000 population

WHO region	Income level	Females						
		All ages ^e	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
All	all	10.4	7.3	8.2	7.6	9.8	14.3	19.1
	high	7.1	2.6	2.5	8.9	5.6	6.3	11.4
	low/middle	11.0	7.8	8.9	7.7	11.1	17.6	23.3
African Region ^d	low/middle	17.4	11.0	25.5	10.0	15.0	22.1	35.8
Region of the Americas	all	7.7	3.7	3.6	8.7	7.3	8.5	14.4
	high	9.3	3.3	3.2	13.2	8.4	8.7	13.6
	low/middle	6.8	3.9	3.7	6.8	6.6	8.3	15.3
South-East Asia Region ^d	low/middle	9.1	6.8	5.0	6.3	7.6	17.4	23.7
European Region	all	7.2	3.4	2.9	7.9	6.1	7.3	11.1
	high	5.5	1.5	1.9	7.5	4.3	4.5	8.1
	low/middle	8.7	4.7	3.6	8.2	7.7	9.9	14.4
Eastern Mediterranean Region	all	14.7	15.7	11.1	10.3	12.5	19.3	46.0
	high	7.9	4.6	4.4	7.4	8.0	12.4	21.3
	low/middle	14.8	15.8	11.2	10.4	12.6	19.4	46.2
Western Pacific Region	all	10.5	3.9	4.3	6.3	12.4	16.7	19.5
	high	6.8	2.9	2.3	4.6	3.7	5.9	15.7
	low/middle	11.1	3.9	4.5	6.5	13.5	18.7	20.6

TABLE A.2 (continued)

Proportion of all deaths due to injury (%)

WHO region	Income level	Total ^c	Males						
			All ages	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
All	all	22.8	24.8	17.8	33.8	25.3	25.8	24.6	21.1
	high	25.1	26.8	23.0	44.5	44.7	28.3	22.9	17.4
	low/middle	22.6	24.6	17.6	33.6	24.0	25.6	24.8	21.9
African Region ^d	low/middle	25.5	23.8	22.1	47.6	14.6	20.3	24.9	26.4
Region of the Americas	all	24.8	24.0	15.0	33.4	22.9	24.5	26.8	22.3
	high	28.9	28.5	20.2	41.5	39.2	27.5	26.5	20.1
	low/middle	23.0	22.2	13.9	31.6	18.9	23.4	27.0	24.0
South-East Asia Region ^d	low/middle	20.2	26.0	12.4	25.0	25.6	29.8	29.0	21.0
European Region	all	15.8	15.9	12.7	27.9	24.6	15.5	11.6	12.8
	high	24.4	28.5	23.6	51.4	54.8	31.9	24.8	15.8
	low/middle	13.4	12.8	11.2	24.6	18.2	12.6	9.6	11.1
Eastern Mediterranean Region	all	33.7	37.2	29.6	43.1	33.1	37.5	41.9	40.4
	high	44.2	44.5	44.3	49.3	56.8	36.4	39.8	55.3
	low/middle	33.7	37.1	29.5	43.0	32.9	37.5	41.9	40.3
Western Pacific Region	all	24.7	27.5	10.3	17.6	34.3	31.6	28.6	21.0
	high	20.4	21.4	26.0	41.8	38.7	23.2	16.7	17.2
	low/middle	25.1	28.2	9.9	17.1	34.0	32.4	30.5	21.9

Proportion of all deaths (%)

WHO region	Income level	Total ^c	Males						
			All ages	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
All	all	2.1	2.9	0.5	11.2	12.5	7.3	3.5	0.9
	high	1.5	2.1	2.5	21.4	31.7	10.5	2.9	0.6
	low/middle	2.2	3.0	0.5	11.0	11.6	7.1	3.5	1.0
African Region ^d	low/middle	1.8	2.4	0.5	14.1	5.0	3.1	2.8	1.2
Region of the Americas	all	2.2	3.2	0.8	13.8	15.7	9.3	3.8	0.8
	high	1.8	2.5	2.4	22.2	29.2	10.5	3.2	0.6
	low/middle	2.6	3.7	0.7	12.5	12.7	8.8	4.2	1.0
South-East Asia Region ^d	low/middle	2.0	2.9	0.2	6.4	11.3	8.0	3.5	1.0
European Region	all	1.3	1.9	0.8	13.1	16.4	6.4	2.2	0.5
	high	1.2	1.8	1.7	21.1	36.5	10.6	2.4	0.5
	low/middle	1.5	2.1	0.7	11.7	12.1	5.4	2.1	0.5
Eastern Mediterranean Region	all	3.2	4.3	1.0	14.5	16.5	10.6	5.4	2.0
	high	5.6	7.6	6.1	25.4	37.6	13.5	5.9	1.4
	low/middle	3.2	4.3	1.0	14.4	16.4	10.6	5.3	2.0
Western Pacific Region	all	2.5	3.4	0.8	10.1	21.5	12.1	4.1	0.9
	high	1.7	2.2	3.7	20.0	27.5	9.7	3.1	0.9
	low/middle	2.7	3.5	0.7	9.8	21.1	12.3	4.3	0.9

Source: WHO Global Burden of Disease project, 2002, Version 1.

^a Road traffic injury = ICD-10 V01–V04, V06, V09–V80, V87, V89, V99 (ICD-9 E810–E819, E826–E829, E929.0).

^b Any apparent discrepancies in total sums are a result of rounding.

^c Combined total for males and females.

^d No high-income countries in the region.

^e Age-standardized.

Proportion of all deaths due to injury (%)

WHO region	Income level	Females							
		All ages	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years	
All	all	18.8	14.8	29.6	16.9	20.5	22.1	14.5	
	high	21.5	24.7	52.3	50.2	28.9	26.1	12.8	
	low/middle	18.5	14.6	29.2	15.3	19.9	21.7	15.0	
African Region ^d	low/middle	30.3	17.7	47.1	26.5	26.1	28.5	26.4	
	Region of the Americas	all	27.6	14.8	36.2	38.3	32.2	32.3	18.6
		high	29.6	23.0	51.9	56.6	32.0	31.7	17.8
South-East Asia Region ^d	low/middle	26.1	13.2	32.5	30.0	32.3	32.8	19.5	
	European Region	low/middle	11.8	13.9	15.6	7.7	11.3	17.3	11.2
		all	15.8	15.5	32.2	29.8	17.8	13.6	11.4
Eastern Mediterranean Region	high	17.0	26.0	58.0	55.8	30.8	23.0	9.0	
	low/middle	15.2	14.1	28.0	23.4	14.7	11.6	13.6	
	all	27.2	25.8	37.3	20.7	26.8	30.7	28.1	
Western Pacific Region	high	42.8	37.4	48.1	37.7	37.9	53.0	55.2	
	low/middle	27.1	25.7	37.3	20.6	26.8	30.6	28.0	
	all	19.7	6.7	19.7	20.6	25.6	26.6	14.3	
	high	18.2	27.1	46.2	28.2	19.1	21.2	15.0	
	low/middle	19.9	6.4	19.2	20.2	25.8	27.0	14.1	

Proportion of all deaths (%)

WHO region	Income level	Females							
		All ages	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years	
All	all	1.2	0.4	6.6	3.6	3.2	2.1	0.4	
	high	0.9	2.3	20.1	25.5	6.2	2.0	0.3	
	low/middle	1.2	0.4	6.4	3.2	3.1	2.1	0.5	
African Region ^d	low/middle	1.1	0.3	8.1	1.3	1.1	1.4	0.6	
	Region of the Americas	all	1.2	0.7	10.6	11.6	4.6	1.8	0.4
		high	1.2	2.4	23.0	29.6	7.1	2.3	0.4
South-East Asia Region ^d	low/middle	1.2	0.6	8.9	7.6	3.5	1.5	0.4	
	European Region	low/middle	1.0	0.4	3.1	2.5	2.1	1.8	0.5
		all	0.7	1.0	11.1	13.3	4.2	1.6	0.3
Eastern Mediterranean Region	high	0.6	1.7	17.4	26.1	5.5	1.6	0.2	
	low/middle	0.8	0.9	9.9	10.3	3.8	1.6	0.3	
	all	1.9	0.7	8.6	5.9	4.0	2.4	1.0	
Western Pacific Region	high	2.4	2.1	18.1	17.5	8.0	3.4	0.5	
	low/middle	1.9	0.7	8.6	5.9	3.9	2.4	1.0	
	all	1.6	0.5	9.2	9.5	8.6	3.7	0.5	
	high	1.1	3.0	18.3	15.4	5.3	2.4	0.6	
	low/middle	1.7	0.4	9.0	9.3	8.8	3.8	0.5	

TABLE A.3

The 12 leading causes of mortality and DALYs, and rankings for road traffic injuries by WHO region, 2002

