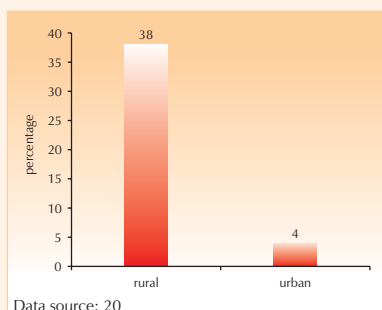




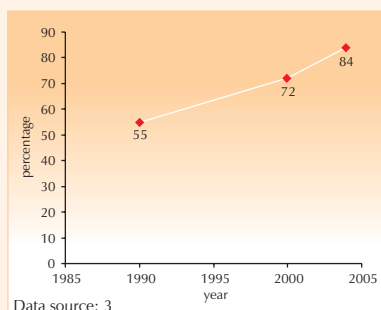
Bhutan

Basic information	Latest available value	Year	Source
Total population	637,000	2005	{7}
Area (sq.km.)	38,394		{1}
Density of population (per sq.km.)	16	2005	{CC}
Administrative divisions	20 Dzongkhags (districts) and 205 Geogs (blocks)		
Development	Latest available value	Year	Source
Gross national income per capita (US\$)	1235	2006	{CC}
Highest in the world (GNI) – Norway	59590	2005	{4}
Highest in the Region – Thailand (GNI)	2750	2005	{4}
Population below national poverty line (%)	32	2004	{3}
Lowest in the Region – Maldives	8	2004	
Adult literacy rate >15 years (%)	59.5	2005	{CC}
Highest in the Region – DPR Korea	100	2003	
Net enrolment ratio – primary (%)	79.4	2006	{CC}
Highest in the Region – DPR Korea	100	2003	
Human Development Index	0.538	2004	{5}
Highest in the Region – Thailand	0.784	2004	
Human Poverty Index (%)	39.0	2006	{5}
Lowest in the Region – Thailand	9.3	2006	
Gender-Related Development Index	0.444	1999	{15}
Highest in the Region – Thailand	0.781	2006	

Percentage of population below national poverty line



Percentage of gross primary enrolment ratio



Salient basics

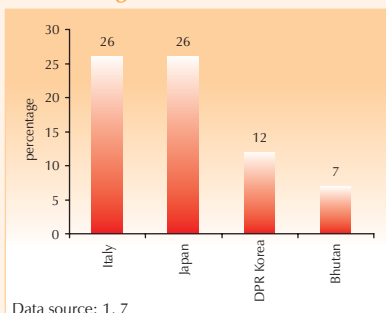
- Bhutan is a landlocked, Himalayan Kingdom with scattered and remote settlements. Many parts of the country are extremely difficult to access.
- Although income per capita is better than some of its neighbours, nearly 32% of the population is below the national poverty line. The Gini coefficient exceeds 0.4.
- The Human Development Index exceeds 0.5.

Q1

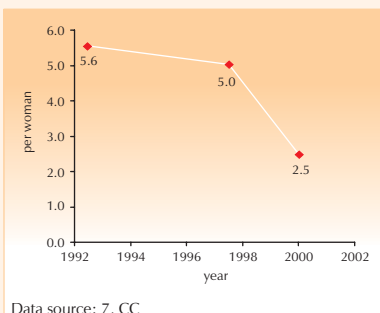
What are the basic demographic features?

Indicators	Latest available value	Year	Source
Population			
Total population	637,000	2005	{7}
Population growth rate per year (%)	1.30	2005	{CC}
Urban population (%)	31	2005	{CC}
Age-sex structure			
Sex ratio (F/1000M)	901	2005	{6}
Children <15 years (%)	33	2005	{CC}
Elderly ≥60 years (%)	7	2004	{1}
Highest in the world – Italy, Japan	26	2005	{7}
Highest in the Region – DPR Korea	12	2002	
Dependency ratio (%)	61	2005	{23}
Fertility			
Birth rate (per 1000 population)	20.0	2005	{6}
Lowest in the world – Germany, Ukraine	8.0	2004	{8}
Lowest in the Region – Thailand	12.7	2002	
Total fertility rate (TFR) (per woman)	2.5	2000	{CC}
Lowest in the world – Ukraine	1.1	2004	{9}
Lowest in the Region – Thailand	1.6	2000	
Contraceptive prevalence (%)	31	2000	{3}
Gross mortality			
Crude death rate (per 1000 population)	7.0	2005	{6}
Lowest in the world – UAE	1.0	2004	{8}
Lowest in the Region – Maldives	3.0	2005	

Comparison of elderly population in the region and the world



Total fertility rate



Salient demographic features

- The country has a low death rate and birth rate.
- Adverse sex ratio.
- The population is predominantly young, with 33% of the population being less than 15 years old.

