

Health and Nutrition

Access to good health can contribute positively to the economic and social development of a country. Thus, key issues that impact the health status of people ought to be addressed through a diverse set of policy tools comprising short and long term measures to secure better health outcomes.

The people of Pakistan have grown healthier over the past three decades. The vision for the health sector comprises a healthy population with sound health, enjoying good quality of life through the practice of a healthy life style. In order to achieve this vision, significant measures have been taken toward disease prevention, health promotion, greater coverage of immunization, family planning, and provision of female health worker services.

This chapter is structured as follows: the next section presents the National Health Policy and its primary objectives, followed by an overview of the state of health indicators, expenditures, and

facilities in Pakistan. The targets and accomplishments for the 2011-12 are then described, followed by a discussion of the government's special focus on cancer treatment and the response waged to counter dengue outbreaks. The chapter then focuses on the challenges of narcotics trafficking and the burdens of growing incidence of drug addiction in Pakistani society. The government's efforts at augmenting food security and enhancing the availability and uptake of nutrients are examined before presenting conclusions.

National Health Policy

In light of the health related MDGs, reducing child and maternal mortality by 2015 is a high priority for the government of Pakistan. Health spending has increased progressively over the years as the National Health Policy adopted in 2009 focuses on making the population healthier. Some of the important targets of the policy are summarized in the table below:

Table:11.1 National Health Policy 2009 Health Sector Indicators (Baseline, Benchmarks and Targets)

Indicators		Baseline	Benchmarks and Targets					
		2006-07	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
I	<5 mortality rate (per 1000 lb)	94	78	73	68	65	60	55
II	Infant mortality rate (per 1000 lb)	78	66	62	58	55	48	43
III	Maternal mortality ratio (per 100,000 lb)	276	240	220	200	175	165	150
IV	% of children (12-23 months) fully immunized (disaggregation by gender and income)	76 (47)	78	80	82	84	84	85
V	TB - Case detection rate (SS+) - %	51	74	77	79	80	83	84
VI	TB - Treatment success rate - %	87	87	88	88.5	89	90	91

Source: National Health Policy 2009

Note: lb refers to Live Births

The objectives of the health policy are being achieved through the following targeted interventions.

- i. Making the health system more responsive and accountable
- ii. Introducing reforms in the health sector to make pragmatic progress in meeting MDG targets and tackling effectively newly emerging and re-emerging health issues
- iii. Effectively engaging private health sector and civil society organizations to improve health outcomes
- iv. Prioritizing vulnerable and disadvantaged groups in society as recipients of social uplift programmes.

Despite these positive efforts, the health indicators have been slow to improve due to various external and natural factors. Communicable diseases still account for a major cause of death. Maternal health problems are widespread and the current infant mortality at 63/1000 is the highest in South Asia.

Analysis suggests that:

- (i) Infectious and nutritional deficiency related diseases dominate the causes of mortality in the country.

(ii) Health status varies between urban-rural locations and by economic status.

(iii) Health achievements in Pakistan contrast sharply with those of its neighbours.

Special efforts and considerable resources are required to achieve the desired health outcomes.

Health Indicators

The most recent data on health performance of other South Asian countries suggest that Pakistan lags behind in infant mortality rate (at 63 per 1000 live births) and the under 5 years mortality rate (at 86.5 per 1000 live births). These indicators continue to remain high mainly on account of unhealthy dietary habits, water borne diseases, malnutrition and rapid population growth. However, the average life expectancy at 66 years compares well with India, Nepal and Bangladesh. Pakistan is committed towards achieving the MDGs. The MDGs 4, 5 and 6 relate to child mortality, maternal health and combating HIV & Aids, Malaria and other diseases. Considerable efforts and immense resources are required to achieve the desired health outcomes.

