

# Human Health

Sources: United Nations Population Division, World Health Organization, United Nations Children's Fund, Joint United Nations Programme on HIV/AIDS

	Life Expectancy at Birth (years)		Physicians Per 100,000 Population	Use of Improved Water Source		Use of Improved Sanitation		Malnutrition in Children Under Age Five (1995-2002)		HIV and AIDS		Tuberculosis Incidence Per 100,000 Population	Malaria		Health Care Expenditures Per Capita (\$Intl)			
	1980-1985	2000-2005		2003	2002		2002		Under-weight	Stunting	Prevalence		Percent in 2003	Change Since 2001 (a)	Rate (b)	ART Use Rate (2002-2003)	Reported Cases Per 100,000 Population	Percent of Children Under Age 5 Using Treated Bed Nets
			1995-2003	Urban	Rural	Urban	Rural	Prevalence	Prevalence	Prevalence	Change Since 2001 (a)	2002-2003	2002	1998-2001	1999-2004	2001	2001	
			2003	Urban	Rural	Urban	Rural	Prevalence	Prevalence	Prevalence	Change Since 2001 (a)	2002-2003	2002	1998-2001	1999-2004	2001	2001	
<b>World</b>	<b>61.3</b>	<b>65.4</b>	<b>157</b> d	<b>95</b>	<b>72</b>	<b>81</b>	<b>37</b>	<b>27</b>	<b>31</b>	<b>1.1</b>	<b>8.5</b>	<b>142</b>	<b>..</b>	<b>..</b>	<b>629</b>	<b>349</b>		
<b>Asia (excl. Middle East)</b>	<b>61.5</b>	<b>67.7</b>	<b>107</b>	<b>93</b>	<b>75</b>	<b>72</b>	<b>31</b>	<b>31</b>	<b>33</b>	<b>0.4</b>	<b>..</b>	<b>152</b>	<b>..</b>	<b>..</b>	<b>230</b>	<b>115</b>		
Armenia	72.5	72.4	353	99	80	96	61	3	13	0.1	25.0	0.0	77	2	..	273	112	
Azerbaijan	68.4	72.2	354	95	59	73	36	7	13	0.1	..	0.0	82	13	1.4	48	32	
Bangladesh	50.0	61.4	23	82	72	75	39	48	45	..	..	0.0	221	40	..	58	26	
Bhutan	47.7	63.2	5	86	60	65	70	19	40	..	..	..	118	279	..	64	58	
Cambodia	52.1	57.4	16	58	29	53	8	45	45	2.6	6.3	3.0	549	399	..	184	27	
China	66.6	71.0	164	92	68	69	29	11	16	0.1	27.7	5.0	113	2	..	224	83	
Georgia	70.7	73.6	391	90	61	96	69	3	12	0.1	100.0	8.0	85	8	..	108	41	
India	54.9	63.9	51	96	82	58	18	47	46	0.9	31.6	2.0	168	192	..	80	14	
Indonesia	56.2	66.8	16	89	69	71	38	26	..	0.1	93.0	2.7	256	93	0.1	77	19	
Japan	76.9	81.6	201	100	100	100	100	..	..	0.1	0.0	..	33	..	..	2,131	1,660	
Kazakhstan	67.0	66.3	330	96	72	87	52	4	10	0.2	59.2	1.0	146	..	..	204	123	
Korea, Dem People's Rep	69.1	63.1	297	100	100	58	60	21	42	..	..	..	160	516	..	44	32	
