

The Global Burden of Noncommunicable Diseases





The global burden of noncommunicable diseases

In 2008, 54% of the 6.8 billion global population lived in the Western Pacific and South-East Asia regions, 2 of the 6 global regions as defined by the World Health Organization (WHO; the other 4 regions are Africa, The Americas, Eastern Mediterranean, and Europe). That same year, there were 57 million deaths globally, 63% of which were due to chronic or noncommunicable diseases (NCD), namely, cardiovascular disease, cancer, diabetes and chronic respiratory disease. One half of all NCD deaths occurred in the South-East Asia and Western Pacific regions. Globally, cardiovascular disease and cancer contributed 17 million and 7.6 million deaths in 2008, respectively. About 78% of all NCD deaths occurred in low and middle-income countries.

Of the 6 WHO regions, the Eastern Mediterranean region has the highest cardiovascular disease mortality rate (age-standardized) and the region of the Americas has the lowest cardiovascular mortality rate. Africa has the highest overall NCD and diabetes mortality rates.

The prevalence of diabetes, a risk factor for cardiovascular disease, is highest in South-East Asia, the Eastern Mediterranean region and high-income countries in the Western Pacific. The Western Pacific region also has the highest prevalence of current smoking; 57% among males aged 15 years and older.

In 5 of the 6 WHO regions, breast cancer in women has the highest incidence rate (age-standardized). Prostate cancer is the highest incident cancer for males in 3 of the regions, while lung cancer is highest in the other 3 regions.

This issue of Population Studies presents new analyses of international databases to gain insight into the global burden of NCD. Information on NCD mortality and morbidity, and preventable risk factors are presented globally and by WHO regions (Africa, The Americas, Eastern Mediterranean, Europe, South-East Asia, and Western Pacific) in order to increase awareness of the health impact NCD have on populations.

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Table of contents

Demographic characteristics	1
Global NCD mortality and morbidity	2
Preventable risk factors	8
Regional profiles	11
Appendix	17

Key messages

- The majority of deaths worldwide are due to NCD, accounting for 36 million or 63% of the 57 million total deaths in 2008
- About 78% of all NCD deaths occur in low and middle-income countries
- Cardiovascular disease accounts for 48% of all NCD deaths and among the 6 WHO regions, the Eastern Mediterranean region has the highest cardiovascular disease mortality rate (age-standardized)
- The prevalence of hypertension, a cardiovascular risk factor, is highest across all European countries and in high income countries of the Western Pacific
- Africa has the highest mortality rate (age-standardized) for diabetes
- Smoking is prevalent, and globally, 41% of the male population aged 15 years and older are current smokers

Demographic characteristics

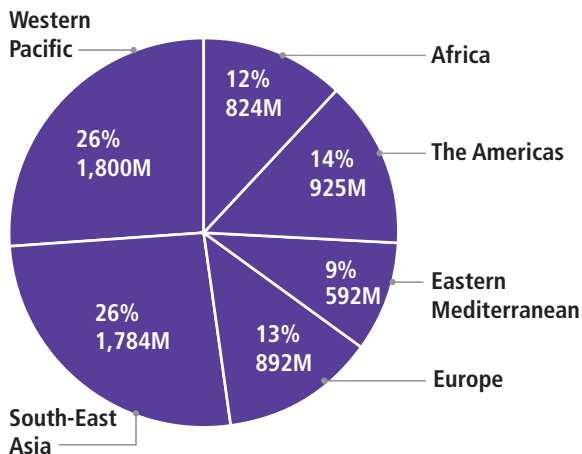
The World Health Organization (WHO) member states are grouped into 6 regions: Africa, The Americas, Eastern Mediterranean, Europe, South-East Asia, and Western Pacific. Of the world's 6.8 billion people, 54% (3.6 billion) live in the WHO Western Pacific and South-East Asia regions.

Countries in WHO regions



Source: WHO 2011

Distribution of global population by WHO region



Total population: 6.8 billion

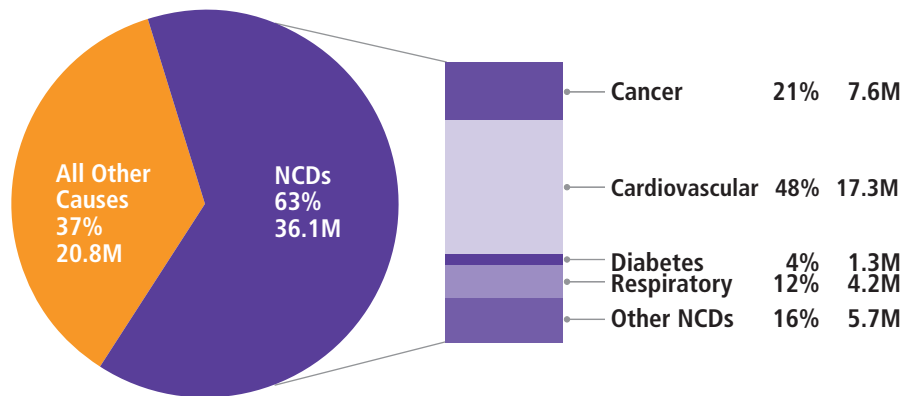
Source: United Nations Population Division 2008.

Global NCD mortality and morbidity

63% of global deaths are due to NCD, and 78% of these deaths occur in low/middle income countries

In 2008, the leading noncommunicable diseases (NCD)—cardiovascular, cancer, diabetes and chronic respiratory disease—accounted for 63% or 36 million of the world’s 57 million deaths. Seventy-eight percent of global NCD deaths occurred in low/middle-income countries. The largest proportion of global NCD deaths are due to cardiovascular disease (48% of NCD deaths) and cancer (21% of NCD deaths).

Global causes of death



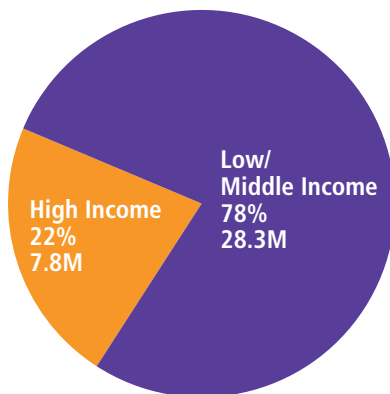
Total deaths: 56.9 million

Cancer: Excludes non-melanoma skin cancer.

Respiratory includes asthma and chronic obstructive pulmonary disease (COPD).

Totals may not add to 100% due to rounding.

