



## 2.16 Reproductive health

	Total fertility rate		Adolescent fertility rate	Women at risk of unintended pregnancy	Contraceptive prevalence rate	Births attended by skilled health staff		Maternal mortality ratio
	1980	1998	births per 1,000 women aged 15–19 1998	% of married women aged 15–49 1990–98 <sup>a</sup>	% of women aged 15–49 1990–98 <sup>a</sup>	% of total 1982 1996–98 <sup>a</sup>		per 100,000 live births 1990–98 <sup>a</sup>
Albania	3.6	2.5	12	..	..	..	99	..
Algeria	6.7	3.5	21	..	51	..	77	..
Angola	6.9	6.7	217	..	..	34	17	..
Argentina	3.3	2.6	64	..	..	..	97	38 <sup>b</sup>
Armenia	2.3	1.3	46	..	..	..	95	35 <sup>b</sup>
Australia	1.9	1.8	30	..	..	99	100	..
Austria	1.6	1.3	22	..	..	..	100	..
Azerbaijan	3.2	2.0	23	..	..	..	99	37 <sup>b</sup>
Bangladesh	6.1	3.1	140	16	49	2	8	440 <sup>c</sup>
Belarus	2.0	1.3	21	..	..	..	..	22 <sup>d</sup>
Belgium	1.7	1.6	11	..	..	..	100	..
Benin	7.0	5.7	111	21	16	34	60	500 <sup>c</sup>
Bolivia	5.5	4.1	78	24	49	..	46	390 <sup>c</sup>
Bosnia and Herzegovina	2.1	1.6	33	..	..	..	..	10 <sup>b</sup>
Botswana	6.1	4.2	76	..	..	..	77	330 <sup>d</sup>
Brazil	3.9	2.3	72	7	77	98	92	160 <sup>c</sup>
Bulgaria	2.0	1.1	44	..	..	..	99	15 <sup>d</sup>
Burkina Faso	7.5	6.7	145	33	12	12	42	..
Burundi	6.8	6.2	54	..	..	..	24	..
Cambodia	4.7	4.5	14	..	..	..	31	..
Cameroon	6.4	5.0	137	22	19	..	55	430 <sup>c</sup>
Canada	1.7	1.6	24	..	..	..	100	..
Central African Republic	5.8	4.8	130	16	14	..	46	1,100 <sup>c</sup>
Chad	6.9	6.4	188	9	4	24	15	830 <sup>c</sup>
Chile	2.8	2.2	47	..	..	92	99	23 <sup>b</sup>
China	2.5	1.9	15	..	85	..	..	65 <sup>c</sup>
Hong Kong, China	2.0	1.1	7	..	..	89	100	..
Colombia	3.9	2.7	86	8	72	..	85	80 <sup>b</sup>
Congo, Dem. Rep.	6.6	6.3	214	..	..	..	45	..
Congo, Rep.	6.3	6.0	140	..	..	..	50	..
Costa Rica	3.6	2.6	82	..	..	93	97	29 <sup>c</sup>
Côte d'Ivoire	7.4	5.0	130	43	11	..	45	600 <sup>c</sup>
Croatia	..	1.5	19	..	..	..	..	12 <sup>b</sup>
Cuba	2.0	1.5	65	..	..	..	99	27 <sup>b</sup>
Czech Republic	2.1	1.2	23	..	69	..	100	9 <sup>d</sup>
Denmark	1.5	1.8	9	..	..	..	100	10 <sup>d</sup>
Dominican Republic	4.2	2.9	12	13	64	..	96	..
Ecuador	5.0	2.9	68	..	57	62	64	160 <sup>c</sup>
Egypt, Arab Rep.	5.1	3.2	50	16	48	..	46	170 <sup>c</sup>
El Salvador	4.9	3.3	107	..	60	..	87	..
Eritrea	..	5.7	118	28	8	..	21	1,000 <sup>c</sup>
Estonia	2.0	1.2	36	..	..	..	100	50 <sup>d</sup>
Ethiopia	6.6	6.4	154	..	4	..	8	..
Finland	1.6	1.8	11	..	..	..	100	6 <sup>d</sup>
France	1.9	1.8	9	..	71	..	99	10 <sup>d</sup>
Gabon	4.5	5.1	164	..	..	..	80	..
Gambia, The	6.5	5.6	170	..	..	41	44	..
Georgia	2.3	1.3	35	..	..	..	100	70 <sup>b</sup>
Germany	1.4	1.4	14	..	..	..	99	8 <sup>d</sup>
Ghana	6.5	4.8	104	33	20	..	44	..
Greece	2.2	1.3	17	..	..	..	97	1 <sup>d</sup>
Guatemala	6.3	4.4	106	24	32	..	29	190 <sup>c</sup>
Guinea	6.1	5.4	186	25	2	..	31	..
Guinea-Bissau	5.8	5.6	187	..	..	..	25	910 <sup>d</sup>
Haiti	5.9	4.3	68	48	18	34	21	..
Honduras	6.5	4.2	111	..	50	..	47	220 <sup>d</sup>



