

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 (SE-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
	low/middle	26.1	13.2	32.5	30.0	32.3	32.8	19.5
South-East Asia Region ^d	low/middle	11.8	13.9	15.6	7.7	11.3	17.3	11.2
European Region	all	15.8	15.5	32.2	29.8	17.8	13.6	11.4
	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
Eastern Mediterranean Region	all	27.2	25.8	37.3	20.7	26.8	30.7	28.1
	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
Western Pacific Region	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
	low/middle	1.2	0.6	8.9	7.6	3.5	1.5	0.4
South-East Asia Region ^d	low/middle	1.0	0.4	3.1	2.5	2.1	1.8	0.5
European Region	all	0.7	1.0	11.1	13.3	4.2	1.6	0.3
	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
Eastern Mediterranean Region	all	1.9	0.7	8.6	5.9	4.0	2.4	1.0
	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
Western Pacific Region	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 (%)
Deaths		
1	HIV/AIDS	20.4
2	Malaria	10.1
3	Lower respiratory infections	9.8
4	Diarrhoeal diseases	6.5
5	Perinatal conditions	5.1
6	Measles	4.1
7	Cerebrovascular disease	3.3
8	Ischaemic heart disease	3.1
9	Tuberculosis	2.8
10	Road traffic injuries	1.8
11	Pertussis	1.6
12	Interpersonal violence	1.3

Rank	Cause	Proportion of total (%)
DALYs		
1	HIV/AIDS	18.4
2	Malaria	10.8
3	Lower respiratory infections	8.8
4	Diarrhoeal diseases	6.3
5	Perinatal conditions	5.9
6	Measles	4.3
7	Tuberculosis	2.2
8	Road traffic injuries	1.9
9	Pertussis	1.9
10	Protein–energy malnutrition	1.5
11	Interpersonal violence	1.5
12	Cataracts	1.4

Males

Rank	Cause	Proportion of total (%)
Deaths		
1	HIV/AIDS	19.4
2	Lower respiratory infections	10.3
3	Malaria	9.3
4	Diarrhoeal diseases	6.6
5	Perinatal conditions	5.8
6	Measles	4.0
7	Tuberculosis	3.8
8	Ischaemic heart disease	3.1
9	Cerebrovascular disease	2.6
10	Road traffic injuries	2.4
11	Interpersonal violence	1.9
12	Pertussis	1.5

Rank	Cause	Proportion of total (%)
DALYs		
1	HIV/AIDS	17.0
2	Malaria	10.1
3	Lower respiratory infections	9.5
4	Perinatal conditions	6.6
5	Diarrhoeal diseases	6.5
6	Measles	4.2
7	Tuberculosis	2.9
8	Road traffic injuries	2.5
9	Interpersonal violence	2.4
10	Pertussis	1.8
11	War	1.6
12	Protein–energy malnutrition	1.6

Females

Rank	Cause	Proportion of total (%)
Deaths		
1	HIV/AIDS	21.6
2	Malaria	11.0
3	Lower respiratory infections	9.3
4	Diarrhoeal diseases	6.3
5	Perinatal conditions	4.5
6	Measles	4.2
7	Cerebrovascular disease	4.1
8	Ischaemic heart disease	3.1
9	Tuberculosis	1.8
10	Pertussis	1.6
11	Hypertensive heart disease	1.2
12	Road traffic injuries	1.1

Rank	Cause	Proportion of total (%)
DALYs		
1	HIV/AIDS	19.8
2	Malaria	11.5
3	Lower respiratory infections	8.1
4	Diarrhoeal diseases	6.1
5	Perinatal conditions	5.2
6	Measles	4.3
7	Pertussis	1.9
8	Cataracts	1.6
9	Tuberculosis	1.6
10	Protein–energy malnutrition	1.5
11	Unipolar depressive disorders	1.5
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 (%)
Deaths		
1	Ischaemic heart disease	15.3
2	Cerebrovascular disease	7.6
3	Diabetes mellitus	4.2
4	Chronic obstructive pulmonary disease	4.0
5	Trachea, bronchus, lung cancers	3.9
6	Lower respiratory infections	3.7
7	Perinatal conditions	2.9
8	Interpersonal violence	2.4
9	Hypertensive heart disease	2.3
10	Road traffic injuries	2.2
11	Alzheimer and other dementias	2.0
12	Colon and rectum cancers	1.8

Rank	Cause	Proportion of total (%)
DALYs		
1	Unipolar depressive disorders	8.2
2	Perinatal conditions	5.1
3	Interpersonal violence	4.6
4	Alcohol use disorders	4.4
5	Ischaemic heart disease	4.2
6	Cerebrovascular disease	3.1
7	Road traffic injuries	2.9
8	Diabetes mellitus	2.4
9	Congenital anomalies	2.3
10	Chronic obstructive pulmonary disease	2.3
11	HIV/AIDS	2.2
12	Lower respiratory infections	2.1

Males

Rank	Cause	Proportion of total (%)
Deaths		
1	Ischaemic heart disease	15.5
2	Cerebrovascular disease	6.4
3	Trachea, bronchus, lung cancers	4.4
4	Interpersonal violence	4.1
5	Chronic obstructive pulmonary disease	4.1
6	Diabetes mellitus	3.5
7	Lower respiratory infections	3.5
8	Road traffic injuries	3.2
9	Perinatal conditions	3.1
10	Cirrhosis of the liver	2.4
11	Prostate cancer	2.4
12	HIV/AIDS	2.1