Korea, Rep	67.2	75.5	181	97	71	..	..	..	..	0.1	48.2	..	91	5	..	948	421	
Kyrgyzstan	65.6	68.6	268	98	66	75	51	11	25	0.1	160.0	0.0	142	1	..	108	53	
Lao People's Dem Rep	45.8	54.5	59	66	38	61	14	40	41	0.1	112.5	..	170	498	..	51	28	
Malaysia	68.0	73.1	70	96	94	..	98	12	..	0.4	24.4	..	95	56	..	345	185	
Mongolia	57.5	63.9	267	87	30	75	37	13	25	0.1	150.0	..	209	..	..	122	88	
Myanmar	51.8	57.3	30	95	74	96	63	35	34	1.2	18.5	1.0	154	252	..	26	5	
Nepal	49.1	59.9	5	93	82	68	20	48	51	0.5	36.4	..	190	29	..	63	19	
Pakistan	53.0	61.0	66	95	87	92	35	38	37	0.1	17.7	2.2	181	55	..	85	21	
Philippines	62.1	70.0	116	90	77	81	61	28	30	0.1	107.0	3.5	320	45	..	169	76	
Singapore	71.8	78.1	140	100	..	100	..	14	11	0.2	20.6	0.0	43	..	..	993	333	
Sri Lanka	67.9	72.6	43	99	72	98	89	29	14	0.1	59.1	2.0	54	348	..	122	60	
Tajikistan	65.9	68.8	218	93	47	71	47	..	..	0.1	..	0.0	109	186	1.9	43	12	
Thailand	65.0	69.3	30	95	80	97	100	19	16	1.5	(9.7)	4.0	128	100	..	254	145	
Turkmenistan	63.2	67.1	317	93	54	77	50	12	22	0.1	..	..	94	0	..	245	180	
Uzbekistan	66.6	69.7	289	97	84	73	48	19	31	0.1	266.7	0.0	102	0	..	91	68	
Viet Nam	58.7	69.2	53	93	67	84	26	33	36	0.4	33.3	1.0	193	86	15.8	134	38	
<b>Europe</b>	<b>72.0</b>	<b>74.5</b>	<b>348</b>	<b>100</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>0.5</b>	<b>..</b>	<b>..</b>	<b>51</b>	<b>..</b>	<b>..</b>	<b>1,461</b>	<b>1,089</b>	
Albania	70.4	73.7	139	99	95	99	81	14	32	..	..	0.0	28	..	..	150	97	
Austria	73.1	78.5	324	100	100	100	100	..	..	0.3	1.0	92.6	15	..	..	2,259	1,565	
Belarus	70.7	70.1	450	100	100	..	..	..	..	..	..	< 1.0	83	..	..	464	402	
Belgium	73.7	78.8	418	100	..	..	..	..	..	0.2	23.5	93.8	14	..	..	2,481	1,779	
Bosnia and Herzegovina	70.7	74.0	134	100	96	99	88	4	10	0.1	..	10.0	60	..	..	268	99	
Bulgaria	71.2	70.9	338	100	100	100	100	..	..	0.1	..	44.5	48	..	..	303	249	
Croatia	70.5	74.2	237	..	..	..	..	1	1	0.1	..	98.7	47	..	..	726	594	
Czech Rep	70.7	75.4	343	..	..	..	..	1	2	0.1	19.0	..	13	..	..	1,129	1,032	
Denmark	74.6	76.6	366	100	100	..	..	..	..	0.2	8.7	90.9	13	..	..	2,503	2,062	
Estonia	69.6	71.7	316	..	..	93	..	..	..	1.1	54.0	32.0	55	..	..	562	437	
Finland	73.9	78.0	311	100	100	100	100	..	..	0.1	25.0	94.6	10	..	..	1,845	1,395	
France	74.7	79.0	329	100	..	..	..	..	..	0.4	9.1	..	14	..	..	2,567	1,951	