2

What is the progress regarding some health-related MDGs?

Indicators	1990	2000	2005	2015 (Target)
Poverty and hunger				
Population below minimum level of dietary energy consumption (%)	N/A	N/A	3.8 (2004)	1.9
Under-weight (<-2SD) children aged 6-59 months (%)	38 (1989)	19	N/A	19
Child mortality				
Infant mortality rate (per 1000 live births)	90	61	40	30
Under-five mortality rate (per 1000 live births)	123	84	61	41
One year olds immunized against measles (%)	84	85	90	>95
Maternal health				
Maternal mortality ratio (per 100,000 live births)	560	255	N/A	140
Deliveries attended by health staff (%)	15	24	32 (2003)	100
HIV/Malaria/Tuberculosis				
HIV prevalence – Total population (per 100,000 population)	0	5	12	
Malaria incidence (per 100,000 population at risk)	4190	873	366 (2004)	
Tuberculosis prevalence (per 100,000 population)	819	169	133 (2004)	
Water and sanitation				
Population with access to improved water source (%)				
Combined	45	78 (2003)	84	73
Rural	N/A	N/A	N/A	
Urban	N/A	N/A	N/A	
Population with access to improved sanitation (%)				
Combined	67	88 (2003)	93	83
Rural	N/A	N/A (2003)	92	
Urban	N/A	N/A (2003)	96	

MDG progress

- The MDG indicators are potentially on track.

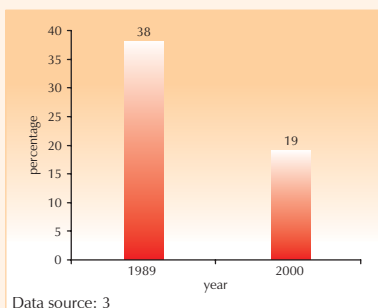
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3

What are the major health problems?

Indicators	Latest available value	Year	Source
In children under-five years			
Low birth weight – Hospital births (%)	8.5	2005	{CC}
Lowest in the Region – Indonesia	6	2002	
Stunted children (%)	40	2000	{3}
Lowest in the world – Croatia	1	1998-2004	{8}
Lowest in the Region – Sri Lanka	14	2000	
Under-weight children (%)	19	2000	{3}
Lowest in the world – Chile, Croatia, Ukraine	1	1998-2004	{8}
Lowest in the Region – Thailand	9	2003	
Childhood diseases			
Diarrhoeas – incidence (per 1000 children <5 years)	396	2005	{6, CC}
Acute respiratory infections – incidence (per 1000 children <5 years)	249	2005	{6, CC}
Other diseases			
Tuberculosis prevalence (per 100,000 population)	169	2000	{C}
Malaria prevalence (per 100,000 population)	377	2005	{C}
Intestinal worm incidence (per 100,000 population)	3,094	2005	{C}
Conjunctivitis incidence (per 100,000 population)	6,363	2005	{C}
HIV prevalence (per 100,000 population)	12	2005	{C}
Diabetes prevalence (per 100,000 population)	148	2005	{C}
Cancer prevalence (per 100,000 population)	93	2005	{C}
Comprehensive indices			
Expectation of healthy years lost (years)			
Male	7.3	2002	{12}
Female	9.5	2002	{12}
As % of expected life at birth (ELB) lost			
Male	12.1	2002	{12}
Female	15.2	2002	{12}

Percentage of underweight children in 1989 and 2000



Major health problems

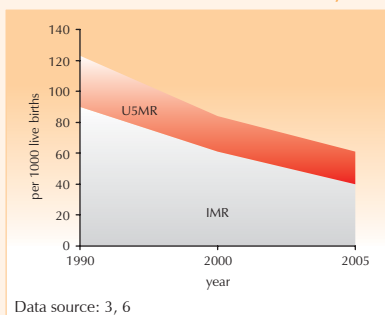
- Under-nutrition is common among children.
- Acute respiratory infection in winter and diarrhoeal diseases in summer top the list for infant/child morbidity.
- Available data for intestinal worms and conjunctivitis shows a high incidence.
- Tuberculosis and malaria are the other major health problems.