Rank	Cause	Proportion of total (%)
DALYs		
1	Interpersonal violence	7.5
2	Alcohol use disorders	6.4
3	Unipolar depressive disorders	5.6
4	Perinatal conditions	5.2
5	Ischaemic heart disease	4.8
6	Road traffic injuries	3.9
7	Cerebrovascular disease	2.8
8	HIV/AIDS	2.7
9	Congenital anomalies	2.2
10	Chronic obstructive pulmonary disease	2.2
11	Lower respiratory infections	2.1
12	Diabetes mellitus	2.0

Females

Rank	Cause	Proportion of total (%)
Deaths		
1	Ischaemic heart disease	15.2
2	Cerebrovascular disease	8.9
3	Diabetes mellitus	5.0
4	Lower respiratory infections	4.1
5	Chronic obstructive pulmonary disease	4.0
6	Trachea, bronchus, lung cancers	3.2
7	Breast cancer	3.1
8	Alzheimer and other dementias	2.9
9	Perinatal conditions	2.7
10	Hypertensive heart disease	2.7
11	Colon and rectum cancers	2.0
12	Nephritis and nephrosis	1.8
14	Road traffic injuries	1.2

Rank	Cause	Proportion of total (%)
DALYs		
1	Unipolar depressive disorders	11.4
2	Perinatal conditions	5.0
3	Ischaemic heart disease	3.6
4	Cerebrovascular disease	3.4
5	Diabetes mellitus	2.9
6	Congenital anomalies	2.5
7	Chronic obstructive pulmonary disease	2.5
8	Lower respiratory infections	2.1
9	Alzheimer and other dementias	1.9
10	Alcohol use disorders	1.9
11	Asthma	1.9
12	Hearing loss, adult onset	1.9
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 (%)
Deaths		
1	Ischaemic heart disease	13.9
2	Lower respiratory infections	9.4
3	Cerebrovascular disease	7.2
4	Perinatal conditions	6.9
5	Tuberculosis	4.7
6	Chronic obstructive pulmonary disease	4.5
7	Diarrhoeal diseases	4.1
8	HIV/AIDS	2.6
9	Road traffic injuries	2.0
10	Diabetes mellitus	1.8
11	Self-inflicted injuries	1.7
12	Cirrhosis of the liver	1.4

Rank	Cause	Proportion of total (%)
DALYs		
1	Perinatal conditions	9.2
2	Lower respiratory infections	7.3
3	Ischaemic heart disease	4.9
4	Unipolar depressive disorders	4.8
5	Diarrhoeal diseases	4.8
6	Tuberculosis	3.7
7	Cataracts	2.6
8	HIV/AIDS	2.6
9	Cerebrovascular disease	2.4
10	Road traffic injuries	2.4
11	Hearing loss, adult onset	2.2
12	Congenital anomalies	2.0

Males

Rank	Cause	Proportion of total (%)
Deaths		
1	Ischaemic heart disease	14.7
2	Lower respiratory infections	8.8
3	Perinatal conditions	7.2
4	Cerebrovascular disease	6.8
5	Tuberculosis	5.7
6	Chronic obstructive pulmonary disease	4.8
7	Diarrhoeal diseases	4.1
8	HIV/AIDS	3.7
9	Road traffic injuries	2.9
10	Self-inflicted injuries	1.9
11	Trachea, bronchus, lung cancers	1.7
12	Diabetes mellitus	1.7

Rank	Cause	Proportion of total (%)
DALYs		
1	Perinatal conditions	10.0
2	Lower respiratory infections	7.1
3	Ischaemic heart disease	5.4
4	Diarrhoeal diseases	4.9
5	Tuberculosis	4.4
6	Unipolar depressive disorders	3.8
7	HIV/AIDS	3.8
8	Road traffic injuries	3.4
9	Cerebrovascular disease	2.5
10	Cataracts	2.2
11	Hearing loss, adult onset	2.1
12	Chronic obstructive pulmonary disease	2.1

Females

Rank	Cause	Proportion of total (%)
Deaths		
1	Ischaemic heart disease	13.1
2	Lower respiratory infections	10.1
3	Cerebrovascular disease	7.7
4	Perinatal conditions	6.6
5	Chronic obstructive pulmonary disease	4.2
6	Diarrhoeal diseases	4.1
7	Tuberculosis	3.7
8	Diabetes mellitus	1.9
9	Fires	1.9
10	Cervix uteri cancer	1.5
11	Self-inflicted injuries	1.5
12	Measles	1.4
19	Road traffic injuries	1.0

Rank	Cause	Proportion of total (%)
DALYs		
1	Perinatal conditions	8.5
2	Lower respiratory infections	7.5
3	Unipolar depressive disorders	5.9
4	Diarrhoeal diseases	4.6
5	Ischaemic heart disease	4.3
6	Cataracts	3.0
7	Tuberculosis	3.0
8	Cerebrovascular disease	2.4
9	Hearing loss, adult onset	2.2
10	Fires	2.2
11	Congenital anomalies	2.1
12	Chronic obstructive pulmonary disease	1.8
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 (%)
Deaths		
1	Ischaemic heart disease	24.7
2	Cerebrovascular disease	15.1
3	Trachea, bronchus, lung cancers	3.8
4	Lower respiratory infections	2.8
5	Chronic obstructive pulmonary disease	2.7
6	Colon and rectum cancers	2.4
7	Hypertensive heart disease	1.8
8	Cirrhosis of the liver	1.8
9	Self-inflicted injuries	1.7
10	Stomach cancer	1.6
11	Breast cancer	1.6
12	Diabetes mellitus	1.5
13	Road traffic injuries	1.3