ALL MEMBER STATES

Total

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	12.6	1	Perinatal conditions	6.6
2	Cerebrovascular disease	9.6	2	Lower respiratory infections	5.9
3	Lower respiratory infections	6.6	3	HIV/AIDS	5.8
4	HIV/AIDS	4.9	4	Unipolar depressive disorders	4.5
5	Chronic obstructive pulmonary disease	4.8	5	Diarrhoeal diseases	4.1
6	Perinatal conditions	4.3	6	Ischaemic heart disease	3.9
7	Diarrhoeal diseases	3.1	7	Cerebrovascular disease	3.3
8	Tuberculosis	2.8	8	Malaria	3.0
9	Trachea, bronchus, lung cancers	2.2	9	Road traffic injuries	2.6
10	Malaria	2.1	10	Tuberculosis	2.4
11	Road traffic injuries	2.1	11	Chronic obstructive pulmonary disease	1.9
12	Diabetes mellitus	1.7	12	Congenital anomalies	1.8

Males

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	12.6	1	Perinatal conditions	6.9
2	Cerebrovascular disease	8.5	2	HIV/AIDS	5.8
3	Lower respiratory infections	6.3	3	Lower respiratory infections	5.7
4	HIV/AIDS	5.1	4	Ischaemic heart disease	4.4
5	Chronic obstructive pulmonary disease	4.7	5	Diarrhoeal diseases	4.1
6	Perinatal conditions	4.6	6	Road traffic injuries	3.5
7	Tuberculosis	3.5	7	Unipolar depressive disorders	3.4
8	Diarrhoeal diseases	3.1	8	Cerebrovascular disease	3.3
9	Trachea, bronchus, lung cancers	3.0	9	Tuberculosis	2.9
10	Road traffic injuries	2.9	10	Malaria	2.8
11	Malaria	2.0	11	Interpersonal violence	2.3
12	Self-inflicted injuries	1.8	12	Alcohol use disorders	2.2

Females

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	12.5	1	Perinatal conditions	6.2
2	Cerebrovascular disease	10.9	2	Lower respiratory infections	6.0
3	Lower respiratory infections	6.9	3	HIV/AIDS	5.7
4	Chronic obstructive pulmonary disease	4.9	4	Unipolar depressive disorders	5.7
5	HIV/AIDS	4.8	5	Diarrhoeal diseases	4.1
6	Perinatal conditions	4.0	6	Ischaemic heart disease	3.4
7	Diarrhoeal diseases	3.1	7	Cerebrovascular disease	3.3
8	Malaria	2.4	8	Malaria	3.3
9	Tuberculosis	2.0	9	Cataracts	2.0
10	Diabetes mellitus	2.0	10	Measles	1.9
11	Hypertensive heart disease	1.8	11	Congenital anomalies	1.9
12	Breast cancer	1.7	12	Tuberculosis	1.8
18	Road traffic injuries	1.2	15	Road traffic injuries	1.6

TABLE A.3 (continued)

ALL MEMBER STATES (continued)**High-income countries**

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	17.0	1	Unipolar depressive disorders	8.9
2	Cerebrovascular disease	9.8	2	Ischaemic heart disease	6.3
3	Trachea, bronchus, lung cancers	5.8	3	Cerebrovascular disease	4.8
4	Lower respiratory infections	4.4	4	Alcohol use disorders	4.6
5	Chronic obstructive pulmonary disease	3.9	5	Alzheimer and other dementias	3.4
6	Colon and rectum cancers	3.3	6	Hearing loss, adult onset	3.4
7	Alzheimer and other dementias	2.7	7	Chronic obstructive pulmonary disease	3.3
8	Diabetes mellitus	2.6	8	Trachea, bronchus, lung cancers	3.0
9	Breast cancer	1.9	9	Road traffic injuries	2.6
10	Stomach cancer	1.8	10	Diabetes mellitus	2.6
11	Hypertensive heart disease	1.6	11	Osteoarthritis	2.2
12	Self-inflicted injuries	1.6	12	Self-inflicted injuries	2.1
14	Road traffic injuries	1.5			

Low-income and middle-income countries

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	11.8	1	Perinatal conditions	7.0
2	Cerebrovascular disease	9.6	2	Lower respiratory infections	6.3
3	Lower respiratory infections	7.0	3	HIV/AIDS	6.2
4	HIV/AIDS	5.7	4	Diarrhoeal diseases	4.4
5	Chronic obstructive pulmonary disease	5.0	5	Unipolar depressive disorders	4.1
6	Perinatal conditions	5.0	6	Ischaemic heart disease	3.7
7	Diarrhoeal diseases	3.6	7	Malaria	3.3
8	Tuberculosis	3.2	8	Cerebrovascular disease	3.2
9	Malaria	2.5	9	Road traffic injuries	2.6
10	Road traffic injuries	2.2	10	Tuberculosis	2.6
11	Trachea, bronchus, lung cancers	1.6	11	Measles	2.0
12	Hypertensive heart disease	1.6	12	Congenital anomalies	1.9

Source: WHO Global Burden of Disease project, 2002, Version 1.

TABLE A.3 (continued)

AFRICAN REGION^a**Total**

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	HIV/AIDS	20.4	1	HIV/AIDS	18.4
2	Malaria	10.1	2	Malaria	10.8
3	Lower respiratory infections	9.8	3	Lower respiratory infections	8.8
4	Diarrhoeal diseases	6.5	4	Diarrhoeal diseases	6.3
5	Perinatal conditions	5.1	5	Perinatal conditions	5.9
6	Measles	4.1	6	Measles	4.3
7	Cerebrovascular disease	3.3	7	Tuberculosis	2.2
8	Ischaemic heart disease	3.1	8	Road traffic injuries	1.9
9	Tuberculosis	2.8	9	Pertussis	1.9
10	Road traffic injuries	1.8	10	Protein–energy malnutrition	1.5
11	Pertussis	1.6	11	Interpersonal violence	1.5
12	Interpersonal violence	1.3	12	Cataracts	1.4

Males

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	HIV/AIDS	19.4	1	HIV/AIDS	17.0
2	Lower respiratory infections	10.3	2	Malaria	10.1
3	Malaria	9.3	3	Lower respiratory infections	9.5
4	Diarrhoeal diseases	6.6	4	Perinatal conditions	6.6
5	Perinatal conditions	5.8	5	Diarrhoeal diseases	6.5
6	Measles	4.0	6	Measles	4.2
7	Tuberculosis	3.8	7	Tuberculosis	2.9
8	Ischaemic heart disease	3.1	8	Road traffic injuries	2.5
9	Cerebrovascular disease	2.6	9	Interpersonal violence	2.4
10	Road traffic injuries	2.4	10	Pertussis	1.8
11	Interpersonal violence	1.9	11	War	1.6
12	Pertussis	1.5	12	Protein–energy malnutrition	1.6

Females

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	HIV/AIDS	21.6	1	HIV/AIDS	19.8
2	Malaria	11.0	2	Malaria	11.5
3	Lower respiratory infections	9.3	3	Lower respiratory infections	8.1
4	Diarrhoeal diseases	6.3	4	Diarrhoeal diseases	6.1
5	Perinatal conditions	4.5	5	Perinatal conditions	5.2
6	Measles	4.2	6	Measles	4.3
7	Cerebrovascular disease	4.1	7	Pertussis	1.9
8	Ischaemic heart disease	3.1	8	Cataracts	1.6
9	Tuberculosis	1.8	9	Tuberculosis	1.6
10	Pertussis	1.6	10	Protein–energy malnutrition	1.5
11	Hypertensive heart disease	1.2	11	Unipolar depressive disorders	1.5
12	Road traffic injuries	1.1	12	Road traffic injuries	1.3

Source: WHO Global Burden of Disease project, 2002, Version 1.

^aNo high-income countries in the region.