Table 11.2: Regional Human Development Indicator

Country	Life Expectancy 2011	Mortality Rate under 5 per 1000 2010	Infant Mortality Rate per 1000 2011	Population Growth Rate (%) 2011
Pakistan	65.99	86.5	63.26	2.03
India	66.80	62.7	47.57	1.34
China	74.68	18.4	16.06	0.49
Indonesia	71.33	35.3	27.95	1.07
Bangladesh	69.75	47.8	50.73	1.57
Sri Lanka	75.73	16.5	9.70	0.93
Malaysia	73.79	6.3	15.02	1.58
Nepal	66.16	49.5	44.54	1.60
Thailand	73.60	13.0	16.39	0.57
Philippines	71.66	29.4	19.34	1.90

Source: World Development Report 2011

Health Expenditure

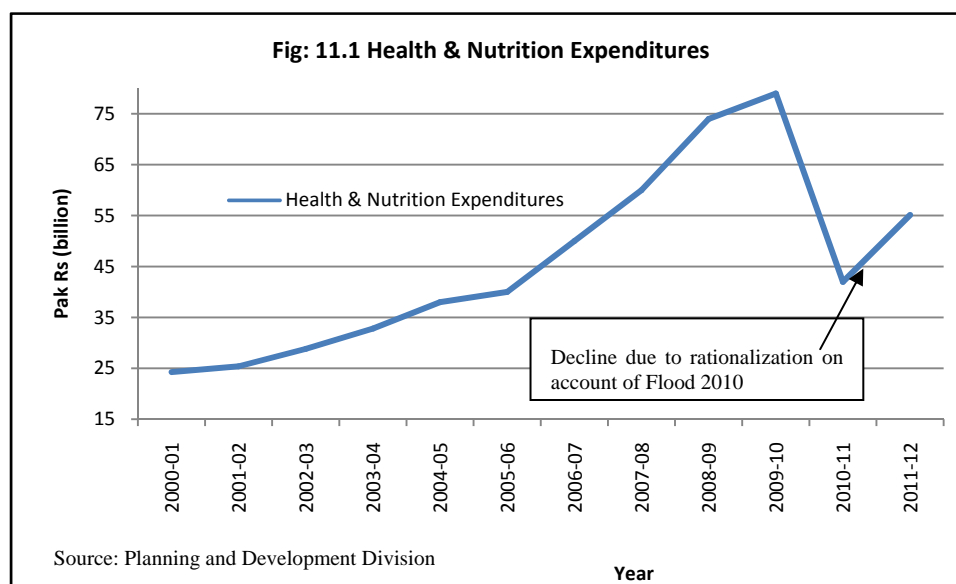
To maintain the expansion of health facilities, the financial allocation for the health sector has been increasing steadily. However, the massive floods of 2010 caused a significant downwards rationalization of health and nutrition expenditures which had to be diverted to the relief and rehabilitation effort. Total health expenditures

(federal and provincial) declined from Rs. 79 billion in 2009-10 to Rs 42 billion in 2010-11. For 2011-12 these have been increased to Rs 55.12 billion; comprising Rs 26.25 billion as development expenditure and Rs 28.87 billion as non-development (current) expenditure. Rs 15.72 billion has been provided in the federal PSDP for 2011-12.

Table 11.3: Health & Nutrition Expenditures (2000-01 to 2011-12) (Rs. Billion)

Fiscal Years	Public Sector Expenditure (Federal and Provincial)			Percentage Change	Health Expenditure as % of GDP
	Total Health Expenditures	Development Expenditure	Current Expenditure		
2000-01	24.28	5.94	18.34	9.9	0.72
2001-02	25.41	6.69	18.72	4.7	0.59
2002-03	28.81	6.61	22.21	13.4	0.58
2003-04	32.81	8.50	24.31	13.8	0.57
2004-05	38.00	11.00	27.00	15.8	0.57
2005-06	40.00	16.00	24.00	5.3	0.51
2006-07	50.00	20.00	30.00	25.0	0.57
2007-08	60.00	27.22	32.67	20.0	0.57
2008-09	74.00	33.00	41.10	23.0	0.56
2009-10	79.00	38.00	41.00	7.0	0.54
2010-11	42.00	19.00	23.00	(-47)	0.23
2011-12	55.12	26.25	28.87	31.24	0.27