Rank	Cause	Proportion of total (%)
DALYs		
1	Ischaemic heart disease	10.4
2	Cerebrovascular disease	7.2
3	Unipolar depressive disorders	6.3
4	Alcohol use disorders	3.1
5	Hearing loss, adult onset	2.6
6	Road traffic injuries	2.4
7	Chronic obstructive pulmonary disease	2.3
8	Self-inflicted injuries	2.3
9	Trachea, bronchus, lung cancers	2.1
10	Osteoarthritis	2.1
11	Alzheimer and other dementias	2.0
12	Perinatal conditions	1.9

Males

Rank	Cause	Proportion of total (%)
Deaths		
1	Ischaemic heart disease	23.7
2	Cerebrovascular disease	11.5
3	Trachea, bronchus, lung cancers	5.8
4	Chronic obstructive pulmonary disease	3.3
5	Lower respiratory infections	2.7
6	Self-inflicted injuries	2.7
7	Colon and rectum cancers	2.4
8	Cirrhosis of the liver	2.2
9	Road traffic injuries	1.9
10	Prostate cancer	1.9
11	Stomach cancer	1.9
12	Poisonings	1.8

Rank	Cause	Proportion of total (%)
DALYs		
1	Ischaemic heart disease	11.3
2	Cerebrovascular disease	6.2
3	Alcohol use disorders	4.6
4	Unipolar depressive disorders	4.1
5	Self-inflicted injuries	3.3
6	Road traffic injuries	3.2
7	Trachea, bronchus, lung cancers	3.0
8	Hearing loss, adult onset	2.3
9	Chronic obstructive pulmonary disease	2.2
10	Poisonings	2.1
11	Cirrhosis of the liver	2.1
12	Interpersonal violence	2.0

Females

Rank	Cause	Proportion of total (%)
Deaths		
1	Ischaemic heart disease	25.6
2	Cerebrovascular disease	18.9
3	Breast cancer	3.2
4	Lower respiratory infections	2.9
5	Colon and rectum cancers	2.4
6	Hypertensive heart disease	2.3
7	Chronic obstructive pulmonary disease	2.1
8	Diabetes mellitus	1.8
9	Trachea, bronchus, lung cancers	1.7
10	Alzheimer and other dementias	1.5
11	Stomach cancer	1.4
12	Cirrhosis of the liver	1.3
20	Road traffic injuries	0.7

Rank	Cause	Proportion of total (%)
DALYs		
1	Ischaemic heart disease	9.1
2	Unipolar depressive disorders	9.0
3	Cerebrovascular disease	8.5
4	Hearing loss, adult onset	3.1
5	Alzheimer and other dementias	3.0
6	Osteoarthritis	2.8
7	Breast cancer	2.6
8	Chronic obstructive pulmonary disease	2.4
9	Perinatal conditions	1.8
10	Diabetes mellitus	1.8
11	Lower respiratory infections	1.7
12	Vision disorders, age-related	1.4
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 (%)
Deaths		
1	Ischaemic heart disease	12.9
2	Lower respiratory infections	8.6
3	Perinatal conditions	7.3
4	Diarrhoeal diseases	6.0
5	Cerebrovascular disease	5.4
6	Road traffic injuries	3.2
7	Tuberculosis	3.1
8	Hypertensive heart disease	2.3
9	Chronic obstructive pulmonary disease	2.3
10	Measles	2.0
11	Congenital anomalies	2.0
12	Cirrhosis of the liver	1.6

Rank	Cause	Proportion of total (%)
DALYs		
1	Perinatal conditions	8.7
2	Lower respiratory infections	7.7
3	Diarrhoeal diseases	6.0
4	Ischaemic heart disease	3.8
5	Unipolar depressive disorders	3.6
6	Road traffic injuries	3.3
7	Congenital anomalies	3.2
8	Measles	2.1
9	Tuberculosis	2.0
10	Cerebrovascular disease	1.8
11	Pertussis	1.8
12	Cataracts	1.8

Males

Rank	Cause	Proportion of total (%)
Deaths		
1	Ischaemic heart disease	14.0
2	Lower respiratory infections	8.4
3	Perinatal conditions	7.8
4	Diarrhoeal diseases	5.8
5	Cerebrovascular disease	5.2
6	Road traffic injuries	4.3
7	Tuberculosis	3.8
8	Chronic obstructive pulmonary disease	2.4
9	Hypertensive heart disease	2.3
10	Congenital anomalies	1.9
11	Measles	1.9
12	Cirrhosis of the liver	1.7

Rank	Cause	Proportion of total (%)
DALYs		
1	Perinatal conditions	9.7
2	Lower respiratory infections	7.8
3	Diarrhoeal diseases	6.2
4	Ischaemic heart disease	4.6
5	Road traffic injuries	4.5
6	Congenital anomalies	3.2
7	Unipolar depressive disorders	2.8
8	Tuberculosis	2.5
9	Measles	2.1
10	Cerebrovascular disease	1.9
11	Pertussis	1.7
12	Drug use disorders	1.6