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	Total fertility rate		Adolescent fertility rate	Women at risk of unintended pregnancy	Contraceptive prevalence rate	Births attended by skilled health staff		Maternal mortality ratio
	births per woman		births per 1,000 women aged 15–19	% of married women aged 15–49	% of women aged 15–49	% of total		per 100,000 live births
	1980	1998	1998	1990–98 <sup>a</sup>	1990–98 <sup>a</sup>	1982	1996–98 <sup>a</sup>	1990–98 <sup>a</sup>
Hungary	1.9	1.3	28	..	73	99	96	15 <sup>d</sup>
India	5.0	3.2	115	20	41	23	35	410 <sup>c</sup>
Indonesia	4.3	2.7	59	11	57	27	36	450 <sup>c</sup>
Iran, Islamic Rep.	6.7	2.7	49	..	73	..	74	37 <sup>c</sup>
Iraq	6.4	4.6	39	..	..	..	54	..
Ireland	3.2	1.9	14	..	60	..	100	6 <sup>d</sup>
Israel	3.2	2.7	19	..	..	..	99	5 <sup>d</sup>
Italy	1.6	1.2	8	..	..	..	100	7 <sup>d</sup>
Jamaica	3.7	2.6	100	..	65	86	92	..
Japan	1.8	1.4	3	..	..	..	100	8 <sup>d</sup>
Jordan	6.8	4.1	41	22	50	..	97	41 <sup>b</sup>
Kazakhstan	2.9	2.0	46	11	59	..	..	70 <sup>e</sup>
Kenya	7.8	4.6	109	36	39	..	45	590 <sup>c</sup>
Korea, Dem. Rep.	2.8	2.0	2	..	..	..	100	110 <sup>d</sup>
Korea, Rep.	2.6	1.6	4	..	..	70	98	20 <sup>d</sup>
Kuwait	5.3	2.8	33	..	..	98	98	5 <sup>d</sup>
Kyrgyz Republic	4.1	2.8	34	12	60	..	98	65 <sup>b</sup>
Lao PDR	6.7	5.5	42	..	25	..	30	650 <sup>b</sup>
Latvia	2.0	1.1	32	..	..	..	100	45 <sup>d</sup>
Lebanon	4.0	2.4	25	..	..	..	89	100 <sup>c</sup>
Lesotho	5.5	4.6	83	..	23	..	50	..
Libya	7.3	3.7	54	..	45	68	94	75 <sup>c</sup>
Lithuania	2.0	1.4	35	..	..	..	100	18 <sup>d</sup>
