

	Life expectancy at birth		Infant mortality rate		Under-five mortality rate		Child mortality rate		Adult mortality rate		Survival to age 65	
	years		per 1,000 live births		per 1,000		per 1,000		per 1,000		% of cohort	
	1990	2007	1990	2007	1990	2007	Male 2000-07 <sup>a,b</sup>	Female 2000-07 <sup>a,b</sup>	Male 2005-07 <sup>a</sup>	Female 2005-07 <sup>a</sup>	Male 2007	Female 2007
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	72	76	37	13	46	15	3	1	106	51	81	90
Algeria	67	72	54	33	69	37	..	..	121	102	78	81
Angola	40	43	150	116	258	158	..	..	479	434	30	36
Argentina	72	75	25	15	29	16	..	..	166	79	74	87
Armenia	68	72	48	22	56	24	8	3	195	87	68	83
Australia	77	81	8	5	10	6	..	..	84	48	88	93
Austria	76	80	8	4	10	4	..	..	111	55	84	93
Azerbaijan	66	67	78	34	98	39	9	5	216	102	62	77
Bangladesh	55	64	105	47	151	61	24	29	231	198	62	67
Belarus	71	70	20	12	24	13	..	..	330	115	52	82
Belgium	76	80	8	4	10	5	..	..	111	61	84	92
Benin	53	57	111	78	184	123	64	65	279	235	53	59
Bolivia	59	66	89	48	125	57	20	26	235	176	63	71
Bosnia and Herzegovina	72	75	18	13	22	14	..	..	145	76	76	86
Botswana	63	51	45	33	57	40	..	..	567	567	32	36
Brazil	67	72	49	20	58	22	..	..	229	120	67	80
Bulgaria	72	73	15	10	19	12	..	..	221	92	70	86
Burkina Faso	50	52	112	104	206	191	110	113	283	183	47	58
Burundi	46	49	113	108	189	180	..	..	404	370	40	45
Cambodia	55	60	87	70	119	91	20	20	346	243	50	61
Cameroon	55	50	85	87	139	148	73	72	414	420	41	43
Canada	77	81	7	5	8	6	..	..	94	57	86	92
Central African Republic	50	45	113	113	171	172	74	82	559	533	28	34
Chad	51	51	120	124	201	209	96	101	355	308	43	49
Chile	74	78	18	8	21	9	..	..	129	64	80	89
China	68	73	36	19	45	22	..	..	151	90	75	83
Hong Kong, China	77	82	..	..	..	..	..	..	77	33	87	94
Colombia	68	73	28	17	35	20	4	3	202	95	71	83
Congo, Dem. Rep.	46	46	127	108	200	161	70	64	435	400	36	40
Congo, Rep.	57	55	67	79	104	125	49	43	391	367	45	50
Costa Rica	76	79	16	10	18	11	..	..	114	61	82	89
Côte d'Ivoire	53	48	104	89	151	127	..	..	420	403	38	43
Croatia	72	76	11	5	13	6	..	..	156	61	76	89
Cuba	75	78	11	5	13	7	..	..	117	72	82	88
Czech Republic	71	77	11	3	13	4	..	..	148	66	78	90
Denmark	75	78	8	4	9	4	..	..	116	69	83	89
Dominican Republic	68	72	53	31	66	38	6	4	219	131	68	79
Ecuador	69	75	43	20	57	22	5	5	169	90	75	85
Egypt, Arab Rep.	62	71	68	30	93	36	10	10	155	91	73	83
El Salvador	66	72	47	21	60	24	..	..	207	125	70	80
Eritrea	49	58	88	46	147	70	55	50	418	319	42	54
Estonia	69	73	12	4	18	6	..	..	283	92	59	85
Ethiopia	48	53	122	75	204	119	56	56	361	325	45	50
Finland	75	79	6	3	7	4	..	..	133	57	83	92
France	77	81	7	4	9	4	..	..	123	57	84	93
Gabon	61	57	60	60	92	91	32	33	379	383	49	51
Gambia, The	51	59	104	82	153	109	46	39	219	181	58	63
Georgia	70	71	41	27	47	30	5	4	213	81	67	84
Germany	75	80	7	4	9	4	..	..	107	56	84	92
Ghana	57	60	76	73	120	115	51	35	285	281	57	59
Greece	77	80	9	4	11	4	..	..	91	41	85	93
Guatemala	63	70	60	29	82	39	..	..	236	130	67	79
Guinea	47	56	137	93	231	150	89	86	272	235	52	59
Guinea-Bissau	42	46	142	118	240	198	110	88	447	401	35	41
Haiti	55	61	105	57	152	76	33	36	306	237	55	63