4

What is the mortality profile?

Indicators	Latest available value	Year	Source
Mortality rates			
Infant mortality rate (IMR) (per 1000 live births)	40	2005	{6}
Lowest in the Region – Sri Lanka	11	2003	
Under-five mortality rate (U5MR) (per 1000 live births)	61	2005	{6}
Lowest in the world – Iceland, Singapore	3	2004	{8}
Lowest in the Region – Maldives, Sri Lanka	16	2005	
Maternal mortality ratio (per 100,000 live births)	255	2000	{6}
Lowest in the Region – Thailand	14	2003	
Age at death			
Expectation of life at birth (ELB) (years)	66	2000	{3}
Highest in the world – Japan	82	2004	{7}
Highest in the Region – Maldives, Sri Lanka	73	1996-2001	
Deaths under-five years (% of total deaths)	17	2005	{C}
Lowest in the Region – Thailand	4	2002	
Causes of death (percentage of total deaths)			
Three major causes of death (all ages) (as % of total deaths)			
Cardio-vascular diseases	19	2005	{6}
Cirrhosis of the liver	8	2005	{6}
COPD/Bronchial asthma	7	2005	{6}
Tuberculosis death rate (per 100,000 population)	3	2005	{6}
Tuberculosis deaths (% of total deaths)	3	2005	{CC}
Cerebrovascular disease deaths (% of total deaths)	7	2002	{22}

Infant and under-five mortality



Mortality profile

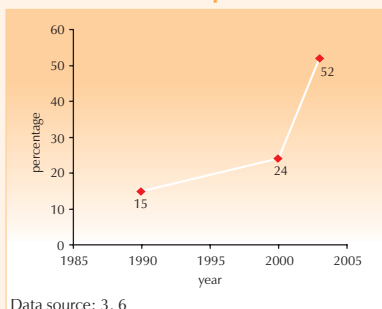
- One out of nearly 16 children die before reaching the age of five years. Most of this mortality is in the first four weeks of life.
- Available data indicate cardiovascular diseases as the most common cause of death. Next is cirrhosis of the liver.

5

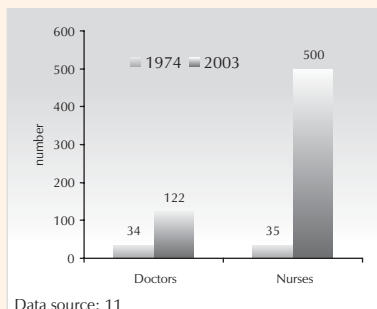
What resources are available for the health sector?

Indicators	Latest available value	Year	Source
Expenditure on health			
Percentage of GDP	3.1	2003	{13}
Highest in the world – USA	15.2	2003	{13}
Highest in the Region – Timor-Leste	9.6	2003	
Per capita (US\$)	10	2003	{13}
Per capita (Intl.\$)	59	2003	{13}
Highest in the world – USA (Intl.\$)	5711	2003	{13}
Highest in the Region – Maldives (Intl.\$)	364	2003	
Food			
Average dietary energy consumption (kcal/day/person)	2124	2001-2003	{3}
Services			
Primary health centres (Basic Health Units) (per 100,000 population)	27	2005	{CC}
Antenatal care coverage (4+ visit) (%)	70	2005	{6}
Deliveries by qualified attendant (%)	52	2005	{6}
Children immunized (%)			
BCG	99	2005	{26}
DPT-3	95	2005	{26}
Polio-3	95	2005	{26}
Measles	93	2005	{26}
Beds (per 10,000 population)	17	2005	{6}
Highest in the world – Monaco	196	1995	{9}
Highest in the Region – DPR Korea	132	2002	
Human resources			
Doctors of modern system (per 10,000 population)	2.0	2005	{6}
Highest in the world – Cuba	59	2002	{13}
Highest in the Region – DPR Korea	32	2003	
Nurses (per 10,000 population)	8.0	2005	{6}
Highest in the Region – DPR Korea	37	2003	
Midwives (per 10,000 population)	0.8	2004	{13}
Dentists (per 10,000 population)	0.2	2004	{13}
Pharmacists (per 10,000 population)	0.3	2004	{13}
Public and Environmental Health Workers (per 10,000 population)	0.3	2004	{13}
Community Health Workers (per 10,000 population)	2.0	2004	{13}
Lab Technicians (per 10,000 population)	0.6	2004	{13}
Other Health workers (per 10,000 population)	0.5	2004	{13}

Percentage of births attended by skilled health personnel



Number of doctors and nurses in 1974 and 2003



Health resources

- Expenditure on health is 3.1% of GDP and 59 Int\$ per capita.
- Immunization coverage is high.
- Health resources in terms of doctors, nurses and beds are limited.