Macedonia, FYR	2.5	1.8	38	..	..	..	95	11 <sup>b</sup>
Madagascar	6.6	5.7	171	26	19	..	57	490 <sup>c</sup>
Malawi	7.6	6.4	152	36	22	..	55	620 <sup>c</sup>
Malaysia	4.2	3.1	25	..	..	88	98	39 <sup>b</sup>
Mali	7.1	6.5	178	26	7	14	24	580 <sup>c</sup>
Mauritania	6.3	5.4	132	..	..	..	40	..
Mauritius	2.7	2.0	38	..	75	..	97	50 <sup>b</sup>
Mexico	4.7	2.8	69	..	65	..	68	48 <sup>c</sup>
Moldova	2.4	1.7	50	..	74	..	..	42 <sup>d</sup>
Mongolia	5.3	2.5	46	..	..	..	99	150 <sup>d</sup>
Morocco	5.4	3.0	48	16	59	20	31	230 <sup>c</sup>
Mozambique	6.5	5.2	161	7	6	29	44	..
Myanmar	4.9	3.1	19	..	..	..	57	230 <sup>c</sup>
Namibia	5.9	4.8	103	22	29	..	68	230 <sup>c</sup>
Nepal	6.1	4.4	118	28	29	..	9	540 <sup>c</sup>
Netherlands	1.6	1.6	4	..	75	100	100	7 <sup>d</sup>
New Zealand	2.0	1.9	52	..	..	..	..	15 <sup>d</sup>
Nicaragua	6.3	3.7	133	..	60	..	65	150 <sup>b</sup>
Niger	7.4	7.3	213	19	8	26	15	590 <sup>c</sup>
Nigeria	6.9	5.3	115	22	6	..	31	..
Norway	1.7	1.8	16	..	..	100	100	6 <sup>d</sup>
Oman	9.0	4.6	63	..	..	..	91	19 <sup>b</sup>
Pakistan	7.0	4.9	102	32	24	..	18	..
Panama	3.7	2.6	80	..	..	80	84	85 <sup>d</sup>
Papua New Guinea	5.8	4.2	67	29	26	..	53	..
Paraguay	5.2	3.9	73	15	59	..	61	190 <sup>c</sup>
Peru	4.5	3.1	66	12	64	30	56	270 <sup>c</sup>
Philippines	4.8	3.6	44	26	47	..	53	170 <sup>c</sup>
Poland	2.3	1.4	23	..	..	..	98	8 <sup>d</sup>
Portugal	2.2	1.5	21	..	..	..	..	8 <sup>d</sup>
Puerto Rico	2.6	1.9	68	..	78	..	90	..
Romania	2.4	1.3	41	..	57	..	99	41 <sup>d</sup>
Russian Federation	1.9	1.2	46	..	34	..	99	50 <sup>b</sup>