	Life expectancy at birth		Infant mortality rate		Under-five mortality rate		Child mortality rate		Adult mortality rate		Survival to age 65	
	years		per 1,000 live births		per 1,000		per 1,000		per 1,000		% of cohort	
	1990	2007	1990	2007	1990	2007	Male 2000-07 <sup>a,b</sup>	Female 2000-07 <sup>a,b</sup>	Male 2005-07 <sup>a</sup>	Female 2005-07 <sup>a</sup>	Male 2007	Female 2007
Honduras	66	70	45	20	58	24	8	9	238	139	66	78
Hungary	69	73	15	6	17	7	..	..	256	107	67	86
India	60	65	80	54	117	72	9	12	257	164	60	69
Indonesia	62	71	60	25	91	31	13	11	168	118	72	80
Iran, Islamic Rep.	65	71	54	29	72	33	..	..	152	101	73	81
Iraq	62	..	42	..	53	..	..	..	..	..	..	..
Ireland	75	79	8	4	9	4	..	..	88	56	85	91
Israel	77	81	10	4	12	5	..	..	80	38	87	93
Italy	77	81	8	3	9	4	..	..	84	44	86	93
Jamaica	72	73	28	26	33	31	5	6	220	139	70	79
Japan	79	83	5	3	6	4	..	..	90	44	87	94
Jordan	67	73	33	21	40	24	3	2	164	113	73	81
Kazakhstan	68	66	51	28	60	32	5	4	361	144	50	77
Kenya	59	54	64	80	97	121	42	39	417	396	43	48
Korea, Dem. Rep.	70	67	42	42	55	55	..	..	179	127	66	75
Korea, Rep.	71	79	8	4	9	5	..	..	109	45	82	92
Kuwait	75	78	13	9	15	11	..	..	86	52	85	90
Kyrgyz Republic	68	68	62	34	74	38	8	4	279	131	57	75
Lao PDR	55	64	120	56	163	70	..	..	233	190	62	68
Latvia	69	71	14	7	17	9	..	..	311	114	64	86
Lebanon	69	72	32	26	37	29	..	..	153	101	74	82
Lesotho	59	43	81	68	102	84	22	19	723	720	19	22
Liberia	43	46	138	93	205	133	57	51	460	425	33	38
Libya	68	74	35	17	41	18	..	..	148	92	75	84
Lithuania	71	71	10	7	16	8	..	..	346	116	63	86
Macedonia, FYR	71	74	33	15	38	17	2	1	135	80	77	85
Madagascar	51	59	103	70	168	112	45	45	287	227	55	62
Malawi	49	48	124	71	209	111	52	54	526	519	34	37
Malaysia	70	74	16	10	22	11	..	..	152	87	75	85
Mali	48	54	148	117	250	196	117	114	255	178	49	59
Mauritania	58	64	81	75	130	119	50	48	172	106	64	74
Mauritius	69	72	20	13	24	15	..	..	207	106	68	82
Mexico	71	75	42	29	52	35	..	..	142	79	78	86
Moldova	67	69	30	16	37	18	7	4	294	138	59	77
Mongolia	61	67	71	35	98	43	11	10	262	171	59	71
Morocco	64	71	69	32	89	34	9	11	148	98	74	82
Mozambique	44	42	135	115	201	168	61	64	625	613	24	27
Myanmar	59	62	91	74	130	103	..	..	298	190	54	67
Namibia	62	53	57	47	87	68	24	19	518	512	37	41
Nepal	54	64	99	43	142	55	21	18	230	206	62	66
Netherlands	77	80	7	4	9	5	..	..	81	59	86	91
New Zealand	75	80	8	5	11	6	..	..	92	59	87	91
Nicaragua	64	73	52	28	68	35	10	9	209	120	70	80
Niger	47	57	143	83	304	176	138	135	166	180	60	58
Nigeria	47	47	120	97	230	189	57	57	434	416	37	39
Norway	77	80	7	3	9	4	..	..	86	53	87	92
Oman	70	76	25	11	32	12	..	..	99	73	82	87
Pakistan	60	65	102	73	132	90	14	22	174	142	66	69
Panama	72	76	27	18	34	23	..	..	139	74	78	87
Papua New Guinea	55	57	69	50	94	65	..	..	422	306	41	55
Paraguay	68	72	34	24	41	29	..	..	174	128	72	79
Peru	66	71	58	17	78	20	11	8	200	123	70	80
Philippines	66	72	43	23	62	28	14	9	158	104	73	82
Poland	71	75	19	6	17	7	..	..	209	80	72	89
Portugal	74	78	11	3	15	4	..	..	128	53	83	91
Puerto Rico	75	78	..	..	..	..	..	..	134	53	80	91