Source: Planning & Development Division



Health Facilities

The health facilities and health related manpower have expanded substantially due to the greater focus on health sector programmes over the last

three decades. This has resulted in the establishment of a large network of health facilities with 108,137 hospital beds, 149,201 doctors, 10,958 dentist and 76,244 nurses by 2011. The current position of health personnel is as follows:

Table 11.4: Healthcare Facilities

Health Manpower	2009-10	2010-11	2011-12
Registered Doctors	139,555	144,901	149,201
Registered Dentists	9,822	10,508	10,958
Registered Nurses	69,313	73,244	76,244
Population per Doctor	1183	1,222	1,206
Population per Dentist	16914	16,854	16,426
Population per Bed	1592	1,701	1,665

Source: Planning & Development Division

Insufficient health spending and rapid population growth have contributed to continuing low facilities to population ratios particularly in the case of dentists, nurses and hospital beds. The potential pay off of investing in and improving the overall health services is enormous.

The health care system in Pakistan comprises both public and private health facilities. The public sector until recently was under the domain of the Ministry of Health. However, under the 18th amendment of the constitution of Pakistan, the Ministry of Health has been devolved in June 2011 and the functions of the ministry have been transferred to provincial health departments. The provinces are now responsible for developing their own strategies, programmes and interventions based on their local needs.

The private health system now stretches across the spectrum from primary to tertiary care and exists all over the country in both urban and rural areas. This sector provides varying levels of care and constitutes a diverse group of doctors, nurses, pharmacists, traditional healers and laboratory technicians. The services they provide include hospitals, nursing homes, and maternity clinics. The private sector has developed considerably by capitalizing on the existing demand. The majority of the private sector hospitals in Pakistan follow either a sole proprietorship or a partnership model organization. People sometime prefer private health services over public health care due to concerns about quality of care in public facilities.

Given the complex nature of the healthcare delivery system in Pakistan and the limited resources available to the health care sector, concerted efforts are required through inter-

sectoral collaboration focusing on the disadvantaged segment of population.

Health insurance is one of the complementary interventions for the safety net beneficiaries with the purpose of improving their access to health care services and reducing income loss due to catastrophic shocks. An important consideration in social insurance relates to the extent of health cover to be provided. Zakat, Bait-ul-Mal, Workers Welfare Fund, Employees Old Age Benefit and Workers Participation Fund are all forms of social security. These funds provide assistance in a limited number of cases to cover medical treatment costs.

Targets and Achievements during 2011-12

The targets for the health sector during 2011-12 included establishment of 10 rural health centres (RHC), 50 basic health units (BHUs) and renovation of 20 existing RHCs and 50 BHUs. The manpower targets include the addition of 5,000 doctors, 500 dentists, 4,000 nurses, 5,000 paramedics and 550 traditional birth attendants. Under the preventive program, about 7.5 million children were targeted to be immunized and 22 million packets of oral rehydration salt (ORS) were to be distributed during 2011-12.

The achievements in the health sector during 2011-12 included the establishment of 7 rural health centres (RHCs), 30 basic health units (BHUs) and renovation of 15 existing RHCs and 35 BHUs and addition of 4,000 hospital beds. The manpower development achievements include entry of 4,300 new doctors, 450 Dentists, 3,000 nurses and completion of training for 9,500 Lady Health Workers (LHWs). 60 percent of the set target was

achieved in the case of BHUs and 95 percent in the case of training of Lady Health Workers. Under the preventive program, about 7 million children were immunized and 20 million packets of ORS were distributed till March, 2012.