TABLE A.3 (continued)

REGION OF THE AMERICAS
Total

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	15.3	1	Unipolar depressive disorders	8.2
2	Cerebrovascular disease	7.6	2	Perinatal conditions	5.1
3	Diabetes mellitus	4.2	3	Interpersonal violence	4.6
4	Chronic obstructive pulmonary disease	4.0	4	Alcohol use disorders	4.4
5	Trachea, bronchus, lung cancers	3.9	5	Ischaemic heart disease	4.2
6	Lower respiratory infections	3.7	6	Cerebrovascular disease	3.1
7	Perinatal conditions	2.9	7	Road traffic injuries	2.9
8	Interpersonal violence	2.4	8	Diabetes mellitus	2.4
9	Hypertensive heart disease	2.3	9	Congenital anomalies	2.3
10	Road traffic injuries	2.2	10	Chronic obstructive pulmonary disease	2.3
11	Alzheimer and other dementias	2.0	11	HIV/AIDS	2.2
12	Colon and rectum cancers	1.8	12	Lower respiratory infections	2.1

Males

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	15.5	1	Interpersonal violence	7.5
2	Cerebrovascular disease	6.4	2	Alcohol use disorders	6.4
3	Trachea, bronchus, lung cancers	4.4	3	Unipolar depressive disorders	5.6
4	Interpersonal violence	4.1	4	Perinatal conditions	5.2
5	Chronic obstructive pulmonary disease	4.1	5	Ischaemic heart disease	4.8
6	Diabetes mellitus	3.5	6	Road traffic injuries	3.9
7	Lower respiratory infections	3.5	7	Cerebrovascular disease	2.8
8	Road traffic injuries	3.2	8	HIV/AIDS	2.7
9	Perinatal conditions	3.1	9	Congenital anomalies	2.2
10	Cirrhosis of the liver	2.4	10	Chronic obstructive pulmonary disease	2.2
11	Prostate cancer	2.4	11	Lower respiratory infections	2.1
12	HIV/AIDS	2.1	12	Diabetes mellitus	2.0

Females

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	15.2	1	Unipolar depressive disorders	11.4
2	Cerebrovascular disease	8.9	2	Perinatal conditions	5.0
3	Diabetes mellitus	5.0	3	Ischaemic heart disease	3.6
4	Lower respiratory infections	4.1	4	Cerebrovascular disease	3.4
5	Chronic obstructive pulmonary disease	4.0	5	Diabetes mellitus	2.9
6	Trachea, bronchus, lung cancers	3.2	6	Congenital anomalies	2.5
7	Breast cancer	3.1	7	Chronic obstructive pulmonary disease	2.5
8	Alzheimer and other dementias	2.9	8	Lower respiratory infections	2.1
9	Perinatal conditions	2.7	9	Alzheimer and other dementias	1.9
10	Hypertensive heart disease	2.7	10	Alcohol use disorders	1.9
11	Colon and rectum cancers	2.0	11	Asthma	1.9
12	Nephritis and nephrosis	1.8	12	Hearing loss, adult onset	1.9
14	Road traffic injuries	1.2	14	Road traffic injuries	1.7

TABLE A.3 (continued)

REGION OF THE AMERICAS (continued)**High-income countries**

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	21.1	1	Unipolar depressive disorders	11.2
2	Cerebrovascular disease	6.8	2	Ischaemic heart disease	7.0
3	Trachea, bronchus, lung cancers	6.6	3	Alcohol use disorders	5.4
4	Chronic obstructive pulmonary disease	5.2	4	Chronic obstructive pulmonary disease	3.8
5	Alzheimer and other dementias	3.9	5	Cerebrovascular disease	3.5
6	Diabetes mellitus	3.2	6	Diabetes mellitus	3.1
7	Colon and rectum cancers	2.7	7	Hearing loss, adult onset	3.0
8	Lower respiratory infections	2.5	8	Trachea, bronchus, lung cancers	3.0
9	Breast cancer	1.9	9	Road traffic injuries	2.9
10	Road traffic injuries	1.8	10	Alzheimer and other dementias	2.8
11	Nephritis and nephrosis	1.8	11	Osteoarthritis	1.8
12	Hypertensive heart disease	1.7	12	Drug use disorders	1.7

Low-income and middle-income countries

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	10.8	1	Unipolar depressive disorders	6.9
2	Cerebrovascular disease	8.2	2	Perinatal conditions	6.7
3	Diabetes mellitus	5.1	3	Interpersonal violence	6.0
4	Perinatal conditions	4.8	4	Alcohol use disorders	3.9
5	Lower respiratory infections	4.8	5	Ischaemic heart disease	3.0
6	Interpersonal violence	3.9	6	Road traffic injuries	2.9
7	Chronic obstructive pulmonary disease	3.1	7	Cerebrovascular disease	2.9
8	Hypertensive heart disease	2.7	8	Lower respiratory infections	2.8
9	HIV/AIDS	2.7	9	HIV/AIDS	2.7
10	Road traffic injuries	2.6	10	Congenital anomalies	2.7
11	Cirrhosis of the liver	2.3	11	Diarrhoeal diseases	2.2
12	Stomach cancer	1.7	12	Diabetes mellitus	2.1

Source: WHO Global Burden of Disease project, 2002, Version 1.

TABLE A.3 (continued)

SOUTH-EAST ASIA REGION^a**Total**

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	13.9	1	Perinatal conditions	9.2
2	Lower respiratory infections	9.4	2	Lower respiratory infections	7.3
3	Cerebrovascular disease	7.2	3	Ischaemic heart disease	4.9
4	Perinatal conditions	6.9	4	Unipolar depressive disorders	4.8
5	Tuberculosis	4.7	5	Diarrhoeal diseases	4.8
6	Chronic obstructive pulmonary disease	4.5	6	Tuberculosis	3.7
7	Diarrhoeal diseases	4.1	7	Cataracts	2.6
8	HIV/AIDS	2.6	8	HIV/AIDS	2.6
9	Road traffic injuries	2.0	9	Cerebrovascular disease	2.4
10	Diabetes mellitus	1.8	10	Road traffic injuries	2.4
11	Self-inflicted injuries	1.7	11	Hearing loss, adult onset	2.2
12	Cirrhosis of the liver	1.4	12	Congenital anomalies	2.0

Males

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	14.7	1	Perinatal conditions	10.0
2	Lower respiratory infections	8.8	2	Lower respiratory infections	7.1
3	Perinatal conditions	7.2	3	Ischaemic heart disease	5.4
4	Cerebrovascular disease	6.8	4	Diarrhoeal diseases	4.9
5	Tuberculosis	5.7	5	Tuberculosis	4.4
6	Chronic obstructive pulmonary disease	4.8	6	Unipolar depressive disorders	3.8
7	Diarrhoeal diseases	4.1	7	HIV/AIDS	3.8
8	HIV/AIDS	3.7	8	Road traffic injuries	3.4
9	Road traffic injuries	2.9	9	Cerebrovascular disease	2.5
10	Self-inflicted injuries	1.9	10	Cataracts	2.2
11	Trachea, bronchus, lung cancers	1.7	11	Hearing loss, adult onset	2.1
12	Diabetes mellitus	1.7	12	Chronic obstructive pulmonary disease	2.1

Females

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	13.1	1	Perinatal conditions	8.5
2	Lower respiratory infections	10.1	2	Lower respiratory infections	7.5
3	Cerebrovascular disease	7.7	3	Unipolar depressive disorders	5.9
4	Perinatal conditions	6.6	4	Diarrhoeal diseases	4.6
5	Chronic obstructive pulmonary disease	4.2	5	Ischaemic heart disease	4.3
6	Diarrhoeal diseases	4.1	6	Cataracts	3.0
7	Tuberculosis	3.7	7	Tuberculosis	3.0
8	Diabetes mellitus	1.9	8	Cerebrovascular disease	2.4
9	Fires	1.9	9	Hearing loss, adult onset	2.2
10	Cervix uteri cancer	1.5	10	Fires	2.2
11	Self-inflicted injuries	1.5	11	Congenital anomalies	2.1
12	Measles	1.4	12	Chronic obstructive pulmonary disease	1.8
19	Road traffic injuries	1.0	17	Road traffic injuries	1.4

Source: WHO Global Burden of Disease project, 2002, Version 1.

^aNo high-income countries in the region.