	Life expectancy at birth		Infant mortality rate		Under-five mortality rate		Child mortality rate		Adult mortality rate		Survival to age 65	
	years		per 1,000 live births		per 1,000		per 1,000		per 1,000		% of cohort	
	1990	2007	1990	2007	1990	2007	Male 2000-07 <sup>a,b</sup>	Female 2000-07 <sup>a,b</sup>	Male 2005-07 <sup>a</sup>	Female 2005-07 <sup>a</sup>	Male 2007	Female 2007
Romania	70	73	27	13	32	15	..	..	201	85	69	85
Russian Federation	69	68	23	13	27	15	..	..	429	158	43	77
Rwanda	32	46	117	109	195	181	90	87	456	408	34	40
Saudi Arabia	68	73	35	20	44	25	3	4	140	90	76	84
Senegal	57	63	72	59	149	114	69	69	171	102	63	73
Serbia	71	73	..	7	..	8	4	3	157 <sup>c</sup>	83 <sup>c</sup>	74 <sup>c</sup>	85 <sup>c</sup>
Sierra Leone	39	43	169	155	290	262	134	124	405	345	33	40
Singapore	74	80	7	2	8	3	..	..	81	46	86	92
Slovak Republic	71	74	12	7	15	8	..	..	196	76	71	88
Slovenia	73	78	8	3	11	4	..	..	149	57	80	91
Somalia	42	48	121	88	203	142	53	54	385	335	39	44
South Africa	62	50	49	46	64	59	13	9	623	598	27	33
Spain	77	81	8	4	9	4	..	..	106	44	85	94
Sri Lanka	70	72	26	17	32	21	..	..	233	99	67	83
Sudan	53	59	79	69	125	109	38	30	305	265	53	59
Swaziland	58	40	70	66	96	91	32	30	772	760	15	18
Sweden	78	81	6	3	7	3	..	..	78	48	88	93
Switzerland	77	82	7	4	9	5	..	..	78	46	87	93
Syrian Arab Republic	68	74	30	15	37	17	5	3	124	84	78	85
Tajikistan	63	67	91	57	117	67	18	13	211	139	63	73
Tanzania	51	52	96	73	157	116	56	52	433	401	41	46
Thailand	67	71	26	6	31	7	..	..	264	159	64	77
Timor-Leste	47	61	138	77	184	97	..	..	266	232	57	62
Togo	58	58	89	65	150	100	55	43	278	236	54	61
Trinidad and Tobago	70	70	30	31	34	35	..	..	240	190	66	73
Tunisia	70	74	41	18	52	21	..	..	124	72	78	86
Turkey	66	72	67	21	82	23	9	9	152	85	73	84
Turkmenistan	63	63	81	45	99	50	19	17	298	142	53	72
Uganda	50	51	106	82	175	130	75	62	429	416	41	44
Ukraine	70	68	22	20	25	24	4	1	385	142	51	80
United Arab Emirates	73	79	13	7	15	8	..	..	74	49	86	91
United Kingdom	76	79	8	5	10	6	..	..	96	60	85	91
United States	75	78	9	7	11	8	..	..	141	82	81	88
Uruguay	73	76	21	12	25	14	..	..	142	67	77	88
Uzbekistan	69	67	61	36	74	41	11	7	240	136	61	74
Venezuela, RB	71	74	27	17	32	19	..	..	179	94	73	84
Vietnam	66	74	40	13	56	15	5	4	137	91	78	84
West Bank and Gaza	69	73	33	24	38	27	3	3	129	92	78	84
Yemen, Rep.	54	63	90	55	127	73	10	11	254	205	59	66
Zambia	48	42	99	103	163	170	89	74	620	619	25	27
Zimbabwe	61	43	62	59	95	90	21	21	687	719	22	22
<b>World</b>	<b>65 w</b>	<b>69 w</b>	<b>63 w</b>	<b>47 w</b>	<b>93 w</b>	<b>68 w</b>			<b>219 w</b>	<b>155 w</b>	<b>68 w</b>	<b>76 w</b>
<b>Low income</b>	54	57	103	80	164	126			306	269	53	58
<b>Middle income</b>	65	70	55	35	75	45			201	127	68	78
Lower middle income	64	69	58	38	81	50			197	125	68	77
Upper middle income	69	71	39	21	47	24			225	138	64	80
<b>Low &amp; middle income</b>	63	67	69	51	101	74			224	159	65	74
East Asia & Pacific	67	72	42	22	56	27			163	102	74	81
Europe & Central Asia	69	70	41	21	49	23			303	125	58	81
Latin America & Carib.	68	73	44	22	55	26			196	107	71	82
Middle East & N. Africa	64	70	58	32	77	38			164	112	72	80
South Asia	59	64	87	59	125	78			248	169	60	69
Sub-Saharan Africa	50	51	108	89	183	146			417	390	41	45
<b>High income</b>	76	79	10	6	12	7			117	63	83	91
Euro area	76	80	8	4	10	4			112	54	84	92