Distribution of global NCD deaths by income category



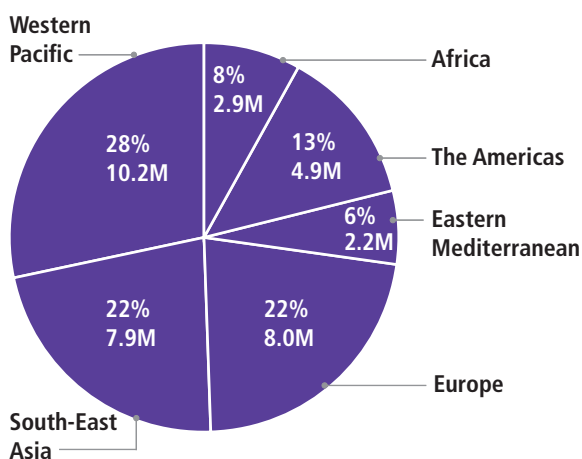
Total NCD deaths: 36.1 million

Source: WHO Global Burden of Disease 2008.

Half of all global NCD deaths occur in the South-East Asia and Western Pacific regions

By region, the Western Pacific and Europe contribute 4.7 million and 4.6 million of the 17.3 million global cardiovascular disease deaths. The Western Pacific region has the largest number of cancer and respiratory deaths as well. South-East Asia has the largest number of diabetes deaths.

Distribution of global NCD deaths by WHO region



Total NCD deaths: 36.1 million

Source: WHO Global Burden of Disease 2008.

Distribution of the leading global NCD deaths by WHO region

WHO region	Cancer		Cardiovascular		Diabetes		Respiratory*		COPD*	
	Deaths (millions)	% of global NCD deaths	Deaths (millions)	% of global NCD deaths	Deaths (millions)	% of global NCD deaths	Deaths (millions)	% of global NCD deaths	Deaths (millions)	% of global NCD deaths
Global	7.6	21.1	17.3	48.0	1.3	3.5	4.2	11.7	3.3	9.1
Africa	0.4	1.1	1.3	3.5	0.2	0.5	0.3	0.9	0.1	0.4
The Americas	1.2	3.3	1.9	5.4	0.3	0.8	0.4	1.1	0.2	0.7
Eastern Mediterranean	0.3	0.9	1.2	3.3	0.1	0.2	0.2	0.4	0.1	0.3
Europe	1.9	5.2	4.6	12.7	0.2	0.4	0.4	1.0	0.2	0.7
South-East Asia	1.1	3.1	3.6	10.0	0.3	0.8	1.4	3.8	1.2	3.3
Western Pacific	2.7	7.4	4.7	13.1	0.3	0.7	1.6	4.4	1.4	3.8

Cancer: Excludes non-melanoma skin cancer.

*Respiratory category includes COPD counts; COPD shown because of its proportion of respiratory deaths.

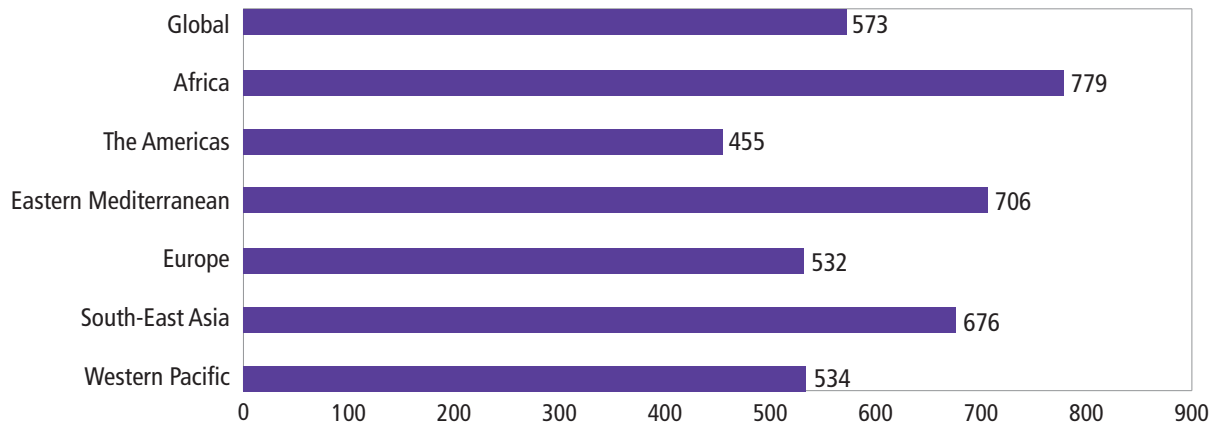
Cancer: Excludes non-melanoma skin cancer.

Source: WHO Global Burden of Disease 2008.

The Eastern Mediterranean region has the highest cardiovascular disease mortality rate and Africa has the highest diabetes mortality rate

The global NCD mortality rate (age-standardized) is 573 deaths per 100,000 persons. Africa has the highest NCD mortality rate as well as the highest diabetes death rate (779 and 55 deaths per 100,000 persons, respectively). Europe and the Western Pacific region lead the world in cancer mortality rates, and Africa, the Western Pacific and South-East Asia regions have the highest respiratory disease mortality rates.

Total NCD mortality rates by WHO region



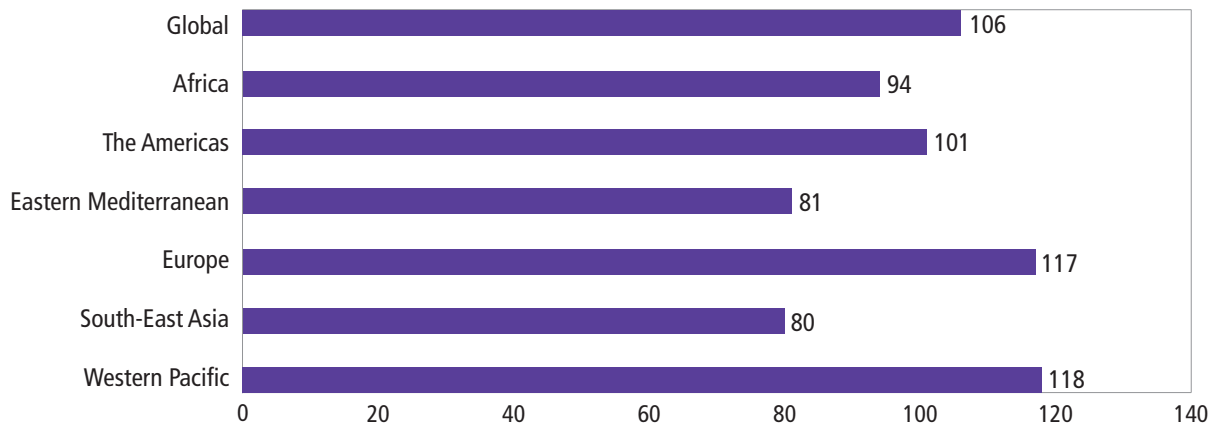
Rate per 100,000

Age-standardized to the World Standard Population.