TABLE A.3 (continued)

EUROPEAN REGION**Total**

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	24.7	1	Ischaemic heart disease	10.4
2	Cerebrovascular disease	15.1	2	Cerebrovascular disease	7.2
3	Trachea, bronchus, lung cancers	3.8	3	Unipolar depressive disorders	6.3
4	Lower respiratory infections	2.8	4	Alcohol use disorders	3.1
5	Chronic obstructive pulmonary disease	2.7	5	Hearing loss, adult onset	2.6
6	Colon and rectum cancers	2.4	6	Road traffic injuries	2.4
7	Hypertensive heart disease	1.8	7	Chronic obstructive pulmonary disease	2.3
8	Cirrhosis of the liver	1.8	8	Self-inflicted injuries	2.3
9	Self-inflicted injuries	1.7	9	Trachea, bronchus, lung cancers	2.1
10	Stomach cancer	1.6	10	Osteoarthritis	2.1
11	Breast cancer	1.6	11	Alzheimer and other dementias	2.0
12	Diabetes mellitus	1.5	12	Perinatal conditions	1.9
13	Road traffic injuries	1.3			

Males

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	23.7	1	Ischaemic heart disease	11.3
2	Cerebrovascular disease	11.5	2	Cerebrovascular disease	6.2
3	Trachea, bronchus, lung cancers	5.8	3	Alcohol use disorders	4.6
4	Chronic obstructive pulmonary disease	3.3	4	Unipolar depressive disorders	4.1
5	Lower respiratory infections	2.7	5	Self-inflicted injuries	3.3
6	Self-inflicted injuries	2.7	6	Road traffic injuries	3.2
7	Colon and rectum cancers	2.4	7	Trachea, bronchus, lung cancers	3.0
8	Cirrhosis of the liver	2.2	8	Hearing loss, adult onset	2.3
9	Road traffic injuries	1.9	9	Chronic obstructive pulmonary disease	2.2
10	Prostate cancer	1.9	10	Poisonings	2.1
11	Stomach cancer	1.9	11	Cirrhosis of the liver	2.1
12	Poisonings	1.8	12	Interpersonal violence	2.0

Females

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	25.6	1	Ischaemic heart disease	9.1
2	Cerebrovascular disease	18.9	2	Unipolar depressive disorders	9.0
3	Breast cancer	3.2	3	Cerebrovascular disease	8.5
4	Lower respiratory infections	2.9	4	Hearing loss, adult onset	3.1
5	Colon and rectum cancers	2.4	5	Alzheimer and other dementias	3.0
6	Hypertensive heart disease	2.3	6	Osteoarthritis	2.8
7	Chronic obstructive pulmonary disease	2.1	7	Breast cancer	2.6
8	Diabetes mellitus	1.8	8	Chronic obstructive pulmonary disease	2.4
9	Trachea, bronchus, lung cancers	1.7	9	Perinatal conditions	1.8
10	Alzheimer and other dementias	1.5	10	Diabetes mellitus	1.8
11	Stomach cancer	1.4	11	Lower respiratory infections	1.7
12	Cirrhosis of the liver	1.3	12	Vision disorders, age-related	1.4
20	Road traffic injuries	0.7	14	Road traffic injuries	1.4

TABLE A.3 (continued)

EUROPEAN REGION (continued)**High-income countries**

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	16.8	1	Unipolar depressive disorders	8.0
2	Cerebrovascular disease	10.3	2	Ischaemic heart disease	6.7
3	Trachea, bronchus, lung cancers	5.3	3	Cerebrovascular disease	5.0
4	Lower respiratory infections	4.5	4	Alcohol use disorders	4.3
5	Chronic obstructive pulmonary disease	3.6	5	Alzheimer and other dementias	3.9
6	Colon and rectum cancers	3.5	6	Hearing loss, adult onset	3.7
7	Alzheimer and other dementias	2.5	7	Chronic obstructive pulmonary disease	3.4
8	Diabetes mellitus	2.4	8	Trachea, bronchus, lung cancers	3.2
9	Breast cancer	2.3	9	Road traffic injuries	2.4
10	Prostate cancer	1.8	10	Osteoarthritis	2.3
11	Hypertensive heart disease	1.7	11	Diabetes mellitus	2.2
12	Cirrhosis of the liver	1.6	12	Colon and rectum cancers	2.0
18	Road traffic injuries	1.2			

Low-income and middle-income countries

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	29.8	1	Ischaemic heart disease	12.1
2	Cerebrovascular disease	18.2	2	Cerebrovascular disease	8.3
3	Trachea, bronchus, lung cancers	2.9	3	Unipolar depressive disorders	5.4
4	Chronic obstructive pulmonary disease	2.1	4	Self-inflicted injuries	2.6
5	Self-inflicted injuries	2.1	5	Alcohol use disorders	2.5
6	Hypertensive heart disease	1.9	6	Road traffic injuries	2.4
7	Poisonings	1.9	7	Perinatal conditions	2.3
8	Cirrhosis of the liver	1.9	8	Hearing loss, adult onset	2.1
9	Lower respiratory infections	1.7	9	Interpersonal violence	2.1
10	Stomach cancer	1.7	10	Poisonings	2.1
11	Colon and rectum cancers	1.7	11	Osteoarthritis	1.9
12	Road traffic injuries	1.5	12	Lower respiratory infections	1.9

Source: WHO Global Burden of Disease project, 2002, Version 1.

TABLE A.3 (continued)

EASTERN MEDITERRANEAN REGION**Total**

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	12.9	1	Perinatal conditions	8.7
2	Lower respiratory infections	8.6	2	Lower respiratory infections	7.7
3	Perinatal conditions	7.3	3	Diarrhoeal diseases	6.0
4	Diarrhoeal diseases	6.0	4	Ischaemic heart disease	3.8
5	Cerebrovascular disease	5.4	5	Unipolar depressive disorders	3.6
6	Road traffic injuries	3.2	6	Road traffic injuries	3.3
7	Tuberculosis	3.1	7	Congenital anomalies	3.2
8	Hypertensive heart disease	2.3	8	Measles	2.1
9	Chronic obstructive pulmonary disease	2.3	9	Tuberculosis	2.0
10	Measles	2.0	10	Cerebrovascular disease	1.8
11	Congenital anomalies	2.0	11	Pertussis	1.8
12	Cirrhosis of the liver	1.6	12	Cataracts	1.8

Males

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	14.0	1	Perinatal conditions	9.7
2	Lower respiratory infections	8.4	2	Lower respiratory infections	7.8
3	Perinatal conditions	7.8	3	Diarrhoeal diseases	6.2
4	Diarrhoeal diseases	5.8	4	Ischaemic heart disease	4.6
5	Cerebrovascular disease	5.2	5	Road traffic injuries	4.5
6	Road traffic injuries	4.3	6	Congenital anomalies	3.2
7	Tuberculosis	3.8	7	Unipolar depressive disorders	2.8
8	Chronic obstructive pulmonary disease	2.4	8	Tuberculosis	2.5
9	Hypertensive heart disease	2.3	9	Measles	2.1
10	Congenital anomalies	1.9	10	Cerebrovascular disease	1.9
11	Measles	1.9	11	Pertussis	1.7
12	Cirrhosis of the liver	1.7	12	Drug use disorders	1.6

Females

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	11.7	1	Perinatal conditions	7.7
2	Lower respiratory infections	8.8	2	Lower respiratory infections	7.6
3	Perinatal conditions	6.6	3	Diarrhoeal diseases	5.9
4	Diarrhoeal diseases	6.2	4	Unipolar depressive disorders	4.4
5	Cerebrovascular disease	5.7	5	Congenital anomalies	3.1
6	Tuberculosis	2.4	6	Ischaemic heart disease	3.1
7	Hypertensive heart disease	2.4	7	Measles	2.2
8	Measles	2.2	8	Road traffic injuries	2.1
9	Chronic obstructive pulmonary disease	2.2	9	Cataracts	2.0
10	Congenital anomalies	2.1	10	Pertussis	1.8
11	Road traffic injuries	1.9	11	Malaria	1.7
12	Malaria	1.6	12	Cerebrovascular disease	1.7

TABLE A.3 (continued)

EASTERN MEDITERRANEAN REGION (continued)**High-income countries**

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	19.8	1	Unipolar depressive disorders	7.9
2	Hypertensive heart disease	6.8	2	Ischaemic heart disease	7.0
3	Cerebrovascular disease	6.0	3	Road traffic injuries	5.3
4	Road traffic injuries	5.6	4	Vision disorders, age-related	5.1
5	Diabetes mellitus	4.2	5	Diabetes mellitus	4.2
6	Lower respiratory infections	3.9	6	Hearing loss, adult onset	4.2
7	Congenital anomalies	2.8	7	Congenital anomalies	3.7
8	Perinatal conditions	2.0	8	Cataracts	3.6
9	Nephritis and nephrosis	2.0	9	Perinatal conditions	2.3
10	Trachea, bronchus, lung cancers	1.7	10	Schizophrenia	2.2
11	Breast cancer	1.4	11	Hypertensive heart disease	1.9
12	Self-inflicted injuries	1.2	12	Asthma	1.8

Low-income and middle-income countries

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Ischaemic heart disease	12.9	1	Perinatal conditions	8.8
2	Lower respiratory infections	8.6	2	Lower respiratory infections	7.7
3	Perinatal conditions	7.3	3	Diarrhoeal diseases	6.1
4	Diarrhoeal diseases	6.0	4	Ischaemic heart disease	3.8
5	Cerebrovascular disease	5.4	5	Unipolar depressive disorders	3.6
6	Tuberculosis	3.2	6	Road traffic injuries	3.3
7	Road traffic injuries	3.2	7	Congenital anomalies	3.2
8	Hypertensive heart disease	2.3	8	Measles	2.2
9	Chronic obstructive pulmonary disease	2.3	9	Tuberculosis	2.0
10	Measles	2.0	10	Cerebrovascular disease	1.8
11	Congenital anomalies	2.0	11	Pertussis	1.8
12	Cirrhosis of the liver	1.6	12	Cataracts	1.7

Source: WHO Global Burden of Disease project, 2002, Version 1.