6

What is the system of health governance?

Organization

The Ministry of Health is guided by the recently established Bhutan Medical & Health Council, and is supported by:

- Policy and Planning Division (PPD),
- Quality Assurance and Standards Division (QASD), and
- Administrative and Finance Division (AFD)

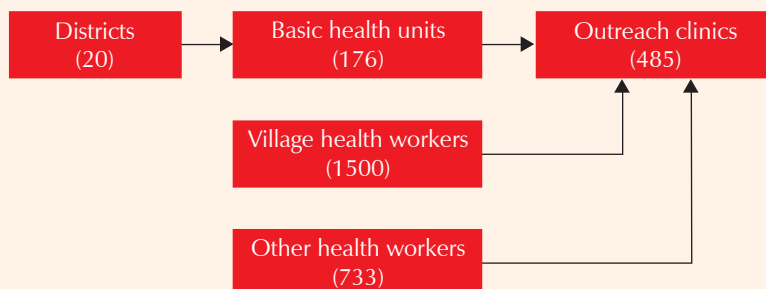
The Ministry has two departments – Department of Public Health and Department of Medical Services, each headed by a Director-General.

The Department of Public Health is supported by the Public Health Laboratory, Public Health Division, Research and Epidemiology Unit and the International Health Unit. The Department comprises four divisions, namely: Communicable Diseases, Non-communicable Diseases, Public Health Engineering, and the Information Communications Bureau.

The Department of Medical Services is supported by the Programmes/Projects Unit and the Health Equipment Repair and Maintenance (HERM) Unit, and comprises four Divisions, namely, Health Care and Diagnostic Services; Health Infrastructure and Maintenance; Drug Vaccines and Equipments; and Hospitals. The last also takes care of Traditional Medicine.

For delivery of health services, Bhutan has 20 districts, each headed by a District Supervisory Officer for primary health care and by a District Medical Officer for hospitals. As of 2005, there are 29 hospitals. In addition, 176 Basic Health Units and 485 Outreach Clinics spread over 201 geogs (blocks) provide primary health care services. Services are

free in the public sector, and there are no private practitioners. Outreach clinics provide health care in a cost-effective way to what has otherwise been an unreachable population.



Each Basic Health Unit is staffed by one Health Assistant, one Assistant Nurse Midwife and one Basic Health Worker. A BHU serves between 2000 to 5000 population. Nearly 1500 Village Health Workers are involved in improving basic hygiene and sanitation, immunization coverage, family planning, nutrition, control of diarrhoeal diseases, and prevention of sexually transmitted diseases including HIV/AIDS.

Private Sector

A few private pharmacies operate in the main towns.

Traditional system

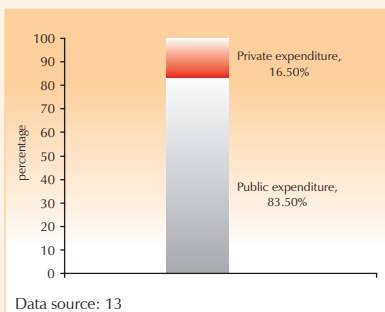
Bhutan gives as much importance to Traditional Medicine as to the modern system. Traditional medicine is well developed and regulated. The two systems co-exist and both are widely used by all population groups, sometimes concurrently, and with mutual referral. The government has plans to establish traditional medicine units in all 20 districts. All herbal products are now produced using good manufacturing practices.

7

Who pays for health care?

Indicators	Latest available value	Year	Source
Government expenditure on health			
Out of total health expenditure (%)	84	2003	{13}
Per capita (US\$)	9	2003	{13}
Per capita (Intl.\$)	49	2003	{13}
Highest in the world – Monaco (Intl.\$)	3403	2003	{13}
Highest in the Region – Maldives (Intl.\$)	324	2003	
Private expenditure on health			
Out of total health expenditure (%)	16	2003	{13}
Per capita (US\$)	2	2003	{C}
Per capita (Intl.\$)	10	2003	{C}
Lowest in the Region – DPR Korea	0.4	2004	

Health expenditure



Health expenditure

- Public health expenditure is less than 50 Intl.\$ per capita.
- Bhutan provides free health services to the people.