a. Data are for the most recent year available. b. Refers to a survey year. Values were estimated directly from surveys and cover the 5 or 10 years preceding the survey. c. Includes Kosovo.

### About the data

Mortality rates for different age groups (infants, children, and adults) and overall mortality indicators (life expectancy at birth or survival to a given age) are important indicators of health status in a country. Because data on the incidence and prevalence of diseases are frequently unavailable, mortality rates are often used to identify vulnerable populations. And they are among the indicators most frequently used to compare socioeconomic development across countries.

The main sources of mortality data are vital registration systems and direct or indirect estimates based on sample surveys or censuses. A “complete” vital registration system—covering at least 90 percent of vital events in the population—is the best source of age-specific mortality data. Where reliable age-specific mortality data are available, life expectancy at birth is directly estimated from the life table constructed from age-specific mortality data.

But complete vital registration systems are fairly uncommon in developing countries. Thus estimates must be obtained from sample surveys or derived by applying indirect estimation techniques to registration, census, or survey data (see *Primary data documentation*). Survey data are subject to recall error, and surveys estimating infant deaths require large samples because households in which a birth or an infant death has occurred during a given year cannot ordinarily be pre-selected for sampling. Indirect estimates rely on model life tables that may be inappropriate for the population concerned. Because life expectancy at birth is estimated using infant mortality data and model life tables for many developing countries, similar reliability issues arise for this indicator. Extrapolations based on outdated surveys may not be reliable for monitoring changes in health status or for comparative analytical work.