Females

Rank	Cause	Proportion of total (%)
Deaths		
1	Ischaemic heart disease	11.7
2	Lower respiratory infections	8.8
3	Perinatal conditions	6.6
4	Diarrhoeal diseases	6.2
5	Cerebrovascular disease	5.7
6	Tuberculosis	2.4
7	Hypertensive heart disease	2.4
8	Measles	2.2
9	Chronic obstructive pulmonary disease	2.2
10	Congenital anomalies	2.1
11	Road traffic injuries	1.9
12	Malaria	1.6

Rank	Cause	Proportion of total (%)
DALYs		
1	Perinatal conditions	7.7
2	Lower respiratory infections	7.6
3	Diarrhoeal diseases	5.9
4	Unipolar depressive disorders	4.4
5	Congenital anomalies	3.1
6	Ischaemic heart disease	3.1
7	Measles	2.2
8	Road traffic injuries	2.1
9	Cataracts	2.0
10	Pertussis	1.8
11	Malaria	1.7
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 (%)
Deaths		
1	Cerebrovascular disease	16.4
2	Chronic obstructive pulmonary disease	11.5
3	Ischaemic heart disease	8.3
4	Stomach cancer	4.2
5	Lower respiratory infections	4.1
6	Trachea, bronchus, lung cancers	3.6
7	Liver cancer	3.3
8	Tuberculosis	3.0
9	Perinatal conditions	2.9
10	Self-inflicted injuries	2.8
11	Road traffic injuries	2.5
12	Hypertensive heart disease	2.4

Rank	Cause	Proportion of total (%)
DALYs		
1	Cerebrovascular disease	6.6
2	Unipolar depressive disorders	6.0
3	Perinatal conditions	5.5
4	Chronic obstructive pulmonary disease	3.9
5	Road traffic injuries	3.4
6	Lower respiratory infections	2.9
7	Ischaemic heart disease	2.8
8	Self-inflicted injuries	2.6
9	Diarrhoeal diseases	2.5
10	Alcohol use disorders	2.4
11	Hearing loss, adult onset	2.4
12	Tuberculosis	2.2

Males

Rank	Cause	Proportion of total (%)
Deaths		
1	Cerebrovascular disease	15.5
2	Chronic obstructive pulmonary disease	9.8
3	Ischaemic heart disease	7.9
4	Stomach cancer	5.0
5	Trachea, bronchus, lung cancers	4.6
6	Liver cancer	4.5
7	Tuberculosis	3.7
8	Road traffic injuries	3.4
9	Lower respiratory infections	3.3
10	Self-inflicted injuries	2.8
11	Perinatal conditions	2.7
12	Oesophagus cancer	2.5

Rank	Cause	Proportion of total (%)
DALYs		
1	Cerebrovascular disease	6.8
2	Perinatal conditions	5.1
3	Unipolar depressive disorders	4.9
4	Road traffic injuries	4.4
5	Chronic obstructive pulmonary disease	4.0
6	Alcohol use disorders	3.9
7	Ischaemic heart disease	3.0
8	Tuberculosis	2.6
9	Liver cancer	2.4
10	Self-inflicted injuries	2.4
11	Diarrhoeal diseases	2.4
12	Hearing loss, adult onset	2.3

Females

Rank	Cause	Proportion of total (%)
Deaths		
1	Cerebrovascular disease	17.4
2	Chronic obstructive pulmonary disease	13.5
3	Ischaemic heart disease	8.7
4	Lower respiratory infections	4.9
5	Stomach cancer	3.3
6	Perinatal conditions	3.2
7	Self-inflicted injuries	2.8
8	Hypertensive heart disease	2.6
9	Trachea, bronchus, lung cancers	2.4
10	Tuberculosis	2.2
11	Liver cancer	2.0
12	Diabetes mellitus	1.9
13	Road traffic injuries	1.6

Rank	Cause	Proportion of total (%)
DALYs		
1	Unipolar depressive disorders	7.4
2	Cerebrovascular disease	6.2
3	Perinatal conditions	5.9
4	Lower respiratory infections	3.8
5	Chronic obstructive pulmonary disease	3.8
6	Self-inflicted injuries	2.8
7	Vision disorders, age-related	2.6
8	Ischaemic heart disease	2.6
9	Diarrhoeal diseases	2.6
10	Osteoarthritis	2.5
11	Hearing loss, adult onset	2.5
12	Congenital anomalies	2.2
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, for the most recent year available between 1992 and 2002