Germany	73.8	78.3	362	100	100	..	..	..	..	0.1	4.9	94.7	10	..	..	2,820	2,112	
Greece	75.2	78.3	440	..	..	..	..	..	..	0.2	2.3	..	20	..	..	1,522	852	
Hungary	69.1	71.9	316	100	98	100	85	2	3	0.1	..	97.0	32	..	..	914	686	
Iceland	76.8	79.8	347	100	100	..	..	..	..	0.2	0.0	87.5	3	..	..	2,643	2,191	
Ireland	73.1	77.0	237	100	..	..	..	..	..	0.1	18.2	..	13	..	..	1,935	1,471	
Italy	74.5	78.7	606	100	..	..	..	..	..	0.5	7.7	72.7	8	..	..	2,204	1,660	
Latvia	69.3	71.0	291	..	..	..	..	..	..	0.6	27.1	51.0	78	..	..	509	267	
Lithuania	70.8	72.7	403	..	..	..	..	..	..	0.1	18.2	55.0	66	..	..	478	337	
Macedonia, FYR	69.6	73.6	219	..	..	..	..	6	7	0.1	0.0	20.0	42	..	..	331	281	
Moldova, Rep	64.8	68.9	269	97	88	86	52	3	10	0.2	..	8.3	155	..	..	112	56	
Netherlands	76.0	78.3	329	100	99	100	100	..	..	0.2	11.8	96.0	9	..	..	2,612	1,653	
Norway	76.0	78.9	356	100	100	..	..	..	..	0.1	11.1	89.6	6	..	..	2,920	2,497	
Poland	70.9	73.9	220	100	..	..	..	..	..	0.1	..	92.9	32	..	..	629	452	
Portugal	72.2	76.2	324	..	..	..	..	..	..	0.4	4.8	..	47	..	..	1,618	1,116	
Romania	69.7	70.5	189	91	16	86	10	6	8	0.1	..	64.4	148	..	..	460	364	
Russian Federation	68.3	66.8	417	99	88	93	70	3	13	1.1	62.3	83.3	126	..	..	454	310	
Serbia and Montenegro	70.2	73.2	..	99	86	97	77	2	5	0.2	0.0	26.4	38	..	..	616	488	
Slovakia	70.6	73.7	325	100	100	100	100	..	..	0.1	..	95.0	24	..	..	681	608	
Slovenia	71.2	76.3	219	..	..	..	..	..	..	0.1	0.0	96.3	21	..	..	1,545	1,157	
Spain	75.8	79.3	320	..	..	..	..	..	..	0.7	0.0	92.3	30	..	..	1,607	1,147	
Sweden	76.3	80.1	305	100	100	100	100	..	..	0.1	6.1	95.0	5	..	..	2,270	1,934	
Switzerland	76.2	79.1	352	100	100	100	100	..	..	0.4	8.3	95.0	8	..	..	3,322	1,897	
Ukraine	69.1	69.7	297	100	94	100	97	3	15	1.4	20.0	< 1.0	95	..	..	176	119	
United Kingdom	74.0	78.2	166	100	..	..	..	..	..	0.2	20.5	92.1	12	..	..	1,989	1,635	
<b>Middle East &amp; N. Africa</b>	<b>59.2</b>	<b>67.9</b>	<b>121</b>	<b>94</b>	<b>73</b>	<b>90</b>	<b>51</b>	<b>15</b>	<b>23</b>	<b>0.2</b>	<b>43.8</b> f	<b>..</b>	<b>65</b>	<b>..</b>	<b>..</b>	<b>302</b>	<b>174</b>	
Afghanistan	40.0	43.1	19	19	11	16	5	48	52	..	..	0.0	333	1,621	..	34	18	
Algeria	60.5	69.7	85	92	80	99	82	6	18	0.1	32.4	..	52	1	..	169	127	
Egypt	56.5	68.8	212	100	97	84	56	11	21	0.1								