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	Total fertility rate		Adolescent fertility rate	Women at risk of unintended pregnancy	Contraceptive prevalence rate	Births attended by skilled health staff		Maternal mortality ratio
	births per woman		births per 1,000 women aged 15–19	% of married women aged 15–49	% of women aged 15–49	% of total		per 100,000 live births
	1980	1998	1998	1990–98 <sup>a</sup>	1990–98 <sup>a</sup>	1982	1996–98 <sup>a</sup>	1990–98 <sup>a</sup>
Rwanda	8.3	6.1	55	37	21	20	26	..
Saudi Arabia	7.3	5.7	112	..	..	..	90	..
Senegal	6.8	5.5	114	33	13	..	47	560 <sup>c</sup>
Sierra Leone	6.5	6.0	199	..	..	..	25	..
Singapore	1.7	1.5	10	..	..	100	100	6 <sup>d</sup>
Slovak Republic	2.3	1.4	33	..	..	..	100	9 <sup>d</sup>
Slovenia	2.1	1.2	16	..	..	..	100	11 <sup>d</sup>
South Africa	4.6	2.8	42	..	69	..	82	..
Spain	2.2	1.2	8	..	..	..	96	6 <sup>d</sup>
Sri Lanka	3.5	2.1	21	..	..	85	..	60 <sup>d</sup>
Sudan	6.5	4.6	54	25	10	23	69	..
Sweden	1.7	1.5	10	..	..	..	99	5 <sup>d</sup>
Switzerland	1.5	1.5	4	..	..	..	99	5 <sup>d</sup>
Syrian Arab Republic	7.4	3.9	43	..	40	43	67	..
Tajikistan	5.6	3.4	29	..	..	..	92	65 <sup>b</sup>
Tanzania	6.7	5.4	123	24	18	..	38	530 <sup>c</sup>
Thailand	3.5	1.9	71	..	72	40	78	44 <sup>c</sup>
Togo	6.8	5.1	110	..	24	..	50	480 <sup>c</sup>
Trinidad and Tobago	3.3	1.8	42	..	..	..	98	..
Tunisia	5.2	2.2	13	..	60	50	81	70 <sup>b</sup>
Turkey	4.3	2.4	43	11	..	70	76	..
Turkmenistan	4.9	2.9	17	..	..	..	96	110 <sup>b</sup>
Uganda	7.2	6.5	193	29	15	..	38	510 <sup>c</sup>
Ukraine	2.0	1.3	34	..	..	..	..	25 <sup>b</sup>
United Arab Emirates	5.4	3.4	57	..	..	94	86	3 <sup>b</sup>
United Kingdom	1.9	1.7	28	..	..	..	100	7 <sup>d</sup>
United States	1.8	2.0	51	..	76	100	99	8 <sup>b</sup>
Uruguay	2.7	2.4	69	..	..	..	96	21 <sup>b</sup>
Uzbekistan	4.8	2.8	48	..	56	..	98	21 <sup>b</sup>
Venezuela, RB	4.2	2.9	96	..	..	82	97	65 <sup>c</sup>
Vietnam	5.0	2.3	34	..	75	100	79	160 <sup>c</sup>
West Bank and Gaza	..	5.9	98	..	42	..	..	..
Yemen, Rep.	7.9	6.3	103	..	21	..	43	350 <sup>c</sup>
Yugoslavia, FR (Serb./Mont.)	2.3	1.7	34	..	..	..	99	10 <sup>d</sup>
Zambia	7.0	5.5	141	27	26	..	47	650 <sup>c</sup>
Zimbabwe	6.4	3.7	87	15	48	49	69	400 <sup>d</sup>
<b>World</b>	<b>3.7 w</b>	<b>2.7 w</b>	<b>69 w</b>		<b>49 w</b>	<b>.. w</b>	<b>52 w</b>	
<b>Low income</b>	4.3	3.1	84		24	..	35	
Excl. China & India	6.0	4.3	108		24	..	34	
<b>Middle income</b>	3.7	2.5	53		53	..	77	
Lower middle income	3.7	2.5	50		53	..	69	
Upper middle income	3.7	2.4	58		65	87	86	
<b>Low &amp; middle income</b>	4.1	2.9	74		48	..	47	
East Asia & Pacific	3.0	2.1	26		52	..	..	
Europe & Central Asia	2.5	1.6	39		67	..	92	
Latin America & Carib.	4.1	2.7	74		59	85	78	
Middle East & N. Africa	6.2	3.5	51		55	..	62	
South Asia	5.3	3.4	116		49	21	29	
Sub-Saharan Africa	6.6	5.4	132		21	..	38	
<b>High income</b>	1.8	1.7	25		75	..	99	
Europe EMU	1.8	1.4	11		75	..	99	

