

PHNIP Country Health Statistical Report

Kenya

September 2002



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About the Report

Released September 2002

This report is one of a series of Country Health Statistical Reports produced by the Population, Health and Nutrition Information (PHNI) Project. Each profile contains statistical data on current health conditions, population dynamics, health and family planning behavior, and health and population trends in a given developing country. Information is compiled from PHNI's health statistics database, which draws data from a diverse range of sources listed at the end of this profile.

Hard copy editions of PHNI's profiles are available from our publications department. Reports will soon be available on the USAID Global Health Web site in Portable Document Format (.pdf). Any feedback you have on the content or presentation of this report would be greatly appreciated. We would also appreciate receiving any more recent, more accurate, or more representative information.

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I. Statistical Overview

*see data notes

Demographic Indicators				
Indicator	Value	Data Unit	Year	Source
Total Population	30,765,916		2001	BUCEN - IDB-2000
Population Growth Rate	1.3	%	2001	BUCEN - IDB-2000
Percent Urban	32.2	%	1999	World Bank/WDI-2001
Women, 15-19	1,991,265		2002	BUCEN - IDB-2000
Women, 15-49	7,735,137		2002	BUCEN - IDB-2000
Life Expectancy at Birth	47.5		2001	BUCEN - IDB-2000
Crude Birth Rate	28.5	per 1,000	2001	BUCEN - IDB-2000
Crude Death Rate	14.4	per 1,000	2001	BUCEN - IDB-2000
Number of Live Births	877	000s	2001	BUCEN - IDB-2000

Socioeconomic Indicators				
Indicator	Value	Data Unit	Year	Source
GNI per Capita (PPP)	1,010	\$	1999	World Bank/WDI-2001
Health Expenditure as Percentage of GDP	7.8	%	1990-1998	World Bank/WDI-2001
Physicians per 1,000 People	0.14		1990-1998	World Bank/WDI-2001
Adult Literacy Rate	81.5	%	1999	World Bank/WDI-2001
Adult Literacy Rate, Female	74.8	%	1999	World Bank/WDI-2001
Adult Literacy Rate, Male	88.3	%	1999	World Bank/WDI-2001
Gross Enrollment Rate - Primary School	88.8	%	1998	UNESCO-2000
Gender Parity Index - Net Enrollment Rate	Data Not Available			
Access to an Improved Water Source (Rural)	31	%	2000	World Bank/WDI-2001
Access to an Improved Water Source (Urban)	87	%	2000	World Bank/WDI-2001
Access to Improved Sanitation Facilities (Rural)	81	%	2000	World Bank/WDI-2001
Access to Improved Sanitation Facilities (Urban)	96	%	2000	World Bank/WDI-2001

Family Planning Indicators				
Indicator	Value	Data Unit	Year	Source
Total Fertility Rate (BUCEN)	3.5		2001	BUCEN - IDB-2000
Total Fertility Rate (DHS)	4.7		1998	Kenya DHS-1998
Contraceptive Prevalence Rate, Modern Methods, All Women	23.6	%	1998	Kenya DHS-1998
Contraceptive Prevalence Rate, Modern Methods, Married Women	31.5	%	1998	Kenya DHS-1998
Median Age of Sexual Debut Among Women, Ages 25-49	16.5		1998	Kenya DHS-1998
Mean Ideal Family Size	3.8		1998	Kenya DHS-1998
Women 20-24 Who Gave Birth Before Age 20	46.3	%	1998	Kenya DHS-1998

Maternal Health Indicators				
Indicator	Value	Data Unit	Year	Source
Maternal Mortality Ratio (DHS)	590	Per 100,000 live births	1999	Kenya SPA-1999
Maternal Mortality Ratio (WHO/Hill)	1,339	Per 100,000 live births	1995	WHO/Hill-2001
Antenatal Care (at least 1 visit)	92.2	%	1998	Kenya DHS-1998
Antenatal Care (2+ visits)	88.5	%	1998	Kenya DHS-1998
Antenatal Care (4+ visits)	60.8	%	1998	Kenya DHS-1998
Assisted Delivery by a Health Professional	44.3 ¹	%	1998	Kenya DHS-1998
Assisted Delivery by Doctor	12.3 ²	%	1998	Kenya DHS-1998
Assisted Delivery by Other Health Professional	32 ³	%	1998	Kenya DHS-1998

¹ The value for this country represents data from the three-year period preceding the survey.