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
Albania ^e	2000	No.	319	250	7	12	72	66	47	45
		Rate	11.1	18.4	—	—	21.0	18.8	21.9	32.8
Argentina	1997	No.	3 468	2 653	78	124	860	634	503	453
		Rate	9.9	15.8	4.4	3.7	18.9	19.0	20.4	22.4
Armenia ^e	2000	No.	232	169	1	9	36	56	27	40
		Rate	5.6	8.9	—	—	7.2	12.9	11.9	17.5
Australia	2000	No.	1 808	1 283	16	48	517	313	177	212
		Rate	9.3	13.4	—	3.5	25.2	14.4	9.9	14.6
Austria	2001	No.	865	635	2	9	224	163	103	134
		Rate	10.1	15.5	—	—	29.4	15.6	13.7	18.9
Azerbaijan ^e	2000	No.	523	411	9	23	82	169	72	56
		Rate	6.9	11.7	—	2.4	8.0	18.0	18.7	17.4
Bahamas	1995	No.	17	13	1	1	3	6	2	0
		Rate	6.1	—	—	—	—	—	—	—
Bahrain	2000	No.	60	54	1	8	19	13	6	7
		Rate	10.3	17.4	—	—	—	—	—	—
Barbados	1995	No.	24	19	0	0	6	3	4	6
		Rate	8.3	—	—	—	—	—	—	—
Belarus	2001	No.	1 514	1 150	6	23	378	337	234	172
		Rate	14.3	23.1	—	3.4	32.8	29.8	29.3	25.4
Belgium	1997	No.	1 482	1 088	7	25	401	278	139	238
		Rate	13.9	21.0	—	4.0	39.4	23.3	15.3	25.7
Brazil ^e	1995	No.	38 051	29 218	523	1 930	10 000	8 854	4 663	3 248
		Rate	25.6	41.3	6.2	10.7	44.3	53.2	53.2	63.4
Bulgaria	2000	No.	940	694	7	15	164	172	163	173
		Rate	10.2	15.6	—	—	18.0	20.5	20.4	22.4
Canada	1999	No.	2 938	1 987	22	89	710	443	304	419
		Rate	9.3	12.8	2.3	4.2	22.3	11.6	10.7	18.9
Chile	1999	No.	1 543	1 246	19	55	279	398	281	214
		Rate	10.7	17.9	—	3.8	15.0	23.2	27.5	32.8
China ^f	2002	No.	250 007	175 714	2 759	5 995	52 323	49 811	37 152	27 673
		Rate	19.0	26.2	5.6	5.3	31.9	29.2	34.4	42.9
Colombia ^e	1998	No.	8 917	6 985	168	405	2 601	1 963	885	962
		Rate	24.2	39.8	6.9	9.0	46.0	47.1	41.9	78.2
Costa Rica ^e	2000	No.	719	581	8	24	187	167	104	90
		Rate	20.1	32.7	—	5.5	34.6	37.6	45.5	63.0
Croatia	2001	No.	535	415	6	10	147	86	68	98
		Rate	11.4	18.4	—	—	32.0	18.1	15.9	25.3
Cuba	2000	No.	1 656	1 289	14	49	263	410	291	261
		Rate	13.9	21.5	—	5.8	20.1	28.7	31.8	35.4
Czech Republic	2001	No.	972	699	4	14	238	164	159	120
		Rate	8.7	12.8	—	—	19.5	15.7	14.4	15.6
Denmark	1999	No.	495	359	7	18	136	89	52	57
		Rate	9.5	14.1	—	—	26.5	14.7	9.4	12.5
Dominican Republic ^e	1998	No.	2 812	2 347	35	105	968	605	337	298
		Rate	41.1	67.1	7.3	11.0	82.2	73.9	78.0	118.3

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
Albania ^e	2000	No.	69	5	8	14	13	12	17
		Rate	4.9	—	—	—	—	—	—
Argentina	1997	No.	815	54	71	226	147	120	198
		Rate	4.4	3.2	2.2	5.1	4.3	4.6	7.3
Armenia ^e	2000	No.	63	0	3	5	13	13	30
		Rate	2.9	—	—	—	—	—	9.8
Australia	2000	No.	525	17	22	172	96	73	145
		Rate	5.2	—	1.7	8.5	4.4	4.1	8.4
Austria	2001	No.	230	3	9	57	41	25	95
		Rate	4.9	—	—	7.6	4.1	3.3	9.3
Azerbaijan ^e	2000	No.	112	3	15	15	35	18	26
		Rate	2.9	—	—	—	3.4	—	6.1
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	6.2	—	—	7.2	6.5	7.5	9.5
Belgium	1997	No.	394	5	21	102	72	57	137
		Rate	7.0	—	3.5	10.4	6.2	6.3	10.8
Brazil ^e	1995	No.	8 833	458	1 216	2 512	1 809	1 321	1 517
		Rate	11.9	5.6	7.0	11.1	10.5	14.1	24.5
Bulgaria	2000	No.	246	4	11	48	37	44	102
		Rate	4.9	—	—	5.5	4.4	5.1	10.2
Canada	1999	No.	951	23	39	285	171	178	255
		Rate	5.9	2.6	2.0	9.3	4.5	6.2	9.1
Chile	1999	No.	297	14	31	69	62	41	80
		Rate	4.0	—	2.2	3.8	3.6	3.8	9.2
China ^f	2002	No.	74 293	1 681	4 563	10 578	23 442	19 754	14 276
		Rate	11.5	3.8	4.5	6.9	14.4	19.5	20.2
Colombia ^e	1998	No.	1 932	131	235	543	410	240	372
		Rate	10.4	5.6	5.4	9.6	9.2	10.4	24.6
Costa Rica ^e	2000	No.	138	7	20	34	21	21	36
		Rate	7.8	—	4.8	6.5	4.9	9.2	22.9
Croatia	2001	No.	120	3	7	30	21	18	41
		Rate	4.8	—	—	6.8	4.4	—	7.2
Cuba	2000	No.	367	8	33	105	86	61	74
		Rate	6.4	—	4.1	8.4	6.1	6.4	9.2
Czech Republic	2001	No.	273	6	15	69	37	41	105
		Rate	4.6	—	—	5.9	3.7	3.6	9.3
Denmark	1999	No.	136	0	8	34	36	21	37
		Rate	4.8	—	—	6.8	6.2	3.9	6.2
Dominican Republic ^e	1998	No.	465	13	42	146	100	72	91
		Rate	13.7	—	4.6	13.2	12.5	16.7	34.6