Source: WHO Global Burden of Disease 2008.

The global burden of noncommunicable diseases

Mortality rates for cancer by WHO region



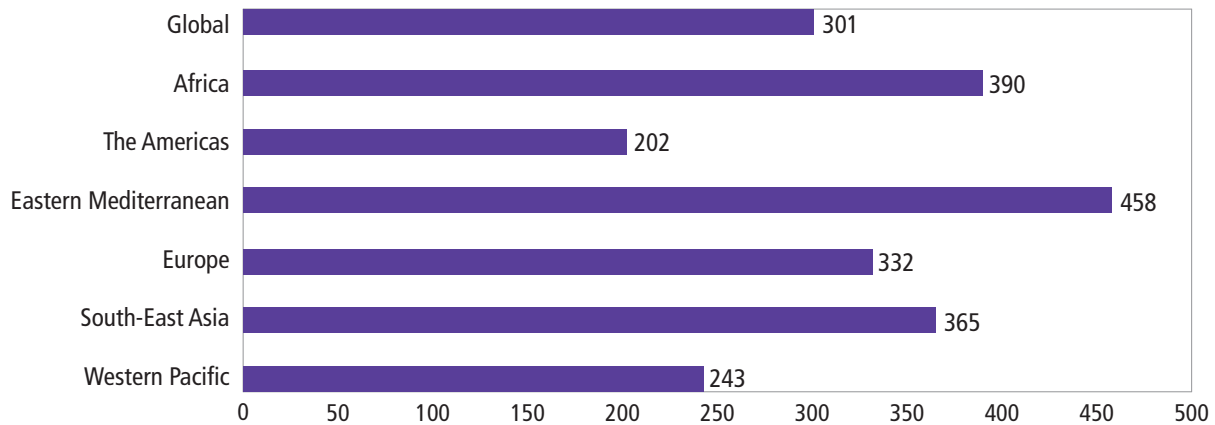
Rate per 100,000

Excludes non-melanoma skin cancer.

Age-standardized to the World Standard Population.

Source: GLOBOCAN 2008, IARC.

Mortality rates for cardiovascular disease by WHO region



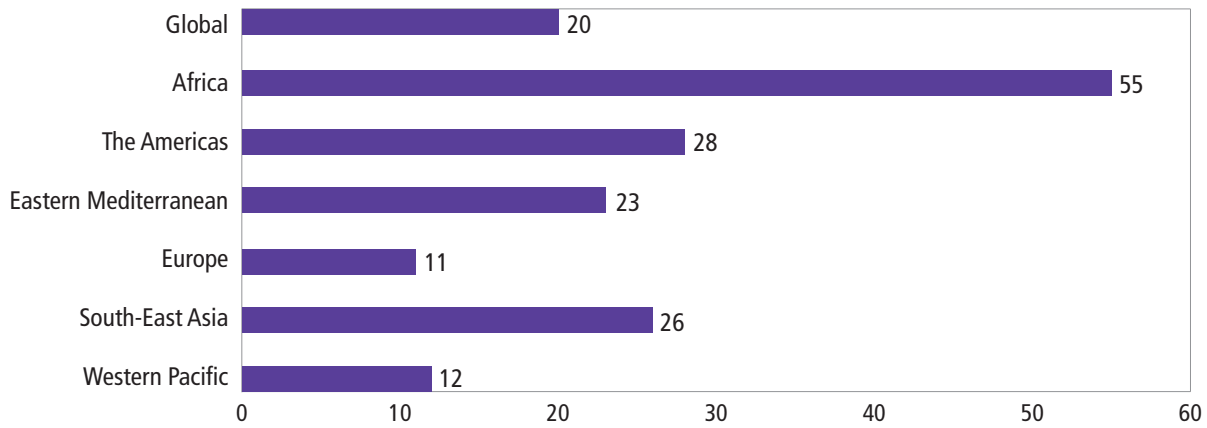
Rate per 100,000

Age-standardized to the World Standard Population.

Source: WHO Global Burden of Disease 2004.

The global burden of noncommunicable diseases

Mortality rates for diabetes by WHO region



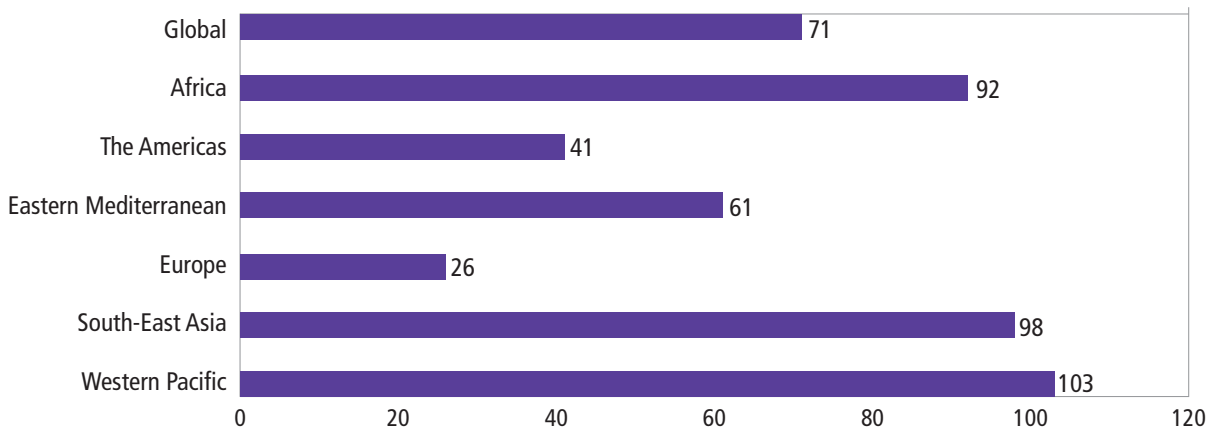
Rate per 100,000

Diabetes: Diabetes mellitus, Type 2 diabetes.

Age-standardized to the World Standard Population.