TABLE A.3 (continued)

WESTERN PACIFIC REGION**Total**

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Cerebrovascular disease	16.4	1	Cerebrovascular disease	6.6
2	Chronic obstructive pulmonary disease	11.5	2	Unipolar depressive disorders	6.0
3	Ischaemic heart disease	8.3	3	Perinatal conditions	5.5
4	Stomach cancer	4.2	4	Chronic obstructive pulmonary disease	3.9
5	Lower respiratory infections	4.1	5	Road traffic injuries	3.4
6	Trachea, bronchus, lung cancers	3.6	6	Lower respiratory infections	2.9
7	Liver cancer	3.3	7	Ischaemic heart disease	2.8
8	Tuberculosis	3.0	8	Self-inflicted injuries	2.6
9	Perinatal conditions	2.9	9	Diarrhoeal diseases	2.5
10	Self-inflicted injuries	2.8	10	Alcohol use disorders	2.4
11	Road traffic injuries	2.5	11	Hearing loss, adult onset	2.4
12	Hypertensive heart disease	2.4	12	Tuberculosis	2.2

Males

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Cerebrovascular disease	15.5	1	Cerebrovascular disease	6.8
2	Chronic obstructive pulmonary disease	9.8	2	Perinatal conditions	5.1
3	Ischaemic heart disease	7.9	3	Unipolar depressive disorders	4.9
4	Stomach cancer	5.0	4	Road traffic injuries	4.4
5	Trachea, bronchus, lung cancers	4.6	5	Chronic obstructive pulmonary disease	4.0
6	Liver cancer	4.5	6	Alcohol use disorders	3.9
7	Tuberculosis	3.7	7	Ischaemic heart disease	3.0
8	Road traffic injuries	3.4	8	Tuberculosis	2.6
9	Lower respiratory infections	3.3	9	Liver cancer	2.4
10	Self-inflicted injuries	2.8	10	Self-inflicted injuries	2.4
11	Perinatal conditions	2.7	11	Diarrhoeal diseases	2.4
12	Oesophagus cancer	2.5	12	Hearing loss, adult onset	2.3

Females

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Cerebrovascular disease	17.4	1	Unipolar depressive disorders	7.4
2	Chronic obstructive pulmonary disease	13.5	2	Cerebrovascular disease	6.2
3	Ischaemic heart disease	8.7	3	Perinatal conditions	5.9
4	Lower respiratory infections	4.9	4	Lower respiratory infections	3.8
5	Stomach cancer	3.3	5	Chronic obstructive pulmonary disease	3.8
6	Perinatal conditions	3.2	6	Self-inflicted injuries	2.8
7	Self-inflicted injuries	2.8	7	Vision disorders, age-related	2.6
8	Hypertensive heart disease	2.6	8	Ischaemic heart disease	2.6
9	Trachea, bronchus, lung cancers	2.4	9	Diarrhoeal diseases	2.6
10	Tuberculosis	2.2	10	Osteoarthritis	2.5
11	Liver cancer	2.0	11	Hearing loss, adult onset	2.5
12	Diabetes mellitus	1.9	12	Congenital anomalies	2.2
13	Road traffic injuries	1.6	13	Road traffic injuries	2.2

TABLE A.3 (continued)

WESTERN PACIFIC REGION (continued)**High-income countries**

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Cerebrovascular disease	13.9	1	Cerebrovascular disease	7.3
2	Ischaemic heart disease	10.0	2	Unipolar depressive disorders	6.5
3	Lower respiratory infections	8.0	3	Alcohol use disorders	4.0
4	Trachea, bronchus, lung cancers	5.7	4	Ischaemic heart disease	3.9
5	Stomach cancer	4.8	5	Alzheimer and other dementias	3.8
6	Colon and rectum cancers	3.7	6	Self-inflicted injuries	3.7
7	Liver cancer	3.4	7	Hearing loss, adult onset	3.7
8	Self-inflicted injuries	3.2	8	Osteoarthritis	2.9
9	Diabetes mellitus	2.3	9	Diabetes mellitus	2.6
10	Chronic obstructive pulmonary disease	2.1	10	Road traffic injuries	2.5
11	Nephritis and nephrosis	1.9	11	Trachea, bronchus, lung cancers	2.5
12	Pancreas cancer	1.8	12	Stomach cancer	2.3
13	Road traffic injuries	1.7			

Low-income and middle-income countries

Rank	Cause	Proportion of total (%)	Rank	Cause	Proportion of total (%)
Deaths			DALYs		
1	Cerebrovascular disease	16.8	1	Cerebrovascular disease	6.5
2	Chronic obstructive pulmonary disease	12.8	2	Unipolar depressive disorders	6.0
3	Ischaemic heart disease	8.1	3	Perinatal conditions	5.9
4	Stomach cancer	4.1	4	Chronic obstructive pulmonary disease	4.0
5	Lower respiratory infections	3.5	5	Road traffic injuries	3.5
6	Tuberculosis	3.3	6	Lower respiratory infections	3.0
7	Perinatal conditions	3.3	7	Ischaemic heart disease	2.7
8	Trachea, bronchus, lung cancers	3.3	8	Diarrhoeal diseases	2.7
9	Liver cancer	3.3	9	Self-inflicted injuries	2.5
10	Self-inflicted injuries	2.7	10	Tuberculosis	2.4
11	Road traffic injuries	2.7	11	Vision disorders, age-related	2.3
12	Hypertensive heart disease	2.6	12	Hearing loss, adult onset	2.3

Source: WHO Global Burden of Disease project, 2002, Version 1.

TABLE A.4

Mortality caused by road traffic injury^a, by sex, age group and country, most recent year available between 1992 and 2002

Country or area	Year	Measure ^b	Total ^{c,d}	Males						
				All ages ^e	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
Albania	2000	No.	52	44	1	3	10	16	9	5
		Rate	2.2	3.6	—	—	—	—	—	—
Argentina	1997	No.	2 609	1 977	61	85	639	456	391	358
		Rate	6.8	10.3	3.3	2.4	12.6	12.5	14.1	16.0
Armenia	2000	No.	203	154	1	8	33	51	25	36
		Rate	6.8	11.3	—	—	8.8	15.5	12.6	23.3
Australia	2000	No.	1 763	1 253	18	51	505	304	170	205
		Rate	8.6	12.4	—	3.6	22.8	13.3	8.7	13.2
Austria	2001	No.	860	634	69	8	202	161	112	138
		Rate	10.7	15.0	33.0	—	25.2	14.4	13.6	18.3
Azerbaijan	2000	No.	390	309	7	17	62	127	54	42
		Rate	7.1	10.8	—	—	8.6	18.2	18.4	17.9
Bahamas	1995	No.	17	13	1	1	3	6	2	0
		Rate	6.0	—	—	—	—	—	—	—
Bahrain	2000	No.	60	54	1	8	19	13	6	7
		Rate	10.9	14.7	—	—	—	—	—	—
Barbados	1995	No.	24	19	0	0	6	3	4	6
		Rate	7.7	—	—	—	—	—	—	—
Belarus	2001	No.	1 514	1 150	6	23	378	337	234	172
		Rate	14.4	25.3	—	3.6	33.1	31.2	28.7	25.9
Belgium	1997	No.	1 477	1 084	6	26	400	278	138	236
		Rate	15.3	21.1	—	4.1	40.9	23.0	13.3	23.7
Brazil	1995	No.	32 458	25 394	454	1 677	8 692	7 695	4 053	2 823
		Rate	24.0	36.9	6.8	12.5	43.6	51.5	45.7	56.3
Bulgaria	2000	No.	857	629	6	13	154	153	152	151
		Rate	9.2	15.7	—	—	16.6	17.9	18.5	19.6
Canada	1999	No.	2 917	1 968	21	93	721	444	302	421
		Rate	9.3	12.7	2.4	4.5	22.6	11.8	9.6	17.7
Chile	1999	No.	1 543	1 246	19	55	279	398	281	214
		Rate	9.8	15.7	—	3.6	14.3	21.8	24.1	29.0
China	1999	No.	16 745	11 881	158	520	2 584	3 929	2 510	2 180
		Rate	15.6	21.8	3.9	5.7	19.4	28.3	28.6	41.6
Colombia	1998	No.	5 815	4 609	123	278	1 667	1 199	534	715
		Rate	18.1	27.0	6.4	7.4	35.6	33.2	26.6	65.0
Costa Rica	2000	No.	530	436	5	17	149	133	88	64
		Rate	18.4	26.4	—	—	32.8	36.4	43.5	52.7
Croatia	2001	No.	313	239	5	9	73	52	38	62
		Rate	6.8	11.4	—	—	16.2	11.4	8.8	16.3
Cuba	2000	No.	1 639	1 280	14	50	277	432	307	286
		Rate	14.1	21.9	—	5.9	21.5	27.3	32.0	35.6
Czech Republic	2001	No.	650	467	2	9	149	98	113	96
		Rate	5.4	9.0	—	—	11.9	8.9	9.7	11.7
Denmark	1999	No.	483	349	8	17	132	89	48	55
		Rate	9.1	12.8	—	—	26.7	14.1	8.2	11.1
Dominican Republic	1998	No.	1 299	1 077	16	50	448	287	177	182
		Rate	38.4	50.9	—	11.1	74.0	65.3	73.5	130.4