TABLE A.4

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
Ecuador ^e	2000	No.	1 850	1 412	48	128	412	363	257	205
		Rate	16.9	26.6	6.5	9.0	22.7	30.3	39.0	49.8
Egypt ^e	2000	No.	4 717	3 601	207	579	1 060	751	563	440
		Rate	7.5	12.1	4.9	6.9	11.2	12.7	14.8	20.7
El Salvador ^e	1999	No.	2 119	1 655	47	107	505	398	306	292
		Rate	41.7	71.8	11.8	14.9	54.6	84.6	107.6	147.9
Estonia	2001	No.	209	157	1	8	40	45	37	25
		Rate	14.8	23.5	—	—	26.9	33.0	32.0	24.3
Finland	1995	No.	437	321	4	14	78	54	66	105
		Rate	7.7	12.0	—	—	15.5	9.0	13.0	27.5
France	1999	No.	7 953	5 782	53	141	2 329	1 253	901	1 078
		Rate	12.1	20.0	2.5	3.5	35.9	18.0	14.1	19.3
Georgia ^e	2000	No.	344	254	0	6	62	94	52	39
		Rate	6.2	10.1	—	—	10.6	17.2	14.8	9.8
Germany	2000	No.	7 153	5 142	31	94	1 983	1 266	804	964
		Rate	8.8	13.0	1.5	2.1	27.1	12.1	10.2	12.2
Greece	1999	No.	2 227	1 668	10	30	612	365	234	417
		Rate	19.0	29.4	—	5.3	52.3	31.9	24.7	37.9
Hungary	2001	No.	1 341	993	2	25	240	222	259	245
		Rate	11.5	18.2	—	4.1	20.8	22.1	25.3	30.4
Iceland	1998	No.	29	21	0	1	7	6	2	5
		Rate	10.4	15.1	—	—	—	—	—	—
Ireland	2000	No.	400	302	2	8	158	67	35	32
		Rate	10.1	15.4	—	—	32.3	17.1	10.9	12.5
Israel	1998	No.	345	267	3	5	128	53	38	40
		Rate	5.9	9.4	—	—	16.8	9.6	9.4	11.7
Italy	1999	No.	7 776	6 052	18	109	1 958	1 347	894	1 726
		Rate	12.1	19.5	—	3.7	33.7	20.2	16.5	29.8
Japan	2000	No.	11 766	8 213	59	129	2 147	1 088	1 607	3 182
		Rate	7.4	11.4	2.0	2.0	16.6	8.9	11.6	24.6
Kuwait	2000	No.	363	293	11	14	113	74	51	30
		Rate	23.7	33.2	—	—	33.7	14.8	30.7	87.2
Kyrgyzstan ^e	2001	No.	558	417	6	21	109	171	68	41
		Rate	12.9	20.0	—	3.6	15.7	34.2	30.6	25.1
Latvia	2001	No.	562	420	4	8	124	123	94	67
		Rate	22.7	36.5	—	—	48.2	49.7	47.7	37.6
Lithuania	2001	No.	700	539	9	14	172	148	108	88
		Rate	19.3	31.9	—	—	45.7	38.3	39.5	35.5
Luxembourg	2001	No.	74	55	1	0	24	10	9	11
		Rate	17.5	25.4	—	—	58.4	—	—	—
Malta	2001	No.	19	15	0	0	8	0	3	4
		Rate	4.3	—	—	—	—	—	—	—
Mauritius	2000	No.	181	154	1	10	30	55	40	18
		Rate	14.7	27.8	—	—	20.2	38.2	47.5	—
Mexico	2000	No.	10 525	8 312	224	482	3 218	2 241	1 211	935
		Rate	11.8	19.4	3.9	4.3	22.4	24.9	24.0	29.8
Netherlands	2000	No.	1 095	808	8	29	289	159	132	191
		Rate	6.7	10.2	—	2.9	18.8	8.1	8.2	15.3