Table: 11.5 Physical achievements 2011-12

Sub Sectors	Targets (Number)	Estimated achievements (Numbers)	Achievement (%)
A. Rural Health Programme			
New BHUs	50	30	60
New RHCs	10	7	70
Strengthening/ Improvement of BHUs	50	35	70
Strengthening/ Improvement of RHCs	20	15	75
B. Hospital Beds	5000	4000	80
C. Health Manpower			
Doctors	5000	4300	86
Dentists	500	450	90
Nurses	4000	3000	75
Paramedics	5000	4500	90
TBAs	550	500	91
Training of LHWs	10000	9500	95
D. Preventive Programme			
Immunization (Million Nos)	7.5	7	93
Oral Rehydration Salt (ORS) (Million Packet)	22	20	91

Source: Planning & Development Division

Health Programs

In pursuance of the 18th amendment to the constitution of Pakistan, the health sector has been devolved to the provinces and the federal Ministry of Health has been abolished. However, national planning in the health sector and cooperation with the provinces and international development partners is vested with the Planning and Development Division. All the vertical health programs have also been devolved to the provinces. However, upon request of the provinces, the Council of Common Interests (CCI) in its meeting held on 28th April 2011 decided that the federal government (Planning and Development Division) shall fund these programs till currency of the 7th NFC award at a predefined share. Accordingly, the following national health programmes continue to be financed by the federal government in the post devolution scenario till 2014-15.

1. National Program for Family Planning and Primary Health Care

The program has recruited more than 103,000

LHWs as of March 2012. More than 60 percent of the total population and 76 percent of the target population is covered by LHWs. Out of 30 million children, about 16 million were immunized by LHWs during National Immunization Days (NIDS) Similarly, in high risk districts out of 5 million target women, 4.5 million were vaccinated by LHWs.

2. Expanded Program on Immunization

The National EPI Program provides immunization against the seven killer diseases - childhood tuberculosis, poliomyelitis, diphtheria, pertussis, neonatal tetanus, measles and hepatitis B. Initiated in 1978, the EPI programme is an effective public health intervention that has a great impact on the health of the population. By reducing the cost of treating diseases, immunization offers opportunities for poverty reduction. Every year a nation wide National Immunization Day (NID) is carried out to give polio vaccine to all children below 5 years of age. The mass immunization campaign has gained a great deal of acceptance across the country.

3. Malaria Control Program

Malaria is the second most prevalent and devastating disease in the country and has been a major cause of morbidity in Pakistan. More than 90 percent of the disease in the country is in the 56 highly endemic districts, mostly located in Balochistan (17 districts), FATA (7 agencies) and Sindh (12 districts). More than 40 percent of the reported cases from these districts are due to flaciparum malaria which is the more dangerous form of malaria. The Federally Administrated Tribal Areas (FATA) is the second highest malaria affected belt of the country accounting for 12-15 percent of the total case load of the country.

The National Strategy for Malaria Control is based on the following six key Roll Back Malaria (RBM) elements.

- 1) Early diagnosis and prompt treatment.
- 2) Multiple prevention
- 3) Improved detection and response to epidemic
- 4) Developing viable partnership with national and international partners
- 5) National commitment
- 6) Intensive and comprehensive public education activities to enhance public awareness of malaria, treatments and prevention

4. National TB Control Program

Pakistan is sixth amongst the top 22 high disease burden country. National Tuberculosis Control Programme (NTP) has achieved 100 percent Directly Observed Treatment System (DOTS) coverage in the public sector; in the last five years NTP and partners have provided care to more than half a million TB patients in Pakistan. Despite this the global target of 70 percent case-detection has not been achieved. There are certain areas where there is room for the NTP to further improve such as, at the client level - suspect management, contact management, quality bacteriology services; at the community level, the NTP can strengthen engagement with all care providers through public private

partnership and inter-sectoral collaboration, monitoring and supervision, research for evidence based planning and Advocacy, Communication and Social Mobilization (ACSM). The prevalence rate of TB is nearly 300 per 100,000 of population whereas the absolute number of cases is 211,500 and the treatment success rate is 91 percent. The percentage of TB case-detection rate is 80 percent and cure rate is 74 percent.