Country or area	Year	Measure ^b	Females						
			All ages ^c	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
Albania	2000	No.	8	0	2	1	2	0	2
		Rate	—	—	—	—	—	—	—
Argentina	1997	No.	639	35	60	158	115	102	171
		Rate	3.2	2.0	1.7	3.2	3.1	3.4	5.6
Armenia	2000	No.	49	0	2	4	10	10	23
		Rate	3.4	—	—	—	—	—	10.8
Australia	2000	No.	510	18	22	168	94	69	139
		Rate	5.0	—	1.6	7.9	4.1	3.6	7.6
Austria	2001	No.	228	3	8	56	41	25	95
		Rate	5.2	—	—	7.3	3.9	3.1	8.8
Azerbaijan	2000	No.	81	2	11	11	25	13	19
		Rate	2.7	—	—	—	3.3	—	—
Bahamas	1995	No.	4	0	0	0	2	1	1
		Rate	—	—	—	—	—	—	—
Bahrain	2000	No.	6	0	1	1	4	0	0
		Rate	—	—	—	—	—	—	—
Barbados	1995	No.	5	0	0	1	1	0	3
		Rate	—	—	—	—	—	—	—
Belarus	2001	No.	364	3	18	80	76	68	118
		Rate	7.1	—	—	7.3	6.8	7.4	9.8
Belgium	1997	No.	491	103	21	102	72	56	137
		Rate	9.2	36.9	3.5	10.8	6.2	5.5	10.3
Brazil	1995	No.	7 064	366	972	2 009	1 447	1 056	1 213
		Rate	10.0	5.7	7.5	10.2	9.2	10.9	19.2
Bulgaria	2000	No.	228	4	10	43	35	42	94
		Rate	5.4	—	—	4.9	4.1	4.7	9.2
Canada	1999	No.	956	23	40	292	174	181	262
		Rate	6.1	2.8	2.0	9.5	4.7	5.7	8.8
Chile	1999	No.	297	14	31	69	62	41	80
		Rate	3.7	—	2.1	3.6	3.4	3.4	8.2
China	1999	No.	4 864	111	280	915	1 284	1 069	1 205
		Rate	9.4	3.1	3.4	7.4	9.7	13.0	21.0
Colombia	1998	No.	1 213	81	155	311	258	148	236
		Rate	6.9	4.4	4.3	6.7	6.7	6.6	17.4
Costa Rica	2000	No.	99	5	14	24	12	13	26
		Rate	6.2	—	—	5.5	—	—	19.4
Croatia	2001	No.	74	1	2	20	15	12	24
		Rate	3.3	—	—	4.6	—	—	4.2
Cuba	2000	No.	375	8	33	113	94	69	74
		Rate	6.4	—	4.1	9.1	6.1	6.9	8.4
Czech Republic	2001	No.	183	3	8	38	22	30	82
		Rate	3.3	—	—	3.2	2.0	2.5	6.9
Denmark	1999	No.	134	0	7	34	34	21	38
		Rate	4.8	—	—	7.1	5.6	3.6	6.0
Dominican Republic	1998	No.	240	6	22	76	53	41	62
		Rate	11.7	—	5.1	13.3	12.5	16.7	41.2

TABLE A.4 (continued)

Country or area	Year	Measure ^b	Total ^{c,d}	Males						
				All ages ^e	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
Ecuador	2000	No.	1 540	1 198	40	112	310	313	220	205
		Rate	18.2	24.7	7.3	10.4	22.0	33.0	41.0	62.0
Egypt	2000	No.	2 932	2 259	142	403	656	481	321	278
		Rate	5.6	8.0	4.0	6.0	8.1	9.9	9.7	15.4
El Salvador	1999	No.	1 662	1 337	38	87	407	321	248	236
		Rate	42.2	58.1	12.9	16.0	58.6	82.8	110.2	150.9
Estonia	2001	No.	203	151	1	8	37	42	39	23
		Rate	14.4	24.6	—	—	24.7	31.6	33.7	22.8
Finland	1995	No.	404	295	4	14	77	51	56	93
		Rate	7.2	11.6	—	—	15.6	9.3	9.6	21.4
France	1999	No.	7 918	5 755	9	18	251	127	86	115
		Rate	4.1	18.3	—	—	3.9	1.8	1.4	2.1
Georgia	2000	No.	176	133	0	3	33	51	27	18
		Rate	4.7	8.1	—	—	8.2	13.6	10.3	—
Germany	2000	No.	4 681	3 380	18	73	1 315	848	521	605
		Rate	5.6	8.2	—	1.6	17.7	7.9	6.4	7.1
Greece	1999	No.	2 227	1 668	1	10	155	90	62	106
		Rate	9.0	35.1	—	—	15.2	8.4	6.9	10.2
Hungary	2001	No.	1 297	955	2	24	236	215	248	230
		Rate	10.7	18.7	—	3.7	19.5	19.9	22.9	28.0
Iceland	1998	No.	26	18	0	1	7	4	2	4
		Rate	8.9	—	—	—	—	—	—	—
Ireland	2000	No.	368	281	2	8	149	59	33	30
		Rate	9.0	14.0	—	—	28.1	14.5	9.4	10.8
Israel	1998	No.	517	370	16	16	153	66	57	94
		Rate	8.0	11.0	—	—	17.8	10.3	11.3	24.7
Italy	1999	No.	7 770	6 049	15	112	1 958	1 346	893	1 725
		Rate	12.5	21.8	—	4.0	37.0	19.8	16.2	28.9
Japan	2000	No.	10 954	7 549	71	120	2 018	985	1 439	2 947
		Rate	7.1	12.5	2.4	2.0	16.4	7.9	10.7	22.4
Kuwait	2000	No.	377	304	12	18	111	79	51	33
		Rate	21.0	21.5	—	—	32.9	14.7	27.0	89.1
Kyrgyzstan	2001	No.	502	376	5	21	96	153	65	36
		Rate	14.9	20.7	—	5.0	18.4	41.7	34.1	27.7
Latvia	2001	No.	598	455	5	12	130	134	103	71
		Rate	24.3	42.7	—	—	50.5	55.4	53.0	40.5
Lithuania	2001	No.	748	579	7	18	176	159	122	97
		Rate	21.2	37.0	—	—	48.7	42.9	45.8	40.3
Luxembourg	2001	No.	75	55	1	0	24	10	9	11
		Rate	16.2	22.8	—	—	53.6	—	—	—
Malta	2001	No.	18	15	0	0	8	0	3	4
		Rate	4.4	—	—	—	—	—	—	—
Mauritius	2000	No.	181	154	1	10	30	55	40	18
		Rate	43.9	25.2	—	—	18.9	36.3	42.0	39.8
Mexico	2000	No.	9 100	7 159	227	503	2 297	1 758	1 091	1 215
		Rate	10.5	14.9	4.1	4.6	16.3	19.2	20.8	37.6
Netherlands	2000	No.	1 031	760	8	26	281	151	119	175
		Rate	6.2	9.4	—	2.5	18.6	7.4	6.9	13.3