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 ^e	2000	No.	438	30	78	97	84	72	77
		Rate	7.9	4.2	5.7	5.5	7.1	10.7	16.4
Egypt ^e	2000	No.	1 117	180	275	180	175	174	132
		Rate	3.5	4.4	3.4	1.9	2.9	4.5	5.3
El Salvador ^e	1999	No.	464	33	70	80	67	84	130
		Rate	18.0	8.5	10.1	8.6	12.3	26.7	53.0
Estonia	2001	No.	52	2	2	16	8	10	14
		Rate	7.0	—	—	—	—	—	—
Finland	1995	No.	116	1	9	22	17	18	49
		Rate	3.8	—	—	4.6	—	—	8.4
France	1999	No.	2 171	42	96	635	387	328	683
		Rate	6.7	2.4	2.6	10.8	6.0	6.1	9.8
Georgia ^e	2000	No.	90	0	3	16	11	18	41
		Rate	2.8	—	—	—	—	—	7.1
Germany	2000	No.	2 011	29	74	592	365	258	693
		Rate	4.6	1.5	1.7	8.5	3.7	3.3	6.2
Greece	1999	No.	559	5	20	126	73	99	236
		Rate	8.6	—	3.7	11.2	6.4	10.3	17.8
Hungary	2001	No.	348	5	10	61	54	71	147
		Rate	5.3	—	—	5.5	5.4	6.3	11.5
Iceland	1998	No.	8	1	0	5	0	0	2
		Rate	—	—	—	—	—	—	—
Ireland	2000	No.	98	1	8	30	21	10	28
		Rate	4.8	—	—	6.3	5.2	—	8.9
Israel	1998	No.	78	3	7	19	15	13	21
		Rate	2.5	—	—	—	—	—	4.7
Italy	1999	No.	1 724	22	42	428	291	240	701
		Rate	5.0	1.7	1.5	7.6	4.4	4.3	8.9
Japan	2000	No.	3 553	25	56	434	242	575	2 221
		Rate	3.7	0.9	0.9	3.5	2.0	4.1	13.3
Kuwait	2000	No.	70	7	8	13	25	8	8
		Rate	11.2	—	—	—	10.8	—	—
Kyrgyzstan ^e	2001	No.	142	7	16	28	43	25	23
		Rate	6.5	—	—	4.0	8.5	10.5	9.8
Latvia	2001	No.	142	1	7	36	26	34	38
		Rate	10.4	—	—	14.5	10.1	14.4	11.4
Lithuania	2001	No.	161	4	6	34	32	33	52
		Rate	7.8	—	—	9.2	8.0	10.2	12.0
Luxembourg	2001	No.	19	0	2	9	3	3	2
		Rate	—	—	—	—	—	—	—
Malta	2001	No.	4	0	0	1	0	1	2
		Rate	—	—	—	—	—	—	—
Mauritius	2000	No.	27	1	2	0	9	7	8
		Rate	4.9	—	—	—	—	—	—
Mexico	2000	No.	2 213	171	231	637	476	299	400
		Rate	4.9	3.1	2.1	4.3	4.8	5.5	10.7
Netherlands	2000	No.	287	5	15	73	42	45	107
		Rate	3.3	—	—	4.9	2.2	2.9	6.5

TABLE A.4

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
New Zealand	1999	No.	535	351	4	13	139	77	45	73
		Rate	13.7	18.7	—	—	34.6	17.7	13.6	27.4
Nicaragua ^e	2000	No.	782	640	24	78	195	171	93	80
		Rate	20.1	36.2	5.9	11.3	26.3	43.9	49.1	75.3
Norway	2000	No.	349	255	7	4	105	58	34	47
		Rate	7.7	11.6	—	—	23.7	11.6	7.8	12.6
Panama ^e	2000	No.	445	371	8	18	119	103	55	68
		Rate	16.4	27.8	—	—	29.0	33.3	31.7	58.8
Peru ^e	2000	No.	3 925	2 923	116	233	746	850	518	461
		Rate	17.6	26.9	7.4	7.8	20.1	33.9	36.8	52.7
Poland	2001	No.	5 607	4 244	26	112	1 237	1 039	1 027	803
		Rate	13.3	21.0	2.6	4.1	25.8	25.3	28.8	31.2
Portugal	2000	No.	1 376	1 098	8	22	391	236	169	272
		Rate	12.1	20.3	—	3.8	33.0	21.6	19.1	30.4
Republic of Korea ^e	2001	No.	10 496	7 610	164	243	1 619	1 997	1 713	1 874
		Rate	21.9	33.3	9.9	6.8	26.4	29.7	45.1	86.9
Republic of Moldova	2001	No.	527	398	5	27	118	102	77	69
		Rate	14.1	22.7	—	8.7	24.7	27.4	27.4	35.2
Romania	1998	No.	4 069	3 013	43	167	636	710	769	688
		Rate	16.8	25.8	7.2	10.4	22.3	30.7	40.8	38.8
Russian Federation	1998	No.	30 479	22 146	166	840	6 837	7 627	4 133	2 542
		Rate	19.4	29.8	4.7	7.4	40.8	42.8	34.3	27.5
Saint Lucia	1998	No.	23	20	0	2	5	6	4	3
		Rate	18.6	33.5	—	—	—	—	—	—
Singapore	2001	No.	201	171	2	1	75	32	27	33
		Rate	5.2	9.0	—	—	17.7	5.6	7.0	15.9
Slovakia	2001	No.	745	590	8	27	174	147	124	111
		Rate	12.9	21.4	—	7.3	25.2	25.5	24.7	33.3
Slovenia	2001	No.	285	233	1	4	106	43	35	44
		Rate	13.4	22.7	—	—	47.5	18.5	17.1	28.5
Spain	2000	No.	6 128	4 677	26	104	1 639	1 135	766	1 007
		Rate	13.7	21.4	2.7	5.0	34.9	24.2	22.1	26.7
Sweden	2000	No.	548	410	2	8	131	81	74	114
		Rate	5.7	8.9	—	—	15.9	8.6	8.1	13.2
Tajikistan ^e	1999	No.	246	209	0	15	45	89	33	27
		Rate	5.6	9.8	—	—	5.5	16.8	16.3	17.1
Thailand	1994	No.	12 411	10 190	103	423	5 225	2 701	1 144	595
		Rate	21.0	34.2	4.0	7.3	57.2	43.2	35.8	30.9
The former Yugoslav Republic of Macedonia	2000	No.	110	85	0	6	20	21	15	23
		Rate	5.1	8.0	—	—	8.0	9.3	—	17.2
Trinidad and Tobago	1994	No.	132	101	2	7	29	28	14	21
		Rate	11.1	16.4	—	—	16.0	19.0	—	37.4
Turkmenistan ^e	1998	No.	425	320	10	53	93	109	33	22
		Rate	10.3	16.1	—	8.4	14.1	24.3	18.8	19.0
Ukraine	2000	No.	5 561	4 240	31	132	1 374	1 195	905	603
		Rate	10.8	17.4	2.9	4.0	24.7	22.8	22.7	16.5