Source: WHO Global Burden of Disease 2004.

Mortality rates for respiratory disease by WHO region



Rate per 100,000

Age-standardized to the World Standard Population.

Source: WHO Global Burden of Disease 2004.

Prevalence of hypertension is highest across all European countries and in high income countries of the Western Pacific

High income countries in Europe have the highest prevalence of cholesterol (39%), while the lowest prevalence of high cholesterol can be found across The Eastern Mediterranean region (15%). South-East Asia, the Eastern Mediterranean region and high income countries in the Western Pacific have the highest prevalence of diabetes.

Prevalence percent of select chronic conditions among adults 30 years of age and older by income group and WHO region

WHO region	Income group	Diabetes	High Cholesterol	Hypertension
<i>Global</i>	<i>Total</i>	11	22	23
Africa	Low and middle income	4	8	27
The Americas	Total	10	28	21
	High income	13	28	21
	Low and middle income	9	28	21
Eastern Mediterranean	Total	17	15	23
	High income	15	15	17
	Low and middle income	17	15	23
Europe	Total	12	34	36
	High income	14	39	36
	Low and middle income	9	29	35
South-East Asia	Low and middle income	17	21	19
Western Pacific	Total	7	17	19
	High income	14	26	28
	Low and middle income	6	17	17

Age-standardized to the World Standard Population.

See appendix for income group definitions.

Hypertension: Systolic blood pressure greater than or equal to 142 mmHg.

Diabetes: Fasting blood glucose greater than 7 mmol/L; 7mmol/L=125 mg/dL.

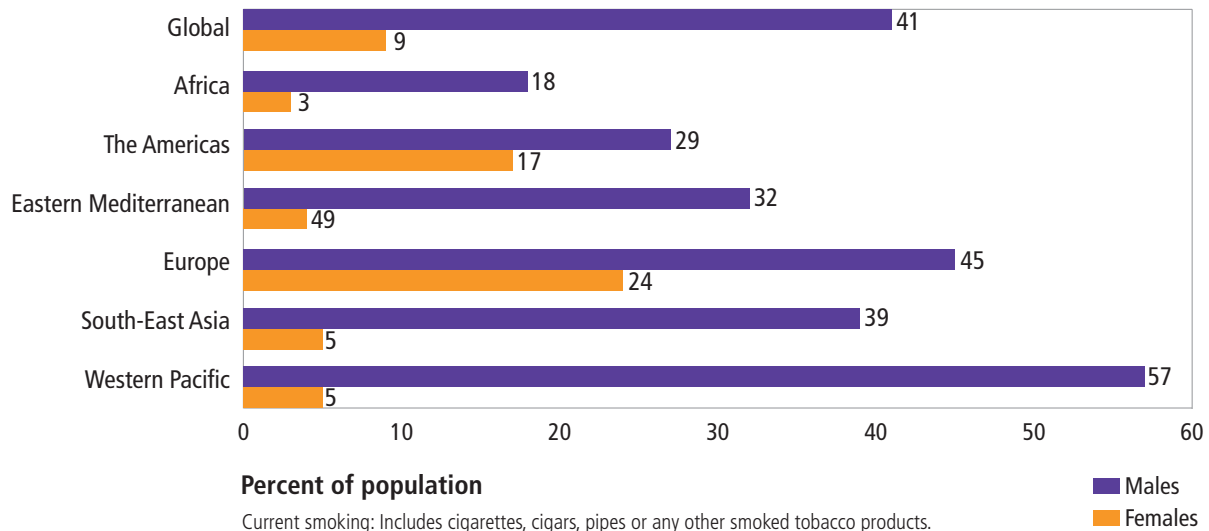
High cholesterol: Cholesterol greater than or equal to 6 mmol/L; 6mmol/L=232 mg/dL.

Source: WHO Global Health Risks: Mortality and Burden of Disease 2004.

Preventable risk factors

Globally, 41% of the male population aged 15 years and older are current smokers. At 57%, the Western Pacific region has the highest prevalence of male smokers.

Prevalence of current smoking among adults aged 15 years and older by WHO region



Percent of population

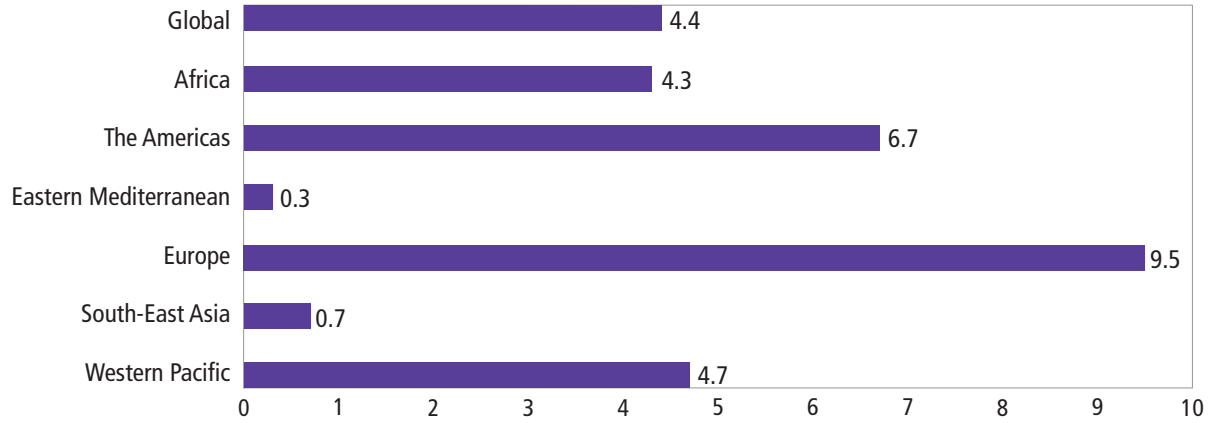
Current smoking: Includes cigarettes, cigars, pipes or any other smoked tobacco products.

"Current" includes both daily and non-daily or occasional smoking.

Source: WHO Global Health Statistics 2006.