Country or area	Year	Measure ^b	Females						
			All ages ^c	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
Ecuador	2000	No.	344	25	72	55	64	49	76
		Rate	7.1	4.7	6.9	4.0	6.8	8.9	20.1
Egypt	2000	No.	673	110	180	107	118	89	73
		Rate	2.4	3.3	2.8	1.3	2.3	2.7	3.5
El Salvador	1999	No.	325	23	49	56	47	59	91
		Rate	13.6	8.1	9.3	8.1	10.6	23.2	46.6
Estonia	2001	No.	52	1	5	15	8	9	14
		Rate	7.2	—	—	—	—	—	—
Finland	1995	No.	109	1	9	21	16	18	44
		Rate	4.1	—	—	4.4	—	—	7.1
France	1999	No.	2 163	42	96	635	385	328	677
		Rate	6.5	2.1	2.5	10.2	5.5	5.1	8.9
Georgia	2000	No.	43	0	2	8	6	5	20
		Rate	2.4	—	—	—	—	—	5.2
Germany	2000	No.	1 301	14	49	378	248	171	441
		Rate	3.0	—	1.1	5.3	2.4	2.1	3.7
Greece	1999	No.	559	5	20	126	73	99	236
		Rate	11.4	—	4.3	13.0	6.9	10.8	18.8
Hungary	2001	No.	342	5	10	61	55	72	139
		Rate	6.1	—	—	5.3	5.2	6.0	10.5
Iceland	1998	No.	8	1	0	5	0	0	2
		Rate	—	—	—	—	—	—	—
Ireland	2000	No.	98	1	8	30	21	10	28
		Rate	4.8	—	—	5.9	5.1	—	8.2
Israel	1998	No.	152	6	9	29	22	21	62
		Rate	4.4	—	—	3.5	3.4	3.9	12.2
Italy	1999	No.	1 721	22	42	428	291	240	698
		Rate	5.8	1.8	1.6	8.4	4.3	4.2	8.7
Japan	2000	No.	3 410	35	55	407	226	545	2 150
		Rate	5.4	1.2	0.9	3.5	1.9	4.0	12.6
Kuwait	2000	No.	73	8	9	13	27	8	8
		Rate	7.8	—	—	—	10.5	—	—
Kyrgyzstan	2001	No.	126	6	17	24	37	21	21
		Rate	6.7	—	—	4.6	9.9	10.1	10.9
Latvia	2001	No.	143	1	8	35	26	32	41
		Rate	11.4	—	—	14.0	10.3	13.5	12.4
Lithuania	2001	No.	169	5	7	34	32	37	54
		Rate	9.4	—	—	9.6	8.2	11.7	12.8
Luxembourg	2001	No.	20	0	2	9	3	4	2
		Rate	8.1	—	—	—	—	—	—
Malta	2001	No.	3	0	0	1	0	0	2
		Rate	—	—	—	—	—	—	—
Mauritius	2000	No.	27	1	2	0	9	7	8
		Rate	4.4	—	—	—	—	—	—
Mexico	2000	No.	1 946	153	197	437	360	279	503
		Rate	3.9	2.9	1.9	3.0	3.5	4.9	13.1
Netherlands	2000	No.	271	5	15	69	40	44	98
		Rate	3.3	—	—	4.8	2.1	2.6	5.7

TABLE A.4 (continued)

Country or area	Year	Measure ^b	Total ^{c,d}	Males						
				All ages ^e	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
New Zealand	1999	No.	513	336	4	12	136	75	44	65
		Rate	12.7	16.7	—	—	32.7	16.7	11.7	22.0
Nicaragua	2000	No.	485	407	16	49	123	109	59	51
		Rate	21.5	27.9	—	12.3	28.6	47.6	52.0	82.0
Norway	2000	No.	326	241	7	4	102	52	32	44
		Rate	7.6	11.0	—	—	24.3	10.3	7.1	11.7
Panama	2000	No.	402	339	7	16	121	102	62	59
		Rate	17.6	25.4	—	—	33.5	36.0	38.3	55.3
Peru	2000	No.	1 993	1 501	63	121	386	442	279	256
		Rate	17.6	22.2	8.0	7.9	20.1	33.5	36.9	54.9
Poland	2001	No.	5 067	3 838	27	105	1 109	938	922	737
		Rate	11.7	19.9	2.7	4.0	22.2	22.7	23.6	28.1
Portugal	2000	No.	1 376	1 098	6	24	391	236	169	272
		Rate	11.1	20.2	—	3.7	31.3	19.1	17.0	27.2
Republic of Korea	2001	No.	9 796	7 160	148	221	1 468	1 864	1 620	1 839
		Rate	22.7	34.1	10.8	7.1	27.7	33.0	46.1	87.6
Republic of Moldova	2001	No.	282	204	2	16	57	54	39	36
		Rate	7.4	12.0	—	—	12.2	14.8	13.4	18.9
Romania	1998	No.	2 778	2 017	29	112	426	475	515	460
		Rate	11.4	18.4	5.0	8.1	15.5	19.8	25.6	25.4
Russian Federation	1998	No.	29 440	21 392	160	812	6 604	7 367	3 992	2 456
		Rate	19.9	32.9	5.2	9.4	39.9	47.4	32.0	27.9
Saint Lucia	1998	No.	21	16	0	3	6	3	4	0
		Rate	13.7	—	—	—	—	—	—	—
Singapore	2001	No.	168	144	2	1	70	26	21	27
		Rate	5.5	8.4	—	—	20.9	5.5	5.9	15.3
Slovakia	2001	No.	386	288	3	19	42	65	82	77
		Rate	6.2	10.5	—	—	5.8	10.6	15.5	22.2
Slovenia	2001	No.	304	249	0	4	105	53	41	46
		Rate	13.9	25.4	—	—	47.1	23.1	19.2	28.8
Spain	2000	No.	4 191	3 166	16	82	1 063	800	515	690
		Rate	9.1	15.5	—	4.0	22.4	15.8	13.9	17.6
Sweden	2000	No.	503	369	2	6	124	77	67	93
		Rate	5.2	8.2	—	—	14.9	7.9	7.0	10.1
Tajikistan	1999	No.	148	126	0	9	27	53	20	16
		Rate	6.2	8.5	—	—	6.3	19.4	16.4	—
Thailand	1994	No.	12 098	9 939	99	415	5 067	2 633	1 118	594
		Rate	20.9	36.5	4.2	8.6	65.9	41.2	29.6	26.8
The former Yugoslav Republic of Macedonia	2000	No.	107	82	0	6	20	20	14	22
		Rate	5.3	8.7	—	—	8.7	9.6	—	17.7
Trinidad and Tobago	1994	No.	132	101	2	7	29	28	14	21
		Rate	10.8	16.9	—	—	16.2	21.3	—	38.0
Turkmenistan	1998	No.	332	250	8	41	72	85	26	17
		Rate	9.6	13.9	—	9.2	13.8	23.2	15.3	—
United Kingdom	1999	No.	3 165	2 317	13	97	815	602	307	489
		Rate	5.3	7.9	—	2.4	14.4	8.9	5.4	9.0

Country or area	Year	Measure ^b	Females						
			All ages ^c	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
New Zealand	1999	No.	178	4	10	56	30	19	59
		Rate	8.6	—	—	14.0	6.2	—	16.6
Nicaragua	2000	No.	78	9	9	20	25	7	8
		Rate	5.3	—	—	4.7	10.2	—	—
Norway	2000	No.	85	2	6	25	15	10	27
		Rate	3.8	—	—	6.2	—	—	5.5
Panama	2000	No.	71	1	8	23	12	10	10
		Rate	5.4	—	—	6.6	—	—	—
Peru	2000	No.	501	39	45	129	105	85	110
		Rate	7.5	5.2	3.1	6.9	8.0	11.1	21.1
Poland	2001	No.	1 234	22	75	277	172	226	484
		Rate	6.0	2.3	3.0	5.7	4.2	5.4	12.1
Portugal	2000	No.	278	7	12	58	39	49	113
		Rate	4.7	—	—	4.8	3.1	4.5	8.1
Republic of Korea	2001	No.	2 636	101	145	365	418	508	1 099
		Rate	12.7	8.0	5.3	7.3	7.6	14.5	39.1
Republic of Moldova	2001	No.	71	1	12	11	12	12	23
		Rate	3.8	—	—	—	—	—	7.7
Romania	1998	No.	761	15	77	150	127	123	269
		Rate	6.6	—	5.8	5.7	5.4	5.8	11.1
Russian Federation	1998	No.	8 049	111	510	2 052	1 755	1 355	2 265
		Rate	10.9	3.8	6.2	12.7	11.1	9.4	13.6
Saint Lucia	1998	No.	5	0	0	1	1	1	2
		Rate	—	—	—	—	—	—	—
Singapore	2001	No.	25	3	2	4	3	3	10
		Rate	1.5	—	—	—	—	—	—
Slovakia	2001	No.	98	0	7	10	11	22	48
		Rate	3.4	—	—	—	—	3.9	9.1
Slovenia	2001	No.	55	0	1	13	7	12	22
		Rate	5.3	—	—	—	—	—	9.2
Spain	2000	No.	1 025	15	36	282	167	144	381
		Rate	4.8	—	1.8	6.2	3.4	3.8	7.5
Sweden	2000	No.	134	0	8	24	23	18	61
		Rate	2.9	—	—	3.0	2.5	—	5.2
Tajikistan	1999	No.	22	2	4	3	5	3	5
		Rate	1.5	—	—	—	—	—	—
Thailand	1994	No.	2 173	76	165	779	558	328	251
		Rate	7.7	3.3	3.5	10.2	8.2	8.1	9.4
The former Yugoslav Republic of Macedonia	2000	No.	25	1	1	4	3	4	12
		Rate	2.7	—	—	—	—	—	—
Trinidad and Tobago	1994	No.	31	0	5	14	4	5	3
		Rate	5.1	—	—	—	—	—	—
Turkmenistan	1998	No.	82	8	18	12	25	9	10
		Rate	4.5	—	—	—	6.6	—	—
United Kingdom	1999	No.	961	16	54	240	140	126	385
		Rate	3.1	—	1.4	4.2	2.0	2.2	5.5