5. HIV/ AIDS Control Program

The government is implementing an HIV/ AIDS Control Programme since 2003 at a cost of Rs 2.9 billion for five years. The major focus is on Behaviour Change Communication (BCC), services to high-risk population groups, treatment of Sexually Transmitted Infections (STIs), supply of safe blood and capacity building of various stakeholders. A total of 4,500 HIV positive cases have been reported to the national and provincial AIDS Control Programmes. These include 2,700 full blown AIDS. Around 1,030 patients are receiving free treatment through 12 AIDS Treatment Centers.

6. National Maternal and Child Health Programme

National Maternal and Child Health Programme has been launched in order to improve maternal and neonatal Health services for all, particularly the poor and the disadvantaged, at all levels of the health care delivery system. It aims to provide improved access to high quality mother and child health and family planning services, train 10,000 community health and nutrition women workers, provide Comprehensive Emergency Obstetric and National Care (EMONC) service in 275 hospitals/ health facilities, provide basic EMONC services in 550 health facilities, and family planning services in all health outlets.

7. National Programme for Prevention and Control of Blindness

The National Programme for Prevention and Control of Blindness (NP-PCB) was launched by the federal Ministry of Health in 2005. The Program is in line with "VISION 2020", the

global initiative of WHO for elimination of preventable causes of blindness by the year 2020. An allocation of Rs. 246.9 million was made for this program during 2011-12.

Cancer Treatment

The Pakistan Atomic Energy Commission (PAEC) is playing a vital role in the health sector by using nuclear and other advanced techniques, for diagnosis and treatment of cancerous and allied diseases, as well as national cancer awareness and prevention programmes.

Presently the PAEC is operating 14 modern cancer hospitals in the country while four others are in the final stages of completion and are expected to start functioning by June 2012. These hospitals are manned by skilled teams of more than 2,000 professionals; including doctors, engineers, scientists, paramedical, technical and other supportive staff. These hospitals bring facilities for early diagnosis and treatment of cancer within the reach of a very large proportion of the population of the country. The major services provided at these hospitals are diagnostic and therapeutic nuclear medicine, hormonal assays, radiotherapy, chemotherapy, indoor/wards facilities, breast care clinics, biochemistry, ultrasonography, color Doppler, diagnostic radiology, histopathology, hematology, molecular based diagnostics and cancer prevention and awareness programmes. About 527,633 patients were treated from July to March 2012. Work continues in the following areas:

- Research continued on various International Atomic Energy Agency (IAEA) TC/Regional Cooperative Agreement (RCA) projects and others in collaboration with different international/ national organization.
- The cancer awareness and prevention/control campaign was launched especially for early diagnosis of breast cancer and treatment leading to better prognosis through arranging lectures, seminar, and workshops in remote areas, and through print and electronic media and mobile breast care clinics.

- Provision of state of the art treatment (radiation therapy) facility at Atomic Energy Medical Centre (AEMC), Karachi.

In order to provide better treatment facilities to the patients at their door steps, the PAEC continued working on the following projects:

- ▶ 4 Hospitals (3 in KPK and 1 in Sindh province) have almost been completed and out patient departments have started working. These hospitals are expected to start functioning at full capacity by June 2012.
- ▶ Addition of latest and advanced diagnostic and therapeutic facilities on par with international standards is also underway and Positron Emission Tomography- Computed tomography (PET/ CT) facility at the PAEC Cancer Hospital Institute of Nuclear Medicine and Oncology (INMOL) in Lahore has been added and patients throughout Pakistan are benefitting from these facilities.
- ▶ PAEC Cancer Registry Programme (PCRP), started in 2007, is now in completion phase and is expected to be completed in August 2012.
- ▶ Patients in remote areas also benefited with mobile breast care clinics being arranged on fortnightly and monthly basis for awareness, diagnosis and treatment of patients.