For more information, please visit <http://earthtrends.wri.org/datatables/population>

	Life Expectancy at Birth (years)		Physicians Per 100,000 Population	Use of Improved Water Source (percent of population)		Use of Improved Sanitation (percent of population)		Malnutrition in Children Under Age Five (1995-2002)		HIV and AIDS			Tuberculosis Incidence Rate Per 100,000 Population	Malaria		Health Care Expenditures Per Capita (\$int'l)			
	1980-1985	2000-2005		2002	2002	Under-weight	Stunting	Prevalence	Prevalence	Adults Ages 15-49 Living With HIV or AIDS		Rate (b)		Reported Cases Per 100,000 Population	Percent of Children Under Age 5 Using Treated Bed Nets	Total Spending (c)	Government Spending		
			1995-2003	Urban	Rural	Urban	Rural	Prevalence	Prevalence	Percent in 2003	Change Since 2001 (a)	2002-2003	2002	1998-2001	1999-2004	2001	2001		
<b>Sub-Saharan Africa</b>	<b>48.5</b>	<b>46.6</b>	<b>15</b>	<b>82</b>	<b>46</b>	<b>55</b>	<b>26</b>	<b>30</b>	<b>39</b>	<b>7.5</b>	<b>5.0</b>	<b>f</b>	<b>..</b>	<b>359</b>	<b>..</b>	<b>3.2</b>	<b>g</b>	<b>85</b>	<b>36</b>
Angola	40.0	40.1	8	70	40	56	16	31	45	3.9	10.0	< 1.0	336	6,594	2.3	70	44		
Benin	49.2	50.6	6	79	60	58	12	23	31	1.9	5.1	2.5	86	11,545	7.4	39	18		
Botswana	62.8	39.7	29	100	90	57	25	13	23	37.3	0.0	7.9	657	2,836	..	381	252		
Burkina Faso	46.1	45.7	4	82	44	45	5	34	37	4.2	8.0	1.4	157	619	6.5	27	16		
Burundi	46.6	40.9	5	90	78	47	35	45	57	6.0	0.0	1.9	359	43,505	1.3	19	11		
Cameroon	50.7	46.2	7	84	41	63	33	21	35	6.9	4.0	1.5	188	2,900	1.3	42	16		
Central African Rep	46.5	39.5	4	93	61	47	12	24	39	13.5	4.3	< 1.0	338	..	1.5	58	30		
Chad	42.3	44.7	3	40	32	30	..	28	29	4.8	5.9	..	222	4,683	0.6	17	13		
Congo	56.8	48.2	25	72	17	14	2	14	19	4.9	0.0	..	395	5,880	..	22	14		
Congo, Dem Rep	47.1	41.8	7	83	..	43	23	31	38	4.2	5.3	0.0	384	1,414	0.7	12	5		
Côte d'Ivoire	50.0	41.0	9	..	..	61	23	21	25	7.0	10.4	2.7	412	2,449	1.1	127	20		
Equatorial Guinea	43.8	49.1	25	45	42	60	46	19	39	..	..	6.8	191	..	0.7	106	64		
Eritrea	43.3	52.7	3	72	54	34	3	44	38	2.7	0.0	< 1.0	268	5,648	4.2	36	23		
Ethiopia	42.7	45.5	3	81	11	19	4	47	52	4.4	16.7	< 1.0	370	621	..	14	6		
Gabon	56.3	56.6	29	95	47	37	30	12	21	8.1	21.6	..	248	2,148	..	197	94		
Gambia	44.1	54.1	4	95	77	72	46	17	19	1.2	0.0	6.3	230	10,096	14.7	78	39		
Ghana	53.6	57.9	9	93	68	74	46	25	26	3.1	3.2	1.8	211	17,143	4.5	60	36		
Guinea	40.2	49.1	9	78	38	25	6	23	26	3.2	30.0	..	215	75,386	..	61	33		
Guinea-Bissau	39.1	45.3	17	79	49	57	23	25	30	..	..	..	196	2,421	7.4	37	20		
Kenya	55.7	44.6	13	89	46	56	43	21	35	6.7	(8.3)	3.0	540	545	4.6	114	24		
Lesotho	52.0	35.1	5	88	74	61	32	18	46	28.9	0.0	< 1.0	726	..	..	101	80		
Liberia	44.9	41.4	2	72	52	49	7	26	39	5.9	20.0	..	247	26,699	..	127	96		
Madagascar	48.0	53.6	9	75	34	49	27	33	49	1.7	32.7	..	234	..	0.2	20	13		
Malawi	45.7	37.5	5	96	62	66	42	25	49	14.2	5.2	1.8	431	20,080	35.5	39	14		
Mali	44.4	48.6	4	76	35	59	38	33	38	1.9	0.0	2.5	334	741	8.4	30	12		
Mauritania	47.4	52.5	14	63	45	64	9	32	35	0.6	50.8	..	188	9,724	4.1	45	33		
Mozambique	42.8	38.1	2	76	24	51	14	26	44	12.2	9.1	0.0	436	19,842	..	47	32		
Namibia	55.2	44.3	30	98	72	66	14	24	24	21.3	5.3	0.0	751	1,502	3.4	342	232		
Niger	40.7	46.2	3	80	36	43	4	40	40	1.2	25.5	..	193	1,693	5.8	22	9		
Nigeria	48.1	51.5	27	72	49	48	30	36	43	5.4	6.5	1.5	304	30	1.2	31	7		