a. Data are for most recent year available. b. Official estimate. c. Estimate based on survey data. d. Estimate by the World Health Organization and Eurostat. e. Estimate by UNICEF.



## Reproductive health 2.16

### About the data

Reproductive health is a state of physical and mental well-being in relation to the reproductive system and its functions and processes. Means of achieving reproductive health include education and services during pregnancy and childbirth, provision of safe and effective contraception, and prevention and treatment of sexually transmitted diseases. Health conditions related to sex and reproduction have been estimated to account for 25 percent of the global disease burden in adult women (Murray and Lopez 1998). Reproductive health services will need to expand rapidly over the next two decades, when the number of women and men of reproductive age is projected to increase by more than 300 million.

Total and adolescent fertility rates are based on data on registered live births from vital registration systems or, in the absence of such systems, from censuses or sample surveys. As long as the surveys are fairly recent, the estimated rates are generally considered reliable measures of fertility in the recent past. In cases where no empirical information on age-specific fertility rates is available, a model is used to estimate the share of births to adolescents. For countries without vital registration systems, fertility rates for 1998 are generally based on extrapolations from trends observed in censuses or surveys from earlier years.

An increasing number of couples in the developing world want to limit or postpone childbearing but are not using effective contraceptive methods. These couples face the risk of unintended pregnancy, shown in the table as the percentage of married women of reproductive age who do not want to become pregnant but are not using contraception (Bulatao 1998). Information on this indicator is collected through surveys and excludes women not exposed to the risk of pregnancy because of postpartum anovulation, menopause, or infertility. Common reasons for not using contraception are lack of knowledge about contraceptive methods and concerns about their possible health side-effects.

Contraceptive prevalence reflects all methods—ineffective traditional methods as well as highly effective modern methods. Contraceptive prevalence rates are obtained mainly from demographic and health surveys and contraceptive prevalence surveys (see *Primary data documentation* for the most recent survey year). Unmarried women are often excluded from such surveys, which may bias the estimates.

The share of births attended by skilled health staff is an indicator of a health system's ability to provide adequate care for pregnant women. Good antenatal and postnatal care improves maternal health and reduces maternal and infant mortality. But data may

not reflect such improvements because health information systems are often weak, maternal deaths are underreported, and rates of maternal mortality are difficult to measure.

Household surveys such as the demographic and health surveys attempt to measure maternal mortality by asking respondents about survivorship of sisters. The main disadvantage of this method is that the estimates of maternal mortality that it produces pertain to 12 years or so before the survey, making them unsuitable for monitoring recent changes or observing the impact of interventions. In addition, measurement of maternal mortality is subject to many types of errors. Even in high-income countries with vital registration systems, misclassification of maternal deaths has been found to lead to serious underestimation. The data in the table are official estimates based on national surveys or derived from official community and hospital records. Some reflect only births in hospitals and other medical institutions. In some cases smaller private and rural hospitals are excluded, and sometimes even primitive local facilities are included. Thus the coverage is not always comprehensive, and cross-country comparisons should be made with extreme caution.

### Definitions

- **Total fertility rate** is the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with current age-specific fertility rates.
- **Adolescent fertility rate** is the number of births per 1,000 women aged 15–19.
- **Women at risk of unintended pregnancy** are fertile, married women of reproductive age who do not want to become pregnant and are not using contraception.
- **Contraceptive prevalence rate** is the percentage of women who are practicing, or whose sexual partners are practicing, any form of contraception. It is usually measured for married women aged 15–49 only.
- **Births attended by skilled health staff** are the percentage of deliveries attended by personnel trained to give the necessary supervision, care, and advice to women during pregnancy, labor, and the postpartum period, to conduct deliveries on their own, and to care for newborns.
- **Maternal mortality ratio** is the number of women who die during pregnancy and childbirth, per 100,000 live births.

### Data sources

The data on reproductive health come from demographic and health surveys, the World Health Organization's *Coverage of Maternity Care* (1997a), and national statistical offices.

**Table 2.16a**

**Total fertility and access to reproductive health care among the poorest and richest, various years, 1990s**

	Total fertility rate			Antenatal care received			Births attended by skilled staff		
	births per woman			% of pregnant women			% of deliveries		
	Poorest quintile	Richest quintile	Average	Poorest quintile	Richest quintile	Average	Poorest quintile	Richest quintile	Average
Bolivia	7.4	2.1	4.2	39	95	65	20	98	57
Cameroon	6.2	4.8	5.8	53	99	79	32	95	64
Guatemala	8.0	2.4	5.1	35	90	53	9	92	35
India	4.1	2.1	3.4	25	89	49	12	79	34
Indonesia	3.3	2.0	2.8	74	99	89	21	89	49
Morocco	6.7	2.3	4.0	8	74	32	5	78	31
Vietnam	3.1	1.6	2.3	50	92	71	49	99	77

Note: Households are grouped into quintiles by assets.

Source: Analysis of demographic and health surveys conducted by the World Bank and Macro International.

**In all regions reproductive health continues to be worst among the poor. Women in the poorest households have much higher fertility rates than those in the wealthiest—and far fewer births in the presence of skilled health professionals, contributing to higher maternal mortality ratios. Indicators of reproductive health by income level can help focus interventions where they are needed most.**