The global burden of noncommunicable diseases

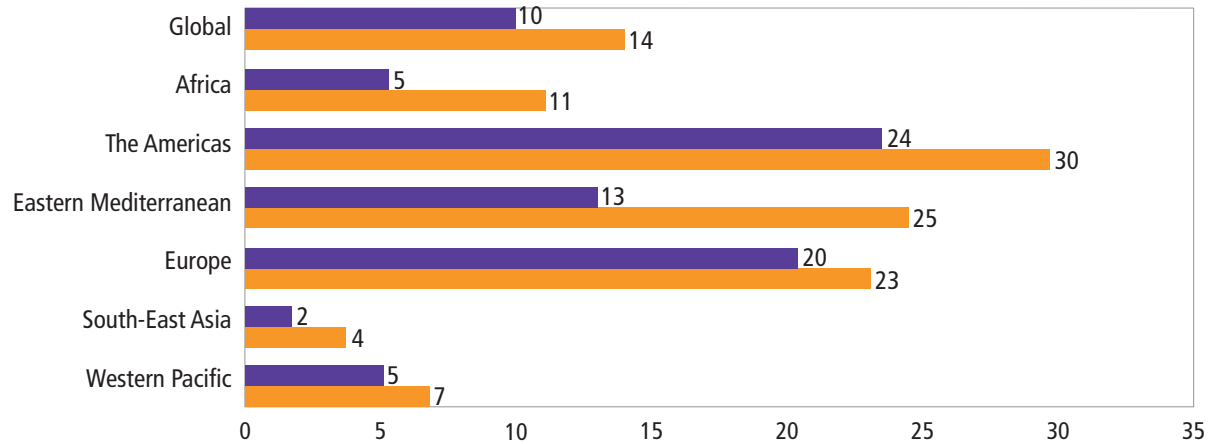
Average annual alcohol consumption per capita in liters among adults aged 15 years and older by WHO region



Average annual alcohol consumption per capita (liters)

Source: Global Information System on Alcohol and Health (GISAH) 2005.

Prevalence of obesity among adults aged 20 years and older by gender and WHO region



Percent of population

Obesity: Body mass index ≥ 30.0 .

Source: WHO World Health Statistics 2008.

■ Males
■ Females



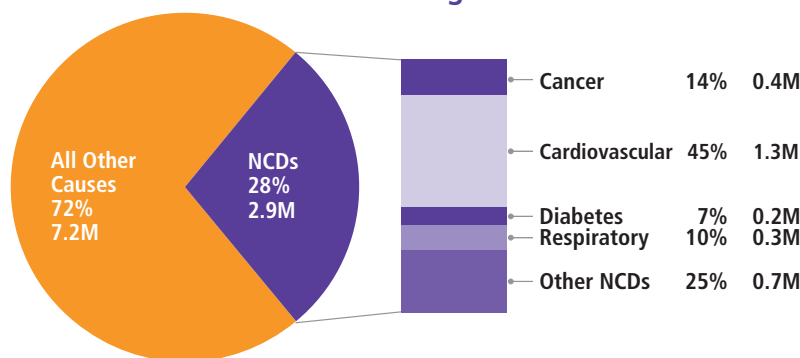
Regional profiles

Africa

Population							
Total (millions)	Male (%)	Median age (years)	Life expectancy at birth (years)		Aged under 15 (%)	Aged 15-59 (%)	Aged over 60 (%)
			M	F			
824	50	19	52	56	42	53	5

Source: WHO Mortality Data 2009 (life expectancy), United Nations Population Division 2008 (all other data).

28% of all deaths in the Africa region are due to NCD



Total deaths: 10.1 million

Cancer: Excludes non-melanoma skin cancer.

Respiratory includes asthma and chronic obstructive pulmonary disease (COPD).

Source: WHO Global Burden of Disease 2008.

Totals may not add to 100% due to rounding.

Incidence and mortality for the 5 most frequent cancers in males and females

Cancer	Incidence		Mortality	
	Number of new cases of cancer	Age-standardized rate per 100,000	Number of deaths	Age-standardized rate per 100,000
Males				
Prostate	34,684	20.4	24,368	15.4
Liver	29,172	12.5	28,532	12.6
Esophagus	15,738	8.0	15,044	12.6
Kaposi's sarcoma	21,914	7.6	18,680	6.5
Colon and rectum	14,709	7.0	11,440	5.7
Females				
Cervix uteri	75,827	30.7	50,571	21.7
Breast	68,012	26.5	37,182	15.4
Liver	15,072	6.1	14,756	6.3
Colon and rectum	12,107	4.9	9,449	4.0
Ovary	10,400	4.0	7,815	3.2

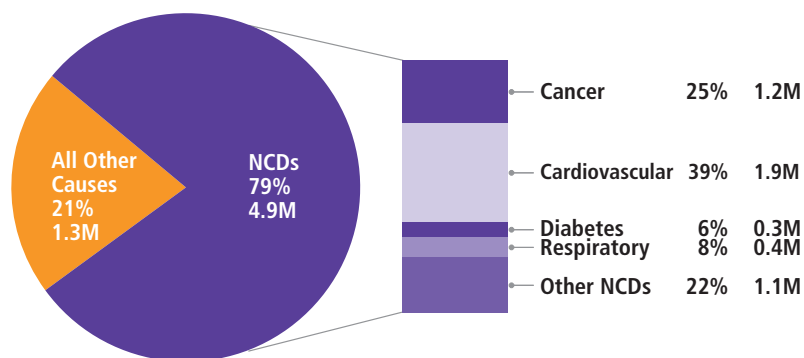
Ranked by the 5 cancers with the highest age-standardized incidence rates. Age-standardized to the World Standard Population. Kaposi's sarcoma is commonly associated with HIV infection. Source: GLOBOCAN 2008, IARC.

The Americas

Population							
Total (millions)	Male (%)	Median age (years)	Life expectancy at birth (years)		Aged under (15%)	Aged 15-59 (%)	Aged over 60 (%)
			M	F			
925	49	31	73	79	25	62	13

Source: WHO Mortality Data 2009 (life expectancy), United Nations Population Division 2008 (all other data).

79% of all deaths in the region of the Americas are due to NCD



Total deaths: 6.2 million

Cancer: Excludes non-melanoma skin cancer.

Respiratory includes asthma and chronic obstructive pulmonary disease (COPD).

Source: WHO Global Burden of Disease 2008.

Totals may not add to 100% due to rounding.

Incidence and mortality for the 5 most frequent cancers in males and females

Cancer	Incidence		Mortality	
	Number of new cases of cancer	Age-standardized rate per 100,000	Number of deaths	Age-standardized rate per 100,000
Males				
Prostate	334,269	66.7	76,535	12.9
Lung	172,900	34.0	144,957	28.1
Colon and rectum	122,297	23.8	46,936	8.8
Bladder	68,609	13.0	17,146	3.0
Stomach	54,452	10.7	40,076	7.8
Females				
Breast	320,413	57.2	82,515	13.7
Lung	134,582	21.9	101,136	15.9
Colon and rectum	118,423	18.3	49,339	7.1
Cervix uteri	80,711	15.3	36,125	6.5
Corpus uteri	59,281	10.5	14,123	2.2

Ranked by the 5 cancers with the highest age-standardized incidence rates.