² The value for this country represents data from the three-year period preceding the survey.

³ The value for this country represents data from the three-year period preceding the survey.

Child Survival Indicators				
Indicator	Value	Data Unit	Year	Source
Acute Respiratory Infection (ARI) and Oral Rehydration Therapy (ORT)				
ARI Treatment - Children Under 5	57.3 ¹	%	1998	Kenya DHS-1998
ORT Use Rate (ORS, RHS, or Increased Fluids)	82	%	1998	Kenya DHS-1998
Mortality Indicators				
Infant Mortality Rate (BUCEN)	67	per 1,000 live births	2002	BUCEN - IDB-2000
Infant Mortality Rate (DHS)	73.7	per 1,000 live births	1998	Kenya DHS-1998
Infant Mortality Rate, Females (BUCEN)	64	per 1,000 live births	2002	BUCEN - IDB-2000
Infant Mortality Rate, Males (BUCEN)	71	per 1,000 live births	2002	BUCEN - IDB-2000
Under-5 Mortality Rate (BUCEN)	109.9	per 1,000 live births	2001	BUCEN - IDB-2000
Under-5 Mortality Rate (DHS)	111.5	per 1,000 live births	1998	Kenya DHS-1998
Nutrition Indicators				
Exclusive Breastfeeding (under 4 mos.)	16.8	%	1998	Kenya DHS-1998
Exclusive Breastfeeding (under 6 mos.)	12.5	%	1998	Kenya DHS-1998
Stunted (height-for-age)	33.3	%	1993	Kenya DHS-1993
Underweight (weight-for-age)	22.6	%	1993	Kenya DHS-1993
Wasted (weight-for-height)	5.9	%	1993	Kenya DHS-1993
Vaccination Coverage				
DPT3 Vaccination Rate (DHS)	79.2	%	1998	Kenya DHS-1998
Measles Vaccination Rate (DHS)	79.2	%	1998	Kenya DHS-1998
Polio Vaccination Rate (DHS)	74.4	%	1998	Kenya DHS-1998
Tetanus Toxoid Vaccination	50.8	%	1998	Kenya DHS-1998

¹ The value for this country represents the percentage of children under three years of age.

HIV/AIDS Prevention Indicators				
Indicator	Value	Data Unit	Year	Source
HIV Prevalence, Adults	13.9	%	1999	UNAIDS-2000
HIV Prevalence, Females 15-24, High Estimates	15	%	1999	UNAIDS-2000
HIV Prevalence, Females 15-24, Low Estimates	11.1	%	1999	UNAIDS-2000
HIV Prevalence, Males 15-24, High Estimates	8.5	%	1999	UNAIDS-2000
HIV Prevalence, Males 15-24, Low Estimates	4.3	%	1999	UNAIDS-2000
Males Reporting Condom Use With Last Non-Regular Partner	42.5	%	1998	Kenya DHS-1998
Females Reporting Condom Use With Last Non-Regular Partner	15.1	%	1998	Kenya DHS-1998

Infectious Diseases Control Indicators				
Indicator	Value	Data Unit	Year	Source
TB Incidence Rate	417	per 100,000 pop	1998	WHO/TB Control Report-2001
TB Case Detection Rate	53.3	%	1998	WHO/TB Control Report-2001
TB (DOTS) Treatment Success Rate	77	%	1998	WHO/TB Control Report-2001
Malaria	4,343,190	Reported # of cases	1995	WHO/RBM-2002

II. Trends in Health Indicators

Figure 1: Current and Projected Population by Age and Sex (in thousands)