Dengue Epidemic and Control Programme

In Pakistan, the outbreak of Dengue Hemorrhagic Fever (DHF) was first reported in Karachi in 1994, followed by outbreaks in 2005, 2008, and most recently in 2011. Heavy monsoon rains in Punjab provided ideal conditions for dengue-bearing mosquitoes to thrive in stagnant water. Although the disease spread in all provinces, Punjab was badly affected.

21,292 confirmed cases of dengue were reported in Punjab in 2011, 352 of these cases were fatal. No deaths have been reported so far in 2012. In order to prevent the dengue epidemic, the following steps have been taken:

- ▶ The Punjab government has established a provincial task force headed by the Chief Minister of Punjab.
- ▶ A provincial steering committee headed by the Chief Secretary of the province has been constituted.
- ▶ District implementation committees headed by DCOs are operational.
- ▶ Chief Minister (CM's) Dengue Research and Development (R&D) cell was established to carryout applied and operations research on dengue.
- ▶ Emphasis is placed on utilizing latest technology for combatting dengue epidemics. A system has been developed and put in place for online dengue case surveillance, while Global Positioning System (GPS) mapping of cases, vector, and digital monitoring of dengue prevention and control activities are being carried out.
- ▶ Environmental management measures have also been taken including proper disposal of waste water, de-silting operations, supply of safe water, time repair of leaks in plumbing systems, use of water filters, management and regulation of used tyres, and cleanliness drives in eateries.
- ▶ All teaching hospitals have established isolation wards and high dependency units with all facilities. On the average 200 extra beds were allocated for dengue patients in each teaching hospital. About 10,000 bed nets treated with insecticide were provided to each hospital for dengue isolation wards.
- ▶ For the arrangements of platelets, cell separator machines with platelet kits were made available on an urgent basis at the Institute of Blood Transfusion Services, Jinnah Hospital Lahore, Children's Hospital Lahore and Lahore General Hospital. In other hospitals centrifuge machines have been provided for platelet segregation.
- ▶ Delegates of dengue experts from Sri Lanka and Indonesia also visited Pakistan to review the strategies and provide guidance on larva surveillance and capacity building on vector control and case management. Job positions

of 875 sanitary patrols, 337 CDC supervisors, 292 LHW's and 66 data entry operators were created. The creation of 718 positions of lady sanitary patrols is under process.

In Khyber Pakhtunkhwa a total of 386 confirmed cases with 7 deaths were reported from Peshawar, Abbotabad, Mansehra, Haripur, Mardan, Swat and Nowshera. Rs 55 million was released for purchase of larvicides, insecticides, spray machines, foggers, and social mobilization activities. To address future dengue outbreaks a scheme at a cost of Rs 265.7 million has been approved. The scheme will be implemented in all 25 districts of the province for three years. Main components of the scheme include institutionalization, advocacy, social mobilization and communication, vector control and surveillance, disease management and surveillance, and research and development.

In Sindh, a total of 1,547 suspected cases were reported out of which 1,326 were from Karachi and 221 were from the rest of Sindh. 18 of these cases were fatal, 16 from Karachi and 2 from the rest of Sindh. Sindh's response to this outbreak includes detailed situation analysis (need assessment and gap analysis) of epidemiology and entomology of transmitting vectors. Provincial Strategic planning for sustained control of vector borne diseases involve:

- ▶ Adopting integrated diseases control for dengue, malaria and leishmaniasis
- ▶ Restructuring of vector control programme to fill existing planning
- ▶ Capacity building of care providers for clinical management of dengue cases using guidelines specific to Pakistan
- ▶ Development of coordination and collaboration with UN Agencies, other line department and development partners for resource mobilization and technical assistance

The incidence of dengue in Balochistan was much less compared to other provinces. However, the government of Balochistan also

took necessary measures to overcome any emergency situation related to dengue.