Age-standardized to the World Standard Population.

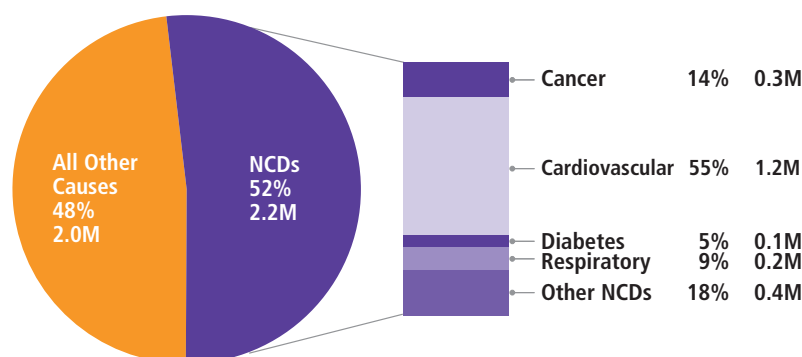
Source: GLOBOCAN 2008, IARC.

Eastern Mediterranean

Population							
Total (millions)	Male (%)	Median age (years)	Life expectancy at birth (years)		Aged under 15 (%)	Aged 15-59 (%)	Aged over 60 (%)
			M	F			
592	49	22	64	67	34	60	6

Source: WHO Mortality Data 2009 (life expectancy), United Nations Population Division 2008 (all other data).

79% of all deaths in the Eastern Mediterranean region are due to NCD



Total deaths: 4.2 million

Cancer: Excludes non-melanoma skin cancer.

Respiratory includes asthma and chronic obstructive pulmonary disease (COPD).

Source: WHO Global Burden of Disease 2008.

Totals may not add to 100% due to rounding.

Incidence and mortality for the 5 most frequent cancers in males and females

Cancer	Incidence		Mortality	
	Number of new cases of cancer	Age-standardized rate per 100,000	Number of deaths	Age-standardized rate per 100,000
Males				
Prostate	21,415	12.0	19,814	11.2
Bladder	18,064	10.0	11,543	6.7
Stomach	15,311	8.4	14,100	7.8
Prostate	12,776	7.6	9,548	5.7
Colon and rectum	13,235	6.7	9,806	5.1
Females				
Breast	61,525	29.3	31,632	16.0
Cervix uteri	18,291	9.0	11,123	5.8
Colon and rectum	10,626	5.4	7,892	4.1
Ovary	9,846	4.8	7,214	3.7
Stomach	8,149	4.3	7,523	4.0

Ranked by the 5 cancers with the highest age-standardized incidence rates.

Age-standardized to the World Standard Population.

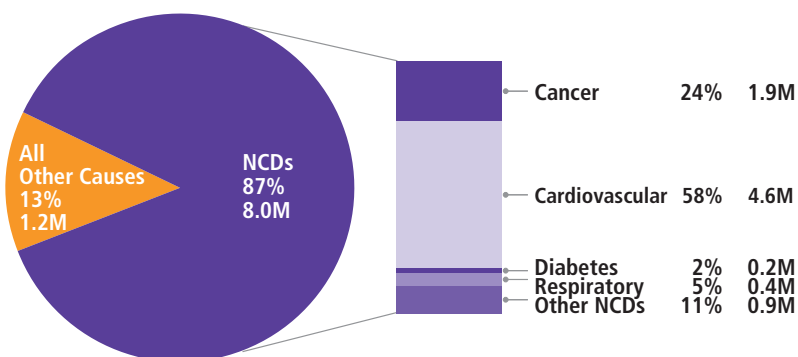
Source: GLOBOCAN 2008, IARC.

Europe

Population							
Total (millions)	Male (%)	Median age (years)	Life expectancy at birth (years)		Aged under 15 (%)	Aged 15-59 (%)	Aged over 60 (%)
			M	F			
892	48	38	71	79	17	64	19

Source: WHO Mortality Data 2009 (life expectancy), United Nations Population Division 2008 (all other data).

87% of all deaths in the European region are due to NCD



Total deaths: 9.2 million

Cancer: Excludes non-melanoma skin cancer.

Respiratory includes asthma and chronic obstructive pulmonary disease (COPD).

Source: WHO Global Burden of Disease 2008.

Totals may not add to 100% due to rounding.

Incidence and mortality for the 5 most frequent cancers in males and females

Cancer	Incidence		Mortality	
	Number of new cases of cancer	Age-standardized rate per 100,000	Number of deaths	Age-standardized rate per 100,000
Males				
Prostate	379,097	55.3	94,080	11.7
Lung	310,368	48.1	276,796	42.0
Colon and rectum	238,349	35.3	115,624	16.3
Bladder	112,819	16.5	42,323	5.7
Stomach	99,479	15.1	79,531	11.9
Females				
Breast	450,322	62.8	139,829	16.7
Colon and rectum	212,272	22.7	107,644	10.3
Lung	107,186	12.7	91,919	10.3
Corpus uteri	93,562	12.3	23,528	2.5
Cervix uteri	61,397	10.1	28,181	3.9

Ranked by the 5 cancers with the highest age-standardized incidence rates.

Age-standardized to the World Standard Population.

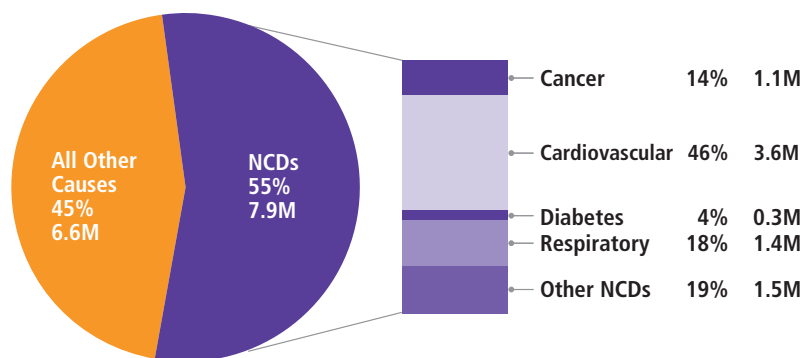
Source: GLOBOCAN 2008, IARC.