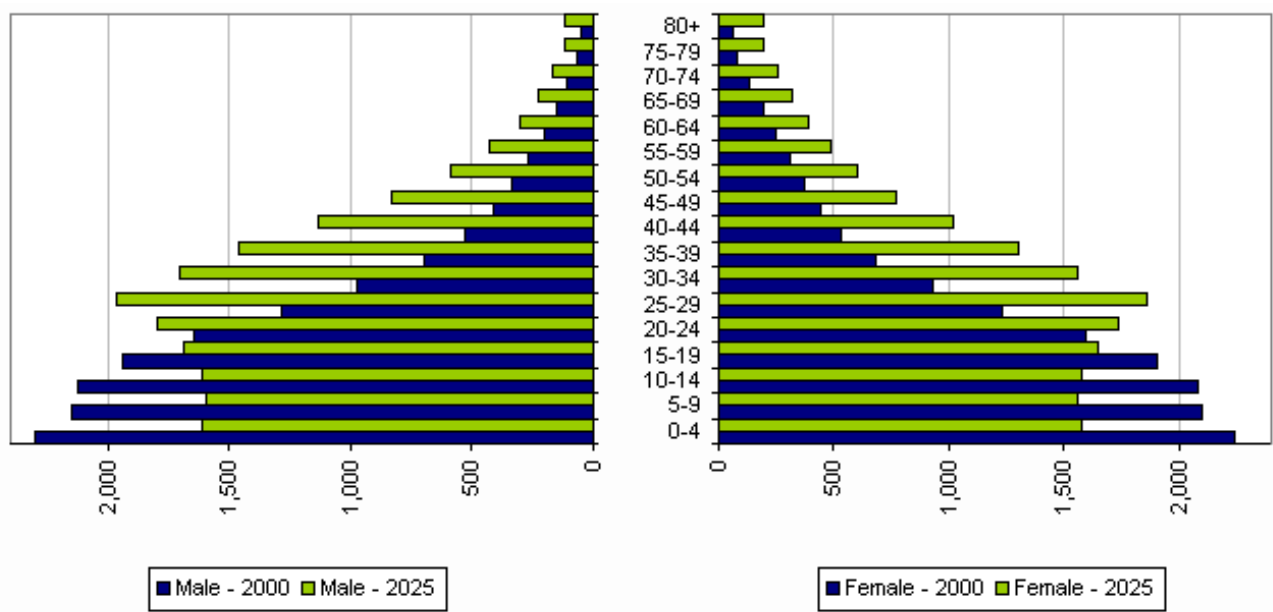


Table 1.1: Current and Projected Population by Age and Sex

Source: BUCEN - IDB

Age Group	Male - 2000	Male - 2025	Female - 2000	Female - 2025
0-4	2,296,000	1,612,000	2,242,000	1,572,000
5-9	2,148,000	1,593,000	2,099,000	1,556,000
10-14	2,123,000	1,611,000	2,078,000	1,575,000
15-19	1,941,000	1,687,000	1,905,000	1,646,000
20-24	1,643,000	1,795,000	1,590,000	1,740,000
25-29	1,284,000	1,963,000	1,233,000	1,856,000
30-34	976,000	1,701,000	932,000	1,558,000
35-39	699,000	1,460,000	681,000	1,303,000
40-44	527,000	1,136,000	535,000	1,018,000
45-49	413,000	832,000	442,000	772,000
50-54	333,000	590,000	369,000	598,000
55-59	266,000	428,000	306,000	484,000
60-64	204,000	304,000	245,000	386,000
65-69	149,000	227,000	191,000	321,000
70-74	105,000	171,000	132,000	261,000
75-79	65,000	121,000	81,000	193,000
80+	47,000	116,000	61,000	198,000

TABLE 1.2: Population Estimates and Projections

Source: BUCEN - IDB

1980	1990	2000	2010	2020
16,684,668	23,767,281	30,339,770	33,068,248	34,001,455

Figure 2: Estimated Total Fertility Rate per Woman

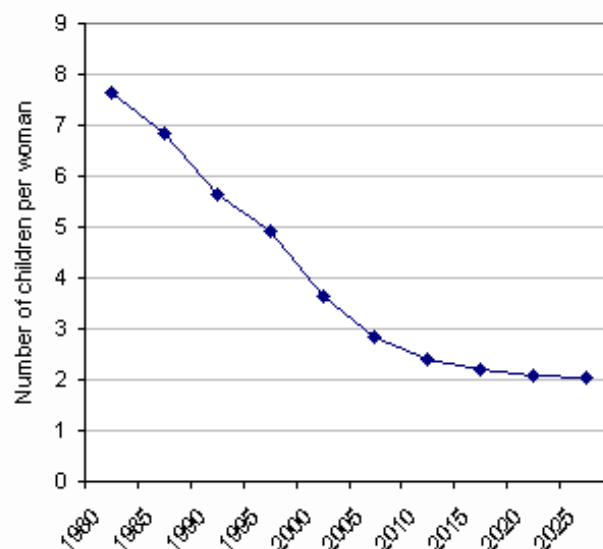


Table 2: Estimated Total Fertility Rate per Woman

Source: BUCEN - IDB

1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
7.6	6.9	5.7	4.9	3.7	2.9	2.4	2.2	2.1	2.0