Rwanda	46.1	39.3	2	92	69	56	38	27	41	5.1	4.5	< 1.0	389	6,510	5	44	24		
Senegal	46.3	52.9	8	90	54	70	34	23	25	0.8	7.9	< 1.0	242	11,925	1.7	63	37		
Sierra Leone	35.3	34.2	7	75	46	53	30	27	34	..	..	0.0	405	8,943	1.5	26	16		
Somalia	43.0	47.9	4	32	27	47	14	26	23	..	..	..	405	118	0.3	15	7		
South Africa	57.7	47.7	69	98	73	86	44	12	25	21.5	6.3	0.0	558	61	..	652	270		
Sudan	49.1	55.6	16	78	64	50	24	17	..	2.3	26.7	< 1.0	217	12,530	0.4	39	7		
Tanzania, United Rep	51.0	43.3	2	92	62	54	41	29	44	8.8	7.1	< 1.0	363	1,207	2.1	26	12		
Togo	50.2	49.7	6	80	36	71	15	25	22	4.1	2.1	..	361	9,273	2	45	22		
Uganda	47.2	46.2	5	87	52	53	39	23	39	4.1	(13.5)	6.3	377	46	0.2	57	33		
Zambia	52.0	32.4	7	90	36	68	32	28	47	16.5	3.8	0.0	668	18,877	6.5	52	28		
Zimbabwe	59.6	33.1	6	100	74	69	51	13	27	24.6	0.0	0.0	683	5,410	..	142	64		
<b>North America</b>	<b>74.2</b>	<b>77.3</b>	<b>516</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>1</b>	<b>2</b>	<b>0.6</b>	<b>5.3</b>	<b>f</b>	<b>..</b>	<b>5</b>	<b>..</b>	<b>..</b>	<b>4,683</b>	<b>2,151</b>	
Canada	75.9	79.3	209	100	99	100	99	..	..	0.3	14.6	..	6	..	..	..	2,792	1,977	
United States	74.0	77.1	549	100	100	100	100	1	2	0.6	5.6	..	5	..	..	..	4,887	2,170	
<b>C. America &amp; Caribbean</b>	<b>66.1</b>	<b>71.5</b>	<b>181</b>	<b>97</b>	<b>76</b>	<b>87</b>	<b>47</b>	<b>10</b>	<b>20</b>	<b>0.8</b>	<b>9.8</b>	<b>..</b>	<b>54</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>428</b>	<b>202</b>	
Belize	71.2	71.4	105	100	82	71	25	6	..	2.4	25.0	7.7	55	475	..	..	278	125	
Costa Rica	73.5	78.1	173	100	92	89	97	5	6	0.6	9.1	..	15	33	..	..	562	385	
Cuba	73.4	76.7	591	95	78	99	95	4	5	0.1	3.1	..	12	..	..	..	229	197	
Dominican Rep	62.8	66.7	188	98	85	67	43	5	6	1.7	(2.3)	0.0	95	12	..	..	353	127	
El Salvador	56.6	70.7	124	91	68	78	40	12	23	0.7	16.7	..	60	6	..	..	376	176	
Guatemala	58.0	65.8	90	99	92	72	52	24	46	1.1	13.8	46.0	77	307	1.2	199	96		
Haiti	51.8	49.5	25	91	59	52	23	17	23	5.6	8.3	..	319	119	..	..	56	30	
Honduras	60.8	68.9	83	99	82	89	52	17	29	1.8	22.9	< 1.0	86	365	..	..	153	81	
Jamaica	71.2	75.7	85	98	87	90	68	6	6	1.2	50.0	< 1.0	8	..	..	..	253	107	
Mexico	67.5	73.4	171	97	72	90	39	8	18	0.3	6.7	92.0	33	5	..	..	544	241	
Nicaragua	59.3	69.5	164	93	65	78	51	10	20	0.2	12.7	0.0	64	201	..	..	158	77	
Panama	70.5	74.7	168	99	79	89	51	7	14	0.9	36.4	..	47	32	..	..	458	316	
Trinidad and Tobago	70.2	71.3	79	92	88	100	100	7	5	3.2	7.7	< 1.0	13	..	..	..	388	168	
<b>South America</b>	<b>64.8</b>	<b>70.2</b>	<b>190</b>	<b>95</b>	<b>64</b>	<b>83</b>	<b>42</b>	<b>6</b>	<b>14</b>	<b>0.6</b>	<b>14.8</b>	<b>..</b>	<b>72</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>551</b>	<b>264</b>	
Argentina	70.0	74.2	301	97	..	..	..	5	12	0.7	0.0	91.2	46	1	..	..	1,130	603	
Bolivia	53.9	63.9	73	95	68	58	23	10	26	0.1	20.0	< 1.0	234	185	..	..	125	83	
Brazil	63.0	68.1	206	96	58	83	35	6	11	0.7	4.8	100.0	62	225	..	..	573	238	
Chile	70.6	76.1	109	100	59	96	64	1	2	0.3	4.0	..	18	..	..	..	792	348	
Colombia	66.6	72.2	135	99	71	96	54	7	14	0.7	50.0	..	45	482	0.7	..	356	234	
Ecuador	64.3	70.8	148	92	77	80	59	15	27	0.3	5.3	..	137	846	..	..	177	89	
Guyana	61.0	63.2	48	83	83	86	60	14	11	2.5	0.0	0.0	115	3,554	5.5	..	215	172	
Paraguay	67.1	70.9	117	100	62	94	58	5	11	0.5	50.0	50.0	70	48	..	..	332	127	
Peru	61.4	69.8	117	87	66	72	33	7	25	0.5	56.9	19							