8

What are the recent reforms and achievements of the health system?

Health sector reforms

- 'Bhutan 2020: A Vision for Peace, Prosperity and Happiness' sets priorities for all sectors including health.
- Bhutan is also promoting the vision of Gross National Happiness. Its four major pillars are (i) economic growth and development, (ii) preservation and promotion of cultural heritage, (iii) preservation and sustainable use of the environment, and (iv) good governance.
- The government and its institutions are making every effort to serve the people with integrity, accountability and transparency – thereby bringing good governance.
- There is a clear shift from expansion of services (quantity) to quality.
- Strategies have been evolved to reach the un-reached through decentralization of planning and management systems, and by intensifying human resource development for health and establishing a system of continuing education.

Achievements

- MDG indicators are potentially on track.
- High EPI coverage in children less than one year. Coverage of measles and rubella in children <15 years and women between 15-44 years is 98%.
- In 2003, 70% women visited the antenatal clinic four or more times.
- Safe water access increased to 84% in 2003 from 45% in 1990, and sanitation facilities are available to 93% of the population compared to 67% in 1990.

- Malaria cases have steeply declined. The slide positivity rate, which was 22% in 1985, has decreased to 5% in 2004.
- The cure rate for tuberculosis is at least 90% and the case-fatality rate has steadily declined.
- Leprosy is under control with a prevalence rate of 0.61 per 10,000.
- The essential drugs list has been compiled and is reviewed every two years by the National Drug Committee. Uninterrupted supply of vaccines and drugs has been realized with 90% of 20 vital drugs available on any particular day. Access to essential drugs is more than 90%. As many as 99% drugs are prescribed from the Essential Drugs List and 85% prescriptions are in generics.
- Solar disinfection of water is under trial.
- Tobacco consumption, both chewing and smoking, once very common, is now declining due to strong advocacy and health sector interventions. The government has banned the use and sale of tobacco at public places.

Legislation

- The 1992 Royal Decree mandated that every household maintains a latrine. As a result, sanitation coverage in 2005 was more than 90%.
- The Medicines Act was passed by the National Assembly in 2003. When fully implemented, this will regulate medicines, drugs, vaccines and other substances. A Drug Regulatory Authority has been setup under the Ministry of Health. A separate pharmacovigilance centre has been established for traditional medicines.
- While no administrative policies or legislative framework on water supply and related rights exist. The Bhutan Water Vision, Water Act and Water Policy are being formulated to create an enabling environment for the integrated and efficient management of water resources.

9

What are the constraints and challenges of the health system?

Financial constraints

- Health gets only 4% of the total government budget. Over 60% of health sector funding comes from donors and technical agencies.

Expertise and other physical constraints

- Two doctors and eight nurses are available per 10,000 population.
- Capacity for surgical and other specialized services is limited.
- One Health Assistant, one Assistant Nurse Midwife and one Basic Health Worker are posted in a Basic Health Unit.

Social constraints

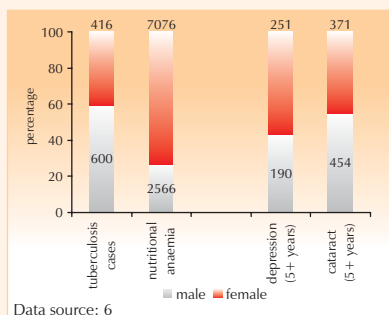
- Among children attending clinics (2005), 4.5% were underweight in Bumthang and 14.7% in Zhemgang. There were 3.3% overweight children in Gasa and 26.9% in Trongsa. Safe water supply is accessible to 95.1% of the population in Bumthang but to 56.9% in Dagana.

Indicators	Latest available value	Year	Source
Inequalities – Gender			
Expectation of life at birth F:M	1.05	2003	{19}
Female share in employment (%)	44	2003	{3}
Seats held in parliament – F (%)	8.7	2005	{17}
Ratio of girls to boys in primary schools (%)	95	2004	{3}

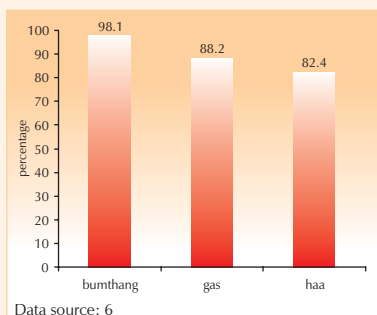
Health sector constraints

- Service delivery requires strengthening including referral for clinical support.