Figure 3: Infant Mortality Rates / Under-5 Mortality Rates

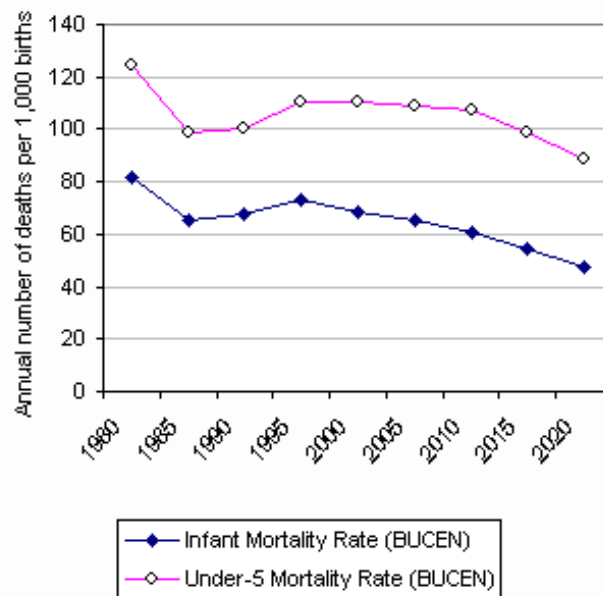


Table 3: Infant Mortality Rates / Under-5 Mortality Rates

Source: BUCEN - IDB 2000

Indicator	1980	1985	1990	1995	2000	2005	2010	2015	2020
Infant Mortality Rate (BUCEN)	81.4	65.2	67.3	72.9	68.7	65.0	60.4	54.1	47.6
Under-5 Mortality Rate (BUCEN)	124.7	98.7	100.6	110.2	110.1	109.2	107.4	98.7	88.4

Figure 4: Vaccination Coverage (DPT3) Trends

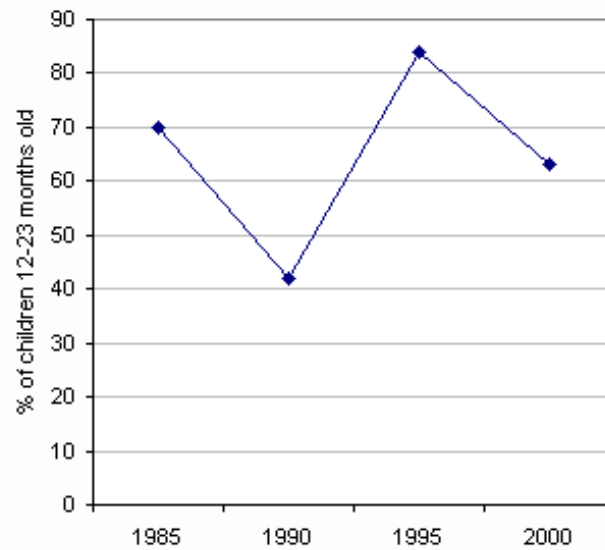


Table 4: Vaccination Coverage (DPT3) Trends

Source: WHO/Global Summary

1985	1990	1995	2000
70.0	42.0	84.0	63.0

Figure 5: Contraceptive Prevalence Rates, Modern Methods, Married Women

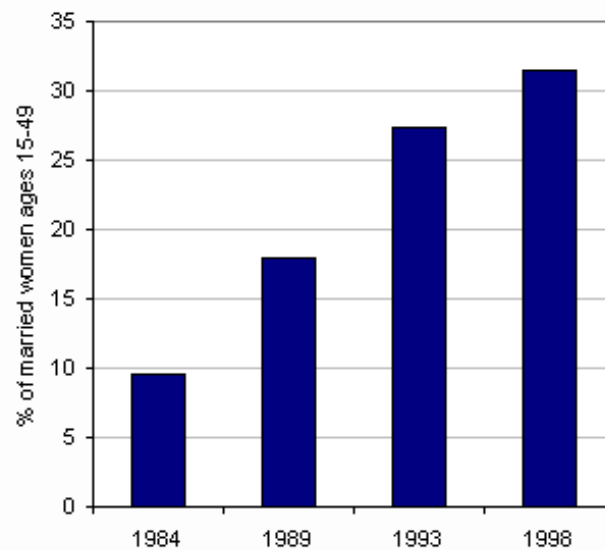


Table 5: Contraceptive Prevalence Rates, Modern Methods, Married Women

Source: Kenya DHS

Ross/TFGI

1984	1989	1993	1998
9.6	17.9	27.3	31.5

Data Notes

*Indicator definitions that differ from those in the data notes section are identified by footnotes accompanying the indicator tables.