# 2 Human Health: Technical Notes

## DEFINITIONS AND METHODOLOGY

**Life Expectancy at Birth** is the average number of years that a newborn baby is expected to live if the age-specific mortality rates effective at the year of birth apply throughout his or her lifetime.

**Physicians per 100,000 Population** indicates the density of doctors in a country. "Physician" includes graduates of a faculty or school of medicine who are working in any medical field (including teaching, research, and practice).

**Improved Water Source** includes any of the following types of drinking water sources: household connections, public standpipes, boreholes, protected dug wells, protected springs, and rainwater collection. To be counted, at least 20 liters per person per day of improved water must be available within one kilometer of a user's dwelling. Examples of unimproved water sources include unprotected wells and springs, vendor-provided water, tanker-provided water, and bottled water. These last examples are considered "unimproved" because they are not consistently available in sufficient quantities. **Improved Sanitation** includes any of the following excreta disposal facilities: connection to a public sewer, connection to a septic tank, pour-flush latrine, simple pit latrine, and ventilated improved pit latrine. Examples of an unimproved sanitation system include open pit latrines, public or shared latrines, and service or bucket latrines.

Data were collected from assessment questionnaires and household surveys and plotted on a graph for each country to show coverage in available years (not necessarily 2002). A trend line was drawn and reviewed by a panel of experts from WHO and UNICEF to determine the level of sanitation and water available in 2002.

**Underweight Prevalence**, an indicator of malnutrition, refers to the proportion of children under five years of age whose weight-for-age is more than two standard deviations (for moderate underweight) or more than three standard deviations (for severe underweight) below the median weight-for-age of a reference population. **Stunting prevalence**, an indicator of chronic malnutrition, refers to the percentage of children under five whose height-for-age is more than two (moderate stunting) and three (severe stunting) standard deviations from the median of the reference population.

Malnutrition data were obtained from Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys (DHS), and other national-level surveys. Where possible, only comprehensive or representative national data have been used.

**Adults Ages 15-49 Living With HIV or AIDS** is the estimated percentage of people aged 15-49 living with HIV/AIDS. **Change Since 2001** measures the percent change in the total population infected with AIDS or HIV between 2001 and 2003. These estimates include all people with HIV infection, whether or not they have developed symptoms of AIDS, who are alive at the end of the year specified. Data for this age group capture those in their most sexually active years. Measuring infection within this age range also allows greater comparability for populations with different age structures. Estimates for a single point in time and the starting date of the epidemic were used to plot an epidemic curve charting the spread of HIV in a particular country.

**Antiretroviral Therapy (ART) Use Rate** is the estimated percentage of adults with advanced HIV infection receiving antiretroviral therapy. This therapy can dramatically reduce HIV-related mortality and improve the quality of life of those infected. The estimated number of people receiving treatment is determined by national program-monitoring reports or estimates from local WHO offices. The number of adults with advanced HIV infection is estimated by the Joint United Nations Programme on HIV/AIDS (UNAIDS) to be 15 percent of the total number of infected adults.

**Tuberculosis Incidence Rate** is the estimated number of new tuberculosis (TB) cases per 100,000 people in the year specified. The estimates include all cases (pulmonary, smear positive, and extrapulmonary). If left untreated, each person with an infectious case of TB will infect 10-15 people every year. It is estimated that TB caused 2 million deaths in 2002 and is now the leading cause of death in people infected with HIV. Data are collected by country using a standard collection form. Initial estimates are derived using surveys of the prevalence of infection and are then refined using a consultative and analytical process involving a panel of epidemiological experts at WHO.

**Reported Malaria Cases** is the total number of malaria cases reported to the WHO by countries in which malaria is endemic. Most countries report only laboratory confirmed cases, but some countries in Sub-Saharan Africa report clinically diagnosed cases as well. Transmitted to humans by the bite of an infected mosquito, malaria is one of the world's prevalent health crises, killing more than one million people annually. Data on malaria are collected from a variety of surveys, including Routine Health Information Systems (HIS), MICS, DHS, Demographic Surveillance Sites (DSS), and Rolling Back Malaria (RBM) baseline surveys.