Percentage of disease distribution in male and female in 2005



Percentage of latrine coverage in 2005



- Limitation of infrastructure to deal with the emerging noncommunicable diseases, for which referral is done outside the country at a large cost to the health system.

Challenges

Health expenditure

Public expenditure on health is more than 80% of the total expenditure on health.

Nutrition

In children, both under-weight and obesity are common with nearly 19% children under five being under-weight and nearly 40% stunted. At the same time, nearly 18% children under five years were found to be over-weight in 2005 among those attending clinic.

Health information system

A standardized form for morbidity, mortality and other health data has been devised for reporting from the lowest to the national level. Data analysis and utilization at all levels require strengthening.

10

What does the country hope to achieve in the near future in health?

- Intensify the control of prevailing health problems and tackle emerging and re-emerging diseases.
- Intensify reproductive health services, sustain population planning activities, promote community-based rehabilitation and mental health services including innovative means to enhance mental well-being, and maintain a balance between primary, secondary and tertiary health care.
- Rationalize deployment of human resources based on workload analysis.
- Ensure timely supply of drugs and non-drug items to the health centres.
- Continue strengthening medical education for doctors, nurses, technicians, etc., with the focus on self-reliance and sustainability of health services.
- Develop guidelines for infection control and hospital waste management, and provide training to implement them.
- Reach the un-reached by:
 - focusing remote health centres and difficult-to-access geographical areas.
 - equitable distribution of services as well as facilities to all the health centres across the country.
 - fielding the best health workers in far flung areas for short duration on rotation.
- Introduce appropriate technology and building up human capital.
- Provide services with a human face.

- Now that the health coverage is adequate, focus on improving the quality of health care services.
- Set up standards of services and facilities, and develop the mechanism for their implementation.
- Strengthen health management information system and research, and their use in planning and monitoring.
- Develop appropriate secondary and tertiary health care services while maintaining the balance between primary, secondary and tertiary health care.
- Promote healthy lifestyles and address emerging noncommunicable diseases.
- A Health Trust Fund was established in 2000 to make health care services sustainable. The primary objective was to enhance accessibility and quality of health care by ensuring continued availability of vaccines and essential drugs. But much remains to be done to accumulate the required capital to invest in health infrastructure.

11

How is WHO collaborating with the country?

Policy development and planning

- Bhutan relies on WHO to develop policies and strategies that are technically sound. Continuity is the other comparative advantage.
- Assistance is provided in assessment of country needs, and how best WHO can help Bhutan in meeting its objectives.
- Help in decentralization for bringing services closer to the communities that are scattered and in remote areas.

Health system management

- The Royal Institute of Health Sciences got WHO's 50th Anniversary Award for Primary Health Care. With WHO support, this Institute is now affiliated to La Trobe University in Australia to train nurses at post-basic level. WHO's contribution to strengthen the Institute is significant.
- Assistance for developing health information system, particularly for streamlining ICD reporting, solar-powered links between basic health units and district hospitals for referral, and extension of tele-medicine project to communities.
- Technical and financial support for in-country training of mid-level managers in reproductive health. Medical officers are being trained to deal with obstetric-gynaecological problems in district hospitals.
- For essential drugs, WHO has been instrumental in revising and updating the national drug formulary and promoting rational use of drugs.

Promotion of healthy lifestyles and settings

- Provided advocacy material and formats for campaigns against substance abuse.
- Water quality guidelines have been provided to the government for developing standards of quality.

Prevention and control of priority diseases

- WHO provides technical support to strengthen the Malaria Control Programme, including training and establishing an entomology unit.
- The country is benefitting from WHO's Integrated Management of Childhood Illnesses (IMCI) strategy.
- For HIV/AIDS, WHO was the primary adviser in developing the country's first control programme. Support was provided for conducting knowledge, attitude, behaviour and practice (KABP) studies on sexual practices.
- Support has been provided to the Expanded Programme on Immunization (EPI) for strengthening the cold chain and for training of technicians.

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