Demographic Indicators

Total Population	The number of people in a given area (i.e., country) in a particular time period (usually a midyear estimate).
Population Growth Rate	The average annual growth rate is the rate of natural increase in a population plus the net migration rate. The rate of natural increase is the difference between the birth rate and the death rate, but it is conventionally measured in percentage terms (per hundred rather than per thousand).
Percent Urban	The percentage of the midyear population living in areas defined as urban in each country and reported to the United Nations.
Women, 15-19	The number of women between the ages of 15-19 in the midyear population.
Women, 15-49	The number of women between the ages of 15-49 in the midyear population.
Life Expectancy at Birth	The average number of years that a person at age 0 will live if age-specific death rates remain constant. Life expectancy at birth is highly affected by rates of infant and child death.
Crude Birth Rate	The number of births per thousand of the population. The product of the number of live births, divided by the midpoint population, multiplied by 1,000.
Crude Death Rate	The number of deaths per thousand of the population. The product of the number of deaths divided by the midpoint population, multiplied by 1,000.
Number of Live Births	The number of live births, annually, within a country.

Socioeconomic Indicators

GNI per Capita (PPP)	The gross national income (GNI) converted to international dollars using purchasing power parity (PPP) rates. An international dollar has the same purchasing power over GNI as a U.S. dollar has in the United States.
Health Expenditure as Percentage of GDP	Total health expenditures is the sum of public and private health expenditures figured as a percentage of a country's gross domestic product (GDP). It covers the provision of health services (preventive and curative), family planning activities, nutrition activities, and emergency aid designated for health but does not include provision of water and sanitation.
Physicians per 1,000 People	Physicians are defined as graduates of any faculty or school of medicine who are working in the country in any medical field (practice, teaching, research).
Adult Literacy Rate	The percentage of people ages 15 and over who can, with understanding, read and write a short, simple statement about their everyday life.
Adult Literacy Rate, Female	The percentage of women ages 15 and over who can, with understanding, read and write a short, simple statement about their everyday life.
Adult Literacy Rate, Male	The percentage of men ages 15 and over who can, with understanding, read and write a short, simple statement about their everyday life.
Gross Enrollment Rate - Primary School	Total enrolment in primary level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to primary level of education in give school-year. GER can be over 100% due to the inclusion of over-aged and under-aged pupils/students because of early or late entrants, and grade repetition.