South-East Asia

Population							
Total (millions)	Male (%)	Median age (years)	Life expectancy at birth (years)		Aged under 15 (%)	Aged 15-59 (%)	Aged over 60 (%)
			M	F			
1,784	51	26	64	67	30	62	8

Source: WHO Mortality Data 2009 (life expectancy), United Nations Population Division 2008 (all other data).

55% of all deaths in the South-East region are due to NCD



Total deaths: 14.5 million

Cancer: Excludes non-melanoma skin cancer.

Respiratory includes asthma and chronic obstructive pulmonary disease (COPD).

Source: WHO Global Burden of Disease 2008.

Totals may not add to 100% due to rounding.

Incidence and mortality for the 5 most frequent cancers in males and females

Cancer	Incidence		Mortality	
	Number of new cases of cancer	Age-standardized rate per 100,000	Number of deaths	Age-standardized rate per 100,000
Males				
Lung	108,979	16.6	97,988	15.2
Lip, oral cavity	59,001	8.4	39,345	5.7
Colon and rectum	50,278	7.4	34,940	5.3
Liver	46,374	6.7	42,342	6.2
Other pharynx	44,364	6.6	38,644	5.7
Females				
Breast	203,929	26.1	93,979	12.5
Cervix uteri	188,242	24.4	102,693	13.7
Colon and rectum	47,058	6.5	32,461	4.5
Ovary	47,058	6.2	32,960	4.4
Lung	42,160	5.9	37,864	5.3

Ranked by the 5 cancers with the highest age-standardized incidence rates.

Age-standardized to the World Standard Population.

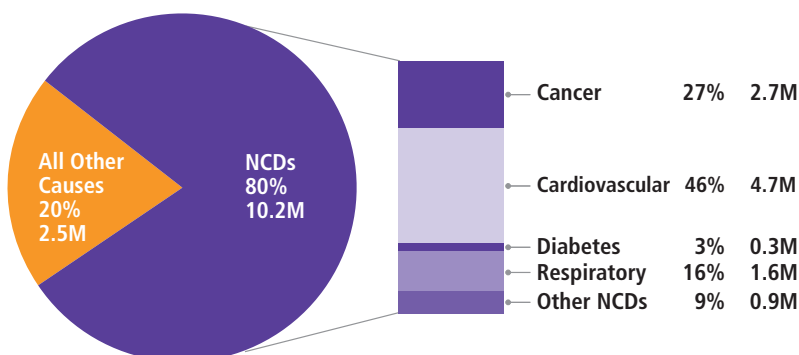
Source: GLOBOCAN 2008, IARC.

Western Pacific

Population							
Total (millions)	Male (%)	Median age (years)	Life expectancy at birth (years)		Aged under 15 (%)	Aged 15-59 (%)	Aged over 60 (%)
			M	F			
1,800	51	34	72	77	21	66	13

Source: WHO Mortality Data 2009 (life expectancy), United Nations Population Division 2008 (all other data).

80% of all deaths in the Western Pacific region are due to NCD



Total deaths: 12.7 million

Cancer: Excludes non-melanoma skin cancer.

Respiratory includes asthma and chronic obstructive pulmonary disease (COPD).

Source: WHO Global Burden of Disease 2008.

Totals may not add to 100% due to rounding.

Incidence and mortality for the 5 most frequent cancers in males and females

Cancer	Incidence		Mortality	
	Number of new cases of cancer	Age-standardized rate per 100,000	Number of deaths	Age-standardized rate per 100,000
Males				
Lung	465,653	44.0	397,521	37.2
Stomach	420,394	39.9	282,900	26.5
Liver	363,923	34.4	327,307	30.9
Colon and rectum	224,849	21.3	101,554	9.4
Esophagus	197,837	18.9	159,407	15.0
Females				
Breast	279,499	26.3	73,194	6.7
Lung	222,449	19.1	187,666	15.7
Stomach	201,646	17.3	150,824	12.4
Colon and rectum	170,554	14.7	81,768	6.6
Liver	141,839	12.4	133,471	11.5

Ranked by the 5 cancers with the highest age-standardized incidence rates.

Age-standardized to the World Standard Population.

Source: GLOBOCAN 2008, IARC.

Appendix

Data Sources

The WHO Global InfoBase

The WHO Global InfoBase is a data warehouse that collects, stores and displays information on chronic diseases and their risk factors for all WHO member states. High quality health statistics are essential for planning and implementing health policy in all country settings. The Infobase assembles, for the first time in one place, non-communicable disease (NCD) risk factor data collected from WHO Member States. The Infobase online dissemination tool provides not only data but also health information to help users understand health enquiries worldwide and improve the health of nations.

<https://apps.who.int/infobase/>

WHO Global Burden of Disease 2004, 2008

WHO Global Statistics 2006

WHO World Health Statistics 2008

WHO Mortality Data 2009

Global Burden of Disease provides a comprehensive and comparable assessment of mortality and loss of health due to diseases, injuries and risk factors for all regions of the world. The WHO GBD project draws on a wide range of data sources to quantify global and regional effects of diseases, injuries and risk factors on population health. The Global Statistics and World Health Statistics also provide estimates of risk factors such as smoking and obesity. These data sources are available for download via access through the Global Health Observatory portal.

<http://www.who.int/research/en/>

<http://www.who.int/gho/ncd/en/index.html>

<http://apps.who.int/globalatlas/DataQuery/default.asp>

<http://www.who.int/healthinfo/statistics/en/>

http://www.who.int/healthinfo/global_burden_disease/en/

http://www.who.int/healthinfo/global_burden_disease/estimates_regional/en/index.html

WHO Global Information System on Alcohol and Health 2009

Since 1997, the Management of Substance Abuse team in the WHO Department of Mental Health and Substance Abuse has been building the Global Alcohol Database and later the Global Information System on Alcohol and Health, providing a reference source of information for global epidemiological surveillance of alcohol use, alcohol-related problems and alcohol policies, based on passive epidemiological surveillance, and by gathering published and fugitive data and information about key aspects of the alcohol situation in WHO Member States. For the Global Information System on Alcohol and Health a set of indicators was chosen to assess the most important aspects of the alcohol situation in WHO Member States as they relate to public health. The indicators are grouped into broad categories such as: Production and availability; levels of consumption and patterns of consumption.