Drug Abuse

Illicit drug consumption, production and trafficking have emerged as a serious global issue. Drug abuse has also affected Pakistan in many ways. Proliferation of drugs and psychotropic substances within Pakistani society and the subsequent increase in number of drug addicts are emerging challenges.

A Drug Control Master Plan (2010-14) has been prepared to reduce the health, social and economic cost associated with drug trafficking and substance abuse in Pakistan. The plan includes short, medium and long term initiatives for implementation of the National Anti-Narcotics Policy 2010. The Ministry of Narcotics Control in collaboration and cooperation with the provincial governments and other stakeholders, is taking measures to effectively implement the policy.

Currently, there are 16 ongoing development projects being implemented at a total cost of Rs.4.67 billion including local cost of Rs.2.13 billion and foreign aid of Rs.2.52 billion.

Table: 11.6 Drug Seizures

S.No.	Kind of Narcotics	Quantity of Drugs Seized (in Kgs)
i	Opium	8,725.006
ii	Morphine	1,249.000
iii	Heroin	1,641.014
iv	Hashish	65,445.850

Source: Narcotic Control Division

Pakistan is one of the top three countries where the confiscation rate, seizure of narcotics, drugs and precursor chemicals is high. The seizures of narcotics by the Anti-Narcotics Force (ANF) during the period July 2011 – 15th February, 2012 are given in the table 11.6:

Food and Nutrition

The links between malnutrition, ill health and poverty are well known. Disease contributes to poverty due to the costs of illness and reduces earning capacity during and after illness. Good health is a first step towards prosperity and reduction of poverty. It is therefore, critical to move towards a system which will address health challenges and prevent households from falling into poverty due to poor health. In Pakistan, health sector investments are viewed as part of the government's poverty alleviation endeavors.

Food security is a national priority. According to the recent National Nutrition Survey (NNS) 2011, about 32 percent children under the age of five years and 15 percent mothers are underweight. About 30 percent babies have low birth weight, reflecting the poor nutritional status of mothers.

The national food availability estimated through food balance sheets, has been satisfactory for major food items during the fiscal year 2011-12. The average calories estimated based on food availability has been 2,430 per capita per day. The overall food availability trend of essential food items for the last five years is given in the following table.

The consumption of essential food items shows slight improvement in calorie intake from 1,650 to 1,700 and protein from 44 to 46gm per capita per day in 2010-11 compared to data from the HIES 2007-08. The change in food consumption between 2007-08 and 2010-11 has mainly been through increase in cereals: wheat 3 percent, rice 12 percent, pulses 30 percent, vegetable ghee and oil 8 percent, meat 5 percent, fruits and vegetables 11 percent. Consumption decreased for sugar (1 percent) and milk (3 percent). Food consumption remained lower than food available and the minimum food basket¹

¹ Planning and Development Division 2012

Table:11.7 Food Availability per capita

Items	Year/ units	2006-07	2007-08	2008-09	2009-10	2010-11 (E)	2011-12 (T)
Cereals	Kg	151.1	158.1	160.3	158.8	158.7	160.0
Pulses	Kg	7.7	7.2	5.8	6.8	6.7	7.0
Sugar	Kg	30.3	30.0	25.6	26.1	26.5	29.5
Milk	Ltr	164.7	165.4	167.2	169.1	169.8	170.0
Meat	Kg	19.2	20.0	20.0	20.5	20.9	21.5
Eggs	Dozen	5.4	5.5	5.6	5.8	6.0	6.0
Edible Oil	Ltr	12.8	12.8	12.5	12.6	12.6	13.0
Calories per day		2398	2410	2425	2415	2420	2430
Protein per day (gm)		69.0	72.0	72.5	71.5	72.0	72.5

Source: Planning & Development Division

E: estimated T: targets

The cost of the food basket for the fiscal year 2011-12 (July- March) fluctuated and a cumulative increase of about 1 percent from Rs.1,745 to Rs.1,767 was noted. The change in cost among provinces has been highest in Khyber Pakhtunkhwa with a 5 percent increase owing to lower availability with respect to demand and lowest in Punjab where there was a 2 percent decrease.