**Percent of Children Under Age Five Using Treated Bed Nets** is the percent of children under age five in each country that sleep under a net treated with an insecticide to ward off mosquitoes, a powerful method of preventing malaria infections. According to UNICEF, the majority of deaths from malaria occur in children under age 5. Data are obtained by UNICEF from DHS, MICS, and other national surveys.

**Health Care Spending per Capita** is defined as the sum of government and private expenditures on health, expressed on a per-person basis. The estimates are provided in international dollars, which minimizes the consequences of differing price levels among countries. **Government Health Spending** includes all public outlays reserved for the enhancement of the health status of the population and/or the distribution of medical care. Expenditures by all levels of government (national, regional, and local), extrabudgetary agencies, and external resources such as grants are included. The estimates for extrabudgetary expenditure on health include purchase of health goods and services by schemes that are compulsory and government-controlled. **Private Health Spending** is the sum of expenditures by prepaid plans and risk-pooling arrangements, public and private enterprises for medical care and health-enhancing benefits (outside of payment to social security), nonprofit institutions that primarily serve households, and household out-of-pocket spending.

Per capita totals were calculated by WHO using population estimates from the Organization for Economic Co-operation and Development (OECD) and the United Nations Population Division.

Information on government health expenditures are obtained from the OECD, the International Monetary Fund (IMF), national health-accounts reports, government finance data, statistical yearbooks, and public-finance reports. Information for private health expenditures are obtained from national health-accounts reports, statistical yearbooks and other periodicals, official web sites, reports from non-governmental organizations, household surveys, academic studies, government ministries, and professional and trade associations.

## FREQUENCY OF UPDATE BY DATA PROVIDERS

Both the UN Population Division and the Joint United Nations Program on HIV/AIDS (UNAIDS) publish country-level statistics every two years with annual revisions of key estimates. UNICEF publishes the most recent available data each year. WHO publishes country-level statistics annually and updates the *Global Atlas of Infectious Diseases* database as new information becomes available.



## DATA RELIABILITY AND CAUTIONARY NOTES

**Life Expectancy:** The United Nations Population Division (UNPD) estimates demographic parameters on a country-by-country basis, so data reliability varies among countries. In some developing countries, census data are not available or are incomplete, and estimates concerning population trends are derived from surveys. Although estimates are based on incomplete mortality data and projections cannot factor in unforeseen events (e.g., famine, wars), UN demographic models are widely accepted and use well-understood qualities, making these data fairly reliable.

**Physicians per 100,000 Population:** Data reliability varies by country. Due to out-of-date health personnel records, some countries mistakenly include retired physicians or physicians no longer working in the health sector, resulting in overestimates. Also, this indicator speaks solely of the quantity of physicians, not the quality or accessibility of the personnel. It does not show the difference in urban and rural concentrations. The exact definition of “physician” may vary among countries. Some countries may include interns, physicians that are retraining, and those working in the private sector.

**Improved Water Sources and Sanitation:** These data have become more reliable as WHO and UNICEF shift from provider-based information (national census estimates) to consumer-based information (survey data). Nonetheless, estimates were calculated based on a wide variety of sources of disparate quality, and comparisons among countries should be made with care. Definitions of urban and rural are not consistent across countries. The assessment does not account for intermittent or poor quality of water supplies. WHO emphasizes that these data measure use of an improved water supply and excreta disposal system, but access to sanitary and safe systems cannot be adequately measured on a global scale.

**Malnutrition in Children under Five:** The data included for these variables cover a wide range of years and sources. Some data refer to periods other than 1995–2002, measure stunting or percentage underweight in a different age range than 0–5, or were collected for only part of a country. Since data are not available for more affluent countries, the regional totals reported here may be larger than the actual averages.

**Adults Ages 15–49 Living with HIV or AIDS:** While HIV surveillance systems are generally more extensive than those for other diseases, data reliability still varies on a country-by-country basis. The extent of uncertainty depends primarily on the type of epidemic—infection rates for generalized (high-level) epidemics are calculated differently from rates for concentrated (low-level) epidemics—and on the quality, coverage, and consistency of a country’s surveillance system. A detailed description of the methods, software, quality of data, and development of ranges for these data was published in the journal *Sexually Transmitted Infections* in July 2004.