United Nations, Department of Economic and Social Affairs Population Division, Population Estimates and Prospects 2008

The Population Division is responsible for monitoring and appraisal of the broad range of areas in the field of population. Among its activities, the Population Division identifies, analyzes and investigates policy issues and provides global trends in the field of population demographic estimates and projections. The United Nations demographic estimates and projections are prepared for all countries and areas of the world, as well as urban and rural areas and major cities, and serve as the standard and consistent set of population figures for use throughout the United Nations system.

http://esa.un.org/unpd/wpp/unpp/panel_population.htm

GLOBOCAN 2008 International Agency for Research on Cancer (IARC)

The GLOBOCAN project provides contemporary estimates of the incidence of, and mortality from major type of cancers, at national level, for all countries of the world. The GLOBOCAN estimates are available by gender and age group.

For additional information: <http://globocan.iarc.fr/>

Ferlay J, Shin HR, Bray F, Forman D, Mathers C and Parkin DM.
GLOBOCAN 2008 v1.2, Cancer Incidence and Mortality Worldwide: IARC CancerBase No. 10 [Internet]. Lyon, France: International Agency for Research on Cancer; 2010. Available from: <http://globocan.iarc.fr>, accessed on 31 July 2011.

List of WHO member states by region and income level

WHO regions: WHO Member States are grouped into 6 geographical regions: Africa, Americas, Eastern Mediterranean, Europe, South-East Asia, and Western Pacific.

WHO member states are divided among income groups according to 2010 gross national income (GNI) per capita, calculated using the World Bank Atlas method. The groups are: low income, \$1,005 or less; lower middle income, \$1,006–3,975; upper middle income, \$3,976–12,275; and high income, \$12,276 or more. World Bank list of economies (December 2010). Washington, DC, World Bank, December 2010

<http://siteresources.worldbank.org/DATASTATISTICS/Resources/CLASS.XLS>

High income countries are *italicized*.

WHO African Region: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Cote d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, South Africa, Swaziland, Togo, Uganda, United Republic of Tanzania, Zambia, Zimbabwe.

The global burden of noncommunicable diseases

WHO Region of the Americas: Antigua and Barbuda, Argentina, *Bahamas*, Barbados, Belize, Bolivia (Plurinational State of), Brazil, *Canada*, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, *United States of America*, Uruguay, Venezuela (Bolivarian Republic of).

WHO Eastern Mediterranean Region: Afghanistan, *Bahrain*, Djibouti, Egypt, Iran (Islamic Republic of), Iraq, Jordan, *Kuwait*, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Pakistan, *Qatar*, *Saudi Arabia*, Somalia, Sudan, Syrian Arab Republic, Tunisia, *United Arab Emirates*, Yemen.

WHO European Region: Albania, *Andorra*, Armenia, *Austria*, Azerbaijan, Belarus, *Belgium*, Bosnia and Herzegovina, Bulgaria, Croatia, *Cyprus*, Czech Republic, *Denmark*, Estonia, *Finland*, *France*, Georgia, *Germany*, *Greece*, Hungary, *Iceland*, *Ireland*, *Israel*, *Italy*, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, *Luxembourg*, *Malta*, *Monaco*, Montenegro, *Netherlands*, *Norway*, Poland, *Portugal*, Republic of Moldova, Romania, Russian Federation, *San Marino*, Serbia, Slovakia, *Slovenia*, *Spain*, *Sweden*, *Switzerland*, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine, *United Kingdom*, Uzbekistan.

WHO South-East Asia Region: Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste.

WHO Western Pacific Region: *Australia*, *Brunei Darussalam*, Cambodia, China, Cook Islands, *Fiji*, *Japan*, Kiribati, Lao People's Democratic Republic, Malaysia, Marshall Islands, Micronesia (Federated States of), Mongolia, Nauru, *New Zealand*, Niue, Palau, Papua New Guinea, Philippines, *Republic of Korea*, Samoa, *Singapore*, Solomon Islands, Tonga, Tuvalu, Vanuatu, Viet Nam.

Definitions

Alcohol consumption: Liters of pure alcohol per capita, computed as the sum of alcohol production and imports, less alcohol exports, divided by the adult population (aged 15 years and older).

Current smoking: Current tobacco smoking includes both daily and non-daily or occasional smoking of cigarettes, cigars, pipes, or any other smoked tobacco products.

Obesity: Body mass index (BMI) is calculated as weight in kilograms divided by height in meters squared.

Disease or condition rates

Incidence: The number of new cases of a disease in a given time period among the population at risk of the disease.

Prevalence percentage: The number of persons diagnosed with a disease as a percentage of the population.

Mortality: The number of deaths occurring in a given period in a specified population. It can be expressed as an absolute number of deaths per year or as a rate per 100,000 persons per year.

Age-standardized rate or age-adjusted rate: An age-standardized rate (ASR) is a summary measure. It is a rate adjusted for differences in the age distribution between the population of interest and a standard population. The standard population used in this report is the WHO World Standard Population. For additional information:

<http://www.who.int/infobase/help.aspx?helpid=293>

International classification of diseases (ICD, 10th revision) codes

ICD-9-CM Code	Condition
C00-C97, D00-D48, D65-D89, E03-E07, E10-E16, E20-E34, E51-E88, F01-F99, G06-G98, H00-H61, H68-H93, I00-I99, J30-J98, K00-K92, N00-N64, N75-N98, L00-L98, M00-M99, Q00-Q99)	Noncommunicable disease
E10-E14	Diabetes
I00-I99	Cardiovascular
J30-J98	Respiratory
C00-97, but C44 ¹	All cancers but non-melanoma skin cancer
C00-08	Lip, oral cavity
C11	Nasopharynx
C09-10, C12-14	Other pharynx
C15	Esophagus
C16	Stomach
C18-21	Colon and rectum ²
C22	Liver and intrahepatic bile ducts
C23-24	Gallbladder and extrahepatic ducts
C25	Pancreas
C32	Larynx
C33-34	Trachea, bronchus and lung
C43	Melanoma of skin
C46	Kaposi's sarcoma ³
C50	Breast ⁴
C53	Cervix uteri
C54	Corpus uteri
C56	Ovary
C61	Prostate
C62	Testis
C64-66	Kidney, renal pelvis and ureter
C67	Bladder
C70-72	Brain, nervous system
C73	Thyroid
C81	Hodgkin lymphoma
C82-85, C96	Non-Hodgkin lymphoma ¹
C88+C90	Multiple myeloma
C91-95	Leukemia

¹Includes HIV disease resulting in malignant neoplasms

²Includes anal cancer

³Sub-Saharan Africa countries only. Includes B21.0 (HIV disease resulting in Kaposi's sarcoma)

⁴Female only



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