Gender Parity Index - Net Enrollment Rate	The ratio of the female-to-male net primary school enrollment rates measures progress towards gender equity in school attendance and the level of learning opportunities available for women in relation to those available to men. Calculation Method: Divide the female net primary school enrollment rate by the male net primary school enrollment rate.
Access to an Improved Water Source (Rural)	Access to an improved water source in rural areas. Refers to the percentage of the rural population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring, or rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. Reasonable access is defined as the availability of at least 20 liters a person a day from a source within one kilometer of the dwelling.
Access to an Improved Water Source (Urban)	Access to an improved water source in urban areas. Refers to the percentage of the urban population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring, or rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. Reasonable access is defined as the availability of at least 20 liters a person a day from a source within one kilometer of the dwelling.
Access to Improved Sanitation Facilities (Rural)	Access to improved sanitation facilities in rural areas. Refers to the percentage of the rural population with access to at least adequate excreta disposal facilities (private or shared, but not public) that can effectively prevent human, animal, and insect contact with excreta.
Access to Improved Sanitation Facilities (Urban)	Access to improved sanitation facilities in urban areas. Refers to the percentage of the urban population with access to at least adequate excreta disposal facilities (private or shared, but not public) that can effectively prevent human, animal, and insect contact with excreta.
Family Planning Indicators	
Total Fertility Rate (BUCEN)	The number of children a woman between ages 15-44 would have during her reproductive life, if, for all of her childbearing years she were to experience the age-specific birth rates for that given year.
Total Fertility Rate (DHS)	The number of children a woman between ages 15-49 would have during her lifetime if she were to bear children at the currently observed rates.
Contraceptive Prevalence Rate, Modern Methods, All Women	Percentage of all women ages 15-49 currently using a modern method of contraception. Modern methods include oral contraceptives, IUDs, injectables, female and male sterilization, all emergency contraception, and barrier methods (diaphragm, foam, jelly, male and female condom).
Contraceptive Prevalence Rate, Modern Methods, Married Women	Percent of currently married ages women 15-49 currently using a modern method of contraception. Modern methods include oral contraceptives, IUDs, injectables, female and male sterilization, all emergency contraception, and barrier methods (diaphragm, foam, jelly, male and female condom).
Median Age of Sexual Debut Among Women, Ages 25-49	Median age of first sexual intercourse for women ages 25-49.
Mean Ideal Family Size	Mean ideal number of children for all women, according to number of living children.
Women 20-24 Who Gave Birth Before Age 20	Percentage of women ages 20-24 who have already given birth or were pregnant with their first child before the age of 20.
Maternal Health Indicators	
Maternal Mortality Ratio (DHS)	The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births, arrived mostly through 'direct sisterhood method'. The use of information reported by a sibling is to expand the sample size and to compensate for the lack of vital registration system.
Maternal Mortality Ratio (WHO/Hill)	The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births arrived through Hill et al., adjustment procedure depending on the nature of data used.
Antenatal Care (at least 1 visit)	Percentage of women of reproductive age (15-49) who receive at least one antenatal care visit during pregnancy (in the three-year period preceding the survey).
Antenatal Care (2+ visits)	Percentage of women of reproductive age (15-49) who receive at least two antenatal care visits during pregnancy (in the three-year period preceding the survey).

Antenatal Care (4+ visits)	Percentage of women of reproductive age (15-49) who receive four or more antenatal care visits during pregnancy (in the three-year period preceding the survey).
Assisted Delivery by a Health Professional	The percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year period preceding the survey. May include doctors, nurses, midwives, village health workers, or any other trained health professional.
Assisted Delivery by Doctor	The percentage of live births/deliveries that occur with the assistance of a doctor during the five-year period preceding the survey.
Assisted Delivery by Other Health Professional	The percentage of live births/deliveries that occur with the assistance of a nurse, midwife, village health worker, or any other trained health professional besides a doctor during the five-year period preceding the survey.
Child Survival Indicators	
ARI Treatment - Children Under 5	Percentage of children under five years who were ill with an acute respiratory infection (ARI), which is associated with cough, rapid breathing and a high fever, during the two weeks preceding the survey, and who were treated with specific remedies.
ORT Use Rate (ORS, RHS, or Increased Fluids)	Oral Rehydration Therapy (ORT). Percentage of children under age 5 with diarrhea two weeks prior to survey who received increased fluids, oral rehydration solution (ORS) or recommended home solution (RHS).
Infant Mortality Rate (BUCEN)	The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.
Infant Mortality Rate (DHS)	The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year (five-year period preceding survey).
Infant Mortality Rate, Females (BUCEN)	The estimated annual number of deaths of female infants under 12 months in a given year per 1,000 live births in that same year.
Infant Mortality Rate, Males (BUCEN)	The estimated annual number of of male infants under 12 months in a given year per 1,000 live births in that same year.
Under-5 Mortality Rate (BUCEN)	Annual number of deaths that occur in children 0-4 years old per 1,000 births.
Under-5 Mortality Rate (DHS)	Annual number of deaths that occur in children 0-4 years old per 1,000 births (five-year period preceding survey).
Exclusive Breastfeeding (under 4 mos.)	Percentage of children under 4 months exclusively breastfed. Exclusive breastfeeding is defined as providing no food or liquid other than breast milk to the child during the 24-hour period before the survey.
Exclusive Breastfeeding (under 6 mos.)	Percentage of children under 6 months exclusively breastfed. Exclusive breastfeeding is defined as providing no food or liquid other than breast milk to the child during the 24-hour period before the survey.
Stunted (height-for-age)	Percentage of children under age five whose height-for-age is below minus-two standard deviations from the median of the reference population.
Underweight (weight-for-age)	Percentage of children under age five whose weight-for-age is below minus-two standard deviations from the median of the reference population.
Wasted (weight-for-height)	Percentage of children under age five whose weight-for-height is below minus-two standard deviations from the median of the reference population.
DPT3 Vaccination Rate (DHS)	Proportion of living children 12-23 months old who have received three complete doses of vaccines against diphtheria, pertussis, and tetanus.
Measles Vaccination Rate (DHS)	Percentage of living children who have received one dose of MCV (fully immunized) against measles.
Polio Vaccination Rate (DHS)	Percentage of children receiving three doses of polio vaccine.
Tetanus Toxoid Vaccination	Percentage of pregnant women receiving two (or more) doses of tetanus toxoid (three-year period preceding survey).