**Antiretroviral Therapy Use Rate:** The data have been reviewed by UNAIDS and compared with other sources to consolidate validity. The reliability of the national data presented in national reports is dependent on the quality of information provided by the countries themselves. Some countries have very small or highly localized epidemics, so the rates presented here do not necessarily reflect national commitment and action. This indicator does not distinguish between the different types of therapy available nor does it measure the cost, quality, or effectiveness of the treatment. In certain settings, a system may not yet be in place to collect data from community-based organizations, private prescribers, and pharmacies. The estimated proportion of the total infected population with advanced HIV infection (currently 15 percent) may require revision, as the proportion varies according to the stage of the HIV epidemic and the coverage and effectiveness of ART.

**Tuberculosis Incidence Rate:** Data are reviewed at all levels of WHO, and WHO headquarters attempts to complete any missing responses and resolve any inconsistencies. The quality of the information provided by a particular country is dependent on the quality of its national surveillance system.

**Reported Malaria Cases:** Malaria infection-rate data are less accurate than estimates of HIV/AIDS or tuberculosis. Data may reflect only a fraction of the true number of malaria cases in a country because of incomplete reporting systems or incomplete coverage by health services, or both. Also, many malaria patients may seek treatment outside of the formal health sector. Case detection and reporting systems vary widely.

**Health Care Spending:** The estimates provided here should be considered the best estimates of WHO and not the official estimates of its member states. WHO has compared the data to a variety of sources, including inpatient care expenditure and pharmaceutical care expenditure, in an effort to ensure the plausibility of the estimates that have been collected. For further information on data collection and reliability, refer to the World Health Report methodology available at [http://www.who.int/whr/2004/en/09\\_annexes\\_en.pdf](http://www.who.int/whr/2004/en/09_annexes_en.pdf).

## SOURCES

**Life Expectancy:** United Nations Population Division (UNPD). 2003. *World Population Prospects: The 2002 Revision*. Dataset on CD-ROM. New York: United Nations. Online at <http://www.un.org/esa/population/ordering.htm>.

**Physicians Per 100,000 Population, Tuberculosis Incidence Rate, and Reported Malaria Cases:** World Health Organization (WHO). 2004. *Global Atlas of Infectious Diseases*. Geneva: WHO. Online at <http://globalatlas.who.int/GlobalAtlas/>.

**Use of Improved Water Source and Sanitation:** United Nation’s Children’s Fund (UNICEF) and World Health Organization (WHO). 2005. *Meeting the MDG Drinking Water and Sanitation Target: A Mid-Term Assessment of Progress*. New York: UNICEF. Online at [http://www.unicef.org/wes/mdgreport/who\\_unicef\\_WESestimate.pdf](http://www.unicef.org/wes/mdgreport/who_unicef_WESestimate.pdf).

**Malnutrition in Children Under Five:** United Nations Children’s Fund (UNICEF). 2004. *State of the World’s Children: Girls, Education, and Development*. New York: UNICEF. Online at <http://www.unicef.org/sowc04/>.

**Adults Ages 15–49 Living with HIV or AIDS:** Joint United Nations Programme on HIV/AIDS (UNAIDS). 2004. *Report on the Global AIDS Epidemic*. Geneva: UNAIDS. Online at <http://www.unaids.org/bangkok2004/report.html>.

**ART Use Rate:** Joint United Nations Programme on HIV/AIDS (UNAIDS). 2003. *Progress Report on the Global Response to the HIV/AIDS Epidemic (Follow-up to the 2001 United Nations General Assembly Special Session on HIV/AIDS)*. Geneva: UNAIDS. Online at [http://www.unaids.org/ungass/en/global/ungass00\\_en.htm](http://www.unaids.org/ungass/en/global/ungass00_en.htm).

**Percent of Children Under Age 5 Using Treated Bed Nets:** United Nations Children’s Fund (UNICEF). 2005. *Childinfo.org*. New York: UNICEF. Online at <http://childinfo.org>.

**Health Care Spending:** World Health Organization (WHO). 2004. *World Health Report*. Geneva: WHO. Online at [http://www.who.int/whr/2004/en/09\\_annexes\\_en.pdf](http://www.who.int/whr/2004/en/09_annexes_en.pdf).