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.	184	4	10	59	30	19	62
		Rate	9.0	—	—	14.6	6.6	—	19.0
Nicaragua ^a	2000	No.	142	17	17	36	46	13	13
		Rate	6.7	—	—	4.8	11.0	—	—
Norway	2000	No.	94	2	5	26	16	13	32
		Rate	3.7	—	—	6.1	—	—	6.5
Panama ^a	2000	No.	74	1	9	27	13	12	12
		Rate	5.4	—	—	6.8	—	—	—
Peru ^a	2000	No.	1 002	77	91	261	209	163	201
		Rate	8.9	5.1	3.1	7.2	8.5	11.5	20.5
Poland	2001	No.	1 363	25	84	293	198	254	509
		Rate	5.9	2.6	3.3	6.3	4.9	6.7	13.1
Portugal	2000	No.	278	7	12	58	39	49	113
		Rate	4.5	—	—	5.0	3.5	5.1	9.3
Republic of Korea ^a	2001	No.	2 885	111	162	405	461	554	1 193
		Rate	11.7	7.4	5.1	7.0	7.2	14.6	38.1
Republic of Moldova	2001	No.	129	1	23	24	27	26	28
		Rate	6.5	—	7.7	5.1	6.8	8.0	9.2
Romania	1998	No.	1 056	21	107	208	177	171	372
		Rate	8.3	3.7	7.0	7.6	7.7	8.5	15.8
Russian Federation	1998	No.	8 333	115	528	2 125	1 817	1 403	2 345
		Rate	9.7	3.4	4.8	13.2	10.0	10.0	13.3
Saint Lucia	1998	No.	3	0	0	1	0	1	1
		Rate	—	—	—	—	—	—	—
Singapore	2001	No.	31	4	2	5	4	4	12
		Rate	1.6	—	—	—	—	—	—
Slovakia	2001	No.	155	3	6	45	21	25	54
		Rate	4.9	—	—	6.8	3.7	4.7	10.6
Slovenia	2001	No.	52	0	1	13	7	12	19
		Rate	4.2	—	—	—	—	—	—
Spain	2000	No.	1 451	22	55	405	246	212	511
		Rate	6.2	2.4	2.8	9.0	5.3	6.0	10.4
Sweden	2000	No.	138	0	8	26	23	18	63
		Rate	2.6	—	—	3.3	2.6	—	5.7
Tajikistan ^a	1999	No.	36	3	7	5	8	5	8
		Rate	1.6	—	—	—	—	—	—
Thailand	1994	No.	2 221	76	172	810	575	336	251
		Rate	7.9	3.1	3.1	9.2	9.2	10.1	10.6
The former Yugoslav Republic of Macedonia	2000	No.	25	1	1	4	3	4	12
		Rate	2.3	—	—	—	—	—	—
Trinidad and Tobago	1994	No.	31	0	5	14	4	5	3
		Rate	5.4	—	—	—	—	—	—
Turkmenistan ^a	1998	No.	105	10	23	15	32	12	13
		Rate	5.0	—	3.8	—	6.9	—	—
Ukraine	2000	No.	1 321	27	84	296	252	253	408
		Rate	4.6	2.7	2.7	5.5	4.6	5.3	6.2

TABLE A.4

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
United Kingdom	1999	No.	3 479	2 505	14	104	882	641	337	527
		Rate	5.6	8.4	—	2.6	15.1	9.4	6.2	10.0
United States of America	1999	No.	42 230	28 261	418	1 003	9 785	7 032	4 713	5 310
		Rate	15.0	20.8	4.3	5.0	34.5	22.0	19.9	27.5
Uruguay	2000	No.	349	263	5	8	72	62	46	70
		Rate	10.0	16.0	—	—	18.2	19.5	18.7	29.2
Uzbekistan ^e	2000	No.	2 044	1 620	65	203	410	571	229	141
		Rate	9.8	15.8	4.4	6.2	11.7	24.3	23.0	20.4
Venezuela ^e	2000	No.	5 198	4 070	89	245	1 462	1 242	638	393
		Rate	23.1	37.5	6.2	8.8	43.1	50.3	45.4	53.0

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.

^e Estimated numbers to allow for completeness.

^f Estimates for the entire population based on data from the Sample Vital Registration System and the Disease Surveillance Point System.

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
United Kingdom	1999	No.	974	16	54	240	146	129	389
		Rate	2.8	—	1.4	4.3	2.2	2.3	5.6
United States of America	1999	No.	13 969	342	698	3 954	2 923	2 170	3 882
		Rate	9.4	3.7	3.6	14.3	9.0	8.7	15.1
Uruguay	2000	No.	86	2	10	18	12	14	29
		Rate	4.6	—	—	—	—	—	8.5
Uzbekistan ^e	2000	No.	424	38	65	83	95	60	83
		Rate	4.1	2.7	2.1	2.4	3.9	5.8	9.2
Venezuela ^e	2000	No.	1 128	60	146	398	226	150	147
		Rate	10.0	4.4	5.5	12.1	9.3	10.6	17.0

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.