HIV/AIDS Prevention Indicators

HIV Prevalence, Adults	The estimated number of adults (ages 15-49) living with HIV/AIDS at the end of 1999 divided by the 1999 adult population (ages 15–49).
HIV Prevalence, Females 15-24, High Estimates	HIV prevalence, adolescent females 15-24 for high estimates.
HIV Prevalence, Females 15-24, Low Estimates	HIV prevalence, adolescent females 15-24 for low estimates.
HIV Prevalence, Males 15-24, High Estimates	HIV prevalence, adolescent males 15-24 for high estimates.
HIV Prevalence, Males 15-24, Low Estimates	HIV prevalence, adolescent males 15-24 for low estimates.
Males Reporting Condom Use With Last Non-Regular Partner	Among men who have had sex in the last year, percentage who used condoms during their last sexual intercourse with a non-regular partner/non-cohabitating partner.
Females Reporting Condom Use With Last Non-Regular Partner	Among women who have had sex in the last year, percentage who used condoms during their last sexual intercourse with a non-regular partner/non-cohabitating partner.

Infectious Diseases Control Indicators

TB Incidence Rate	Total number of TB cases (all types) estimated in a given period of time per 100,000 population.
TB Case Detection Rate	TB Case Detection Rate is defined as the percentage of the annual new smear-positive notifications of the estimated annual new smear-positive incidence.
TB (DOTS) Treatment Success Rate	The proportion of smear-positive patients who were cured plus the proportion who completed treatment.
Malaria	Reported number of cases of malaria during the year for which data reported.

Statistical Sources For Kenya

BUCEN - IDB 2000	United States Census Bureau (BUCEN), International Programs Center. International Database. Web site revision dated October 2000.
Kenya DHS 1989	National Council for Population and Development, and Institute for Resource Development/Macro Systems, Inc. Kenya Demographic and Health Survey. Columbia, MD: IRD, 1989.
Kenya DHS 1993	National Council for Population and Development, Central Bureau of Statistics-Office of the Vice President and Ministry of Planning and National Development and Demographic and Health Surveys-Macro International Inc. Demographic and Health Survey, 1993.
Kenya DHS 1998	National Council for Population and Development, Central Bureau of Statistics and Macro International Inc. "Kenya Demographic and Health Survey, 1998." Macro International Inc., Calverton MD: 1999
Kenya SPA 1999	Ministry of Health [Kenya], National Council for Population and Development [Kenya], and ORC Macro. 2000. "Kenya Service Provision Assessment Survey 1999." Calverton, Maryland: Ministry of Health, National Council for Population and Development, and ORC Macro.
Ross/TFGI 1999	Ross, John., Stover, John., Willard, Amy. Profiles for Family Planning and Reproductive Health Programs (116 Countries). The Futures Group International. Glastonbury, CT, 1999.
UNAIDS 2000	Report on the Global HIV/AIDS Epidemic. June 2000. The Joint United Nations Programme on HIV/AIDS, Geneva.
UNESCO 2000	UNESCO Education for All 2000 Assessment. United Nations Educational, Scientific and Cultural Organization, Paris.
WHO/Global Summary 2001	WHO Vaccine-Preventable Diseases Monitoring System. 2001 Global Summary. World Health Organization, Geneva.
WHO/Hill 2001	Kenneth Hill, Carla Abou Zahr & Tessa Wardlaw: Estimates of Maternal Mortality for 1995. Bulletin of the World Health Organization, vol. 79, no. 3, 182-193, 2001.
WHO/RBM 2002	WHO-Roll Back Malaria Web site. A Global Partnership. http://www.who.int/rbm . Data accessed on web site in March 2002.
WHO/TB Control Report 2001	Global Tuberculosis Control, WHO Report 2000. World Health Organization, Geneva.
World Bank/WDI 2001	World Bank Development Indicators 2001, CD-Rom. Washington, DC: The World Bank, 2001.