TABLE A.4 (continued)

Country or area	Year	Measure ^b	Total ^{c,d}	Males						
				All ages ^c	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
Ukraine	2000	No.	5 559	4 239	31	132	1 374	1 194	905	603
		Rate	11.3	19.7	3.1	4.5	25.9	24.2	23.2	17.4
United States of America	1999	No.	44 249	29 908	489	1 147	10 158	7 437	5 004	5 673
		Rate	14.7	20.6	4.6	5.2	32.7	22.5	18.3	27.2
Uruguay	2000	No.	357	273	5	8	78	65	45	72
		Rate	10.0	16.4	—	—	19.3	19.7	17.7	29.3
Uzbekistan	2000	No.	1 852	1 469	59	184	372	518	208	128
		Rate	9.8	14.1	5.2	7.2	12.1	24.9	21.4	20.4
Venezuela	2000	No.	5 136	4 130	91	259	1 476	1 254	646	404
		Rate	22.7	33.5	6.5	9.5	42.9	50.0	43.7	51.9

Source: WHO mortality database as of August 2003.

^a Road traffic injury = ICD-10 V01–V04, V06, V09–V80, V87, V89, V99 (ICD-9 E810–E819, E826–E829, E929.0).

^b No. = number of deaths; rate = number of deaths per 100 000 population. Deaths where the age of the deceased person was not known were proportionally distributed across age groups based on the distribution of road traffic injury deaths in the population. The numbers of deaths have therefore been rounded to the nearest whole number. Any apparent discrepancy in the total sums is due to rounding. The rate was not calculated if fewer than 20 deaths were reported. The population counts on which the rates are based are available from WHO at http://www3.who.int/whosis/mort/table1.cfm?path=whosis,mort,mort_table1&language=english.

^c Age-standardized.

^d Combined total for males and females.

Country or area	Year	Measure ^b	Females						
			All ages ^c	0—4 years	5—14 years	15—29 years	30—44 years	45—59 years	≥60 years
Ukraine	2000	No.	1 320	27	84	296	252	253	408
		Rate	5.3	2.9	3.0	5.7	4.9	5.5	6.6
United States of America	1999	No.	14 341	391	741	4 003	2 999	2 224	3 983
		Rate	9.6	3.8	3.5	13.4	9.0	7.7	14.7
Uruguay	2000	No.	84	2	10	18	12	14	28
		Rate	4.8	—	—	—	—	—	8.0
Uzbekistan	2000	No.	383	34	59	75	86	54	75
		Rate	3.6	3.1	2.4	2.5	4.0	5.3	9.0
Venezuela	2000	No.	1 006	56	133	364	205	136	132
		Rate	8.3	4.2	5.1	10.9	8.3	9.1	14.5

TABLE A.5

WHO economic regions, as at 2002

African Region 46 Member States	Region of the Americas 35 Member States	South-East Asia Region 11 Member States
Low-income and middle-income	High-income	Low-income and middle-income
Algeria	Antigua and Barbuda	Bangladesh
Angola	Bahamas	Bhutan
Benin	Barbados	Democratic People's Republic of Korea
Botswana	Canada	India
Burkina Faso	United States of America	Indonesia
Burundi	Low-income and middle-income	Maldives
Cameroon	Argentina	Myanmar
Cape Verde	Belize	Nepal
Central African Republic	Bolivia	Sri Lanka
Chad	Brazil	Thailand
Comoros	Chile	Timor-Leste
Congo	Colombia	
Côte d'Ivoire	Costa Rica	
Democratic Republic of the Congo	Cuba	
Equatorial Guinea	Dominica	
Eritrea	Dominican Republic	
Ethiopia	Ecuador	
Gabon	El Salvador	
Gambia	Grenada	
Ghana	Guatemala	
Guinea	Guyana	
Guinea-Bissau	Haiti	
Kenya	Honduras	
Lesotho	Jamaica	
Liberia	Mexico	
Madagascar	Nicaragua	
Malawi	Panama	
Mali	Paraguay	
Mauritania	Peru	
Mauritius	Saint Kitts and Nevis	
Mozambique	Saint Lucia	
Namibia	Saint Vincent and the Grenadines	
Niger	Suriname	
Nigeria	Trinidad and Tobago	
Rwanda	Uruguay	
Sao Tome and Principe	Venezuela	
Senegal		
Seychelles		
Sierra Leone		
South Africa		
Swaziland		
Togo		
Uganda		
United Republic of Tanzania		
Zambia		
Zimbabwe		

European Region
51 Member States
High-income

Andorra
Austria
Belgium
Denmark
Finland
France
Germany
Greece
Iceland
Ireland
Israel
Italy
Luxembourg
Malta
Monaco
Netherlands
Norway
Portugal
San Marino
Slovenia
Spain
Sweden
Switzerland
United Kingdom

Low-income and middle-income

Albania
Armenia
Azerbaijan
Belarus
Bosnia and Herzegovina
Bulgaria
Croatia
Czech Republic
Estonia
Georgia
Hungary
Kazakhstan
Kyrgyzstan
Latvia
Lithuania
Poland
Republic of Moldova
Romania
Russian Federation
Serbia and Montenegro
Slovakia
Tajikistan
The former Yugoslav Republic
of Macedonia
Turkey
Turkmenistan
Ukraine
Uzbekistan

Eastern Mediterranean Region
22 Member States
High-income

Bahrain
Cyprus
Kuwait
Qatar
United Arab Emirates

Low-income and middle-income

Afghanistan
Djibouti
Egypt
Iraq
Islamic Republic of Iran
Jordan
Lebanon
Libyan Arab Jamahiriya
Morocco
Oman
Pakistan
Saudi Arabia
Somalia
Sudan
Syrian Arab Republic
Tunisia
Yemen

Western Pacific Region
27 Member States
High-income

Australia
Brunei Darussalam
Japan
New Zealand
Republic of Korea
Singapore

Low-income and middle-income

Cambodia
China
Cook Islands
Federated States of Micronesia
Fiji
Kiribati
Lao People's Democratic Republic
Malaysia
Marshall Islands
Mongolia
Nauru
Niue
Palau
Papua New Guinea
Philippines
Samoa
Solomon Islands
Tonga
Tuvalu
Vanuatu
Viet Nam

TABLE A.6

Motorization rates in selected countries and areas, 1999

Country or area	Number of vehicles per 1000 persons ^a	Country or area	Number of vehicles per 1000 persons ^a
HD1^b countries or areas		HD2^b countries or areas	
Australia ^c	616	Bangladesh ^f	3.1
Austria	612	Benin ^c	52
Bahrain	339	Botswana	72
Belgium	522	Bulgaria	342
Canada ^d	585	Colombia	67
Chile	138	Ecuador ^d	47
China, Hong Kong SAR ^e	80	Egypt ^c	35
Costa Rica	162	Ethiopia ^d	1.5
Cyprus	551	India ^f	34
Czech Republic	440	Indonesia ^d	81
Denmark	424	Kenya ^c	14
Finland	498	Latvia	267
Germany ^d	572	Malaysia	451
Hungary	283	Mauritius	195
Iceland	629	Mongolia	38
Ireland ^c	312	Morocco	51
Israel	301	Nigeria ^c	29
Italy ^f	658	Pakistan	23
Japan ^d	677	Panama ^f	112
Luxembourg	685	Philippines ^d	42
Netherlands	427	Romania	169
New Zealand ^f	565	Senegal ^c	14
Norway	559	South Africa	144
Poland	323	Sri Lanka ^d	74
Portugal ^f	423	Swaziland ^d	69
Republic of Korea	296	Thailand ^c	280
Singapore	164	Togo ^c	39
Spain ^f	499	Turkey	100
Sweden ^d	496		
Switzerland	622		
United Kingdom ^d	434		
United States of America	779		

Source: World Bank data, 2003.

^a Including passenger cars, buses, trucks and motorized two-wheelers.

^b HDI = United Nations Human Development Index. Countries with an HDI of more than 0.8 are denoted as HD1 while those with a value less than 0.8 are denoted as HD2.

^c Data from 1996.

^d Data from 1998.

^e SAR = Special Administrative Region.

^f Data from 1997.