Estimates of infant and under-five mortality tend to vary by source and method for a given time and place. Years for available estimates also vary by country, making comparison across countries and over time difficult. To make infant and under-five mortality estimates comparable and to ensure consistency across estimates by different agencies, the United Nations Children’s Fund (UNICEF) and the World Bank (now working together with other organizations as the Inter-agency Group for Child Mortality Estimation) developed and adopted a statistical method that uses all available information to reconcile differences. The method uses the weighted least squares method to fit a regression line to the relationship between mortality rates and

their reference dates and then extrapolate the trend to the present. (For further discussion of childhood mortality estimates, see UNICEF, WHO, World Bank, and United Nations Population Division 2007; for a graphic presentation and detailed background data, see [www.childmortality.org/](http://www.childmortality.org/)).

Infant and child mortality rates are higher for boys than for girls in countries in which parental gender preferences are insignificant. Child mortality captures the effect of gender discrimination better than infant mortality does, as malnutrition and medical interventions are more important in this age group. Where female child mortality is higher, as in some countries in South Asia, girls probably have unequal access to resources. Child mortality rates in the table are not compatible with infant mortality and under-five mortality rates because of differences in methodology and reference year. Child mortality data were estimated directly from surveys and cover the 10 years preceding the survey. In addition to estimates from Demographic Health Surveys, new estimates derived from Multiple Indicator Cluster Surveys (MICS) 3 have been added to the table; they cover the 5 years preceding the survey.

Rates for adult mortality and survival to age 65 come from life tables. Adult mortality rates increased notably in a dozen countries in Sub-Saharan Africa between 1995–2000 and 2000–05 and in several countries in Europe and Central Asia during the first half of the 1990s. In Sub-Saharan Africa the increase stems from AIDS-related mortality and affects both sexes, though women are more affected. In Europe and Central Asia the causes are more diverse (high prevalence of smoking, high-fat diet, excessive alcohol use, stressful conditions related to the economic transition) and affect men more.

The percentage of a hypothetical cohort surviving to age 65 reflects both child and adult mortality rates. Like life expectancy, it is a synthetic measure based on current age-specific mortality rates. It shows that even in countries where mortality is high, a certain share of the current birth cohort will live well beyond the life expectancy at birth, while in low-mortality countries close to 90 percent will reach at least age 65.

### Definitions

- **Life expectancy at birth** is the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.
- **Infant mortality rate** is the number of infants dying before reaching one year of age, per 1,000 live births in a given year.
- **Under-five mortality rate** is the probability per 1,000 that a newborn baby will die before reaching age 5, if subject to current age-specific mortality rates.
- **Child mortality rate** is the probability per 1,000 of dying between ages 1 and 5—that is, the probability of a 1-year-old dying before reaching age 5—if subject to current age-specific mortality rates.
- **Adult mortality rate** is the probability per 1,000 of dying between the ages of 15 and 60—that is, the probability of a 15-year-old dying before reaching age 60—if subject to current age-specific mortality rates between those ages.
- **Survival to age 65** refers to the percentage of a hypothetical cohort of newborn infants that would survive to age 65, if subject to current age-specific mortality rates.

### Data sources

Data on infant and under-five mortality rates are the estimates by the Inter-agency Group for Child Mortality Estimation (which comprises the World Health Organization, UNICEF, United Nations Population Division, World Bank, Harvard University, U.S. Census Bureau, Economic Commission for Latin America and the Caribbean, Measure DHS, and other universities and research institutes) and are based mainly on household surveys, censuses, and vital registration data, supplemented by the World Bank’s estimates based on household surveys and vital registration and sample registration data. Data on child mortality rates are from Demographic and Health Surveys by Macro International (Measure DHS) and Multiple Indicator Cluster Surveys by UNICEF. Other estimates are compiled and produced by the World Bank’s Human Development Network and Development Data Group in consultation with its operational staff and country offices. Important inputs to the World Bank’s demographic work come from the United Nations Population Division’s *World Population Prospects: The 2006 Revision*, census reports and other statistical publications from national statistical offices and Eurostat, Demographic and Health Surveys by Macro International, and the Human Mortality Database by the University of California, Berkeley, and the Max Planck Institute for Demographic Research ([www.mortality.org](http://www.mortality.org)).