The nutrition related activities/programmes are summarized below:

- ▶ Food security and social safety net measures especially for poor households continued to be in place to combat the impact of food inflation. The Benazir Income Support Program (BISP) and Pakistan Bait-ul-Mal's Food Support Program for poorest of the poor households continued to provide cash incentive support during the year throughout the country.
- ▶ Food quality control is also an important food security concern. A reference food laboratory for strengthening of food quality control system at the Nutrition Division of the National Institute of Health (NIH), Islamabad was completed during the year and is currently operational.
- ▶ Nutrition improvement through micronutrient supplementation to address anemia, and vitamin-A deficiency in children under five

and women of child bearing age continued along with growth monitoring, counseling of breastfeeding and weaning practices and raising awareness through 98,000 Lady Health Workers in primary health care (PHC) continued across the country to cover more than 60 percent of the total population.

- ▶ Micronutrient Deficiency Control Program to address major micronutrient deficiencies of iodine, iron and vitamin-A& D are being addressed through food fortification in the public and private sector. The emphasis during the fiscal year remained on improving the quality of fortified products.

Conclusion

This chapter discussed the state of health and nutrition in Pakistan. An overview of the National Health Policy and its primary objectives are presented, followed by a discussion of the state of health indicators, expenditures, and facilities in Pakistan. The targets and accomplishments for the 2011-12 are described, followed by a special focus on cancer treatment and the government's response to dengue outbreaks. The chapter highlights the challenges of narcotics trafficking and growing incidence of drug addiction in Pakistani society. Finally the chapter documents the government's efforts at augmenting food security and enhancing the availability and uptake of nutrients.

TABLE 11.1
NATIONAL MEDICAL AND HEALTH ESTABLISHMENTS, Progressive (Calendar Year Basis)

(Number)								
Year	Hospitals	Dispensaries	BHUs Sub Health Centres	Maternity & Child Health Centres	Rural Health Centres	TB Centres	Total Beds	Population per Bed
1960	342	1195	..	348	..	..	22394	2038
1961	345	1251	3	422	1	18	22394	2063
1962	361	1374	..	449	..	..	22775	2087
1963	365	1514	..	488	..	..	23429	2088
1964	365	1626	..	524	..	..	23664	2126
1965	379	1695	..	554	..	..	25603	2022
1966	389	1754	..	558	..	..	26200	2033
1967	391	1834	..	650	..	..	27291	1678
1968	398	1751	..	650	..	..	27112	2079
1969	405	1846	..	668	..	..	27618	2100
1970	411	1875	..	668	..	..	28976	2061
1971	495	2136	249	668	87	79	34077	1804
1972	496	2137	249	675	87	82	35337	1792
1973	521	2566	255	662	90	84	35655	1848
1974	517	2836	290	690	102	89	35866	1893
1975	518	2908	373	696	134	89	37776	1852
1976	525	3063	536	715	173	95	39129	1843
1977	528	3220	544	726	186	95	40518	1834
1978	536	3206	554	748	200	95	42469	1804
1979	550	3367	645	772	211	98	44367	1779
1980	602	3466	736	812	217	98	47412	1716
1981	600	3478	774	823	243	99	48441	1752
1982	613	3459	1587	817	283	98	50335	1735
1983	626	3351	1982	794	302	98	52161	1723
1984	633	3386	2366	787	319	96	53603	1724
1985	652	3415	2647	778	334	100	55886	1699
1986	670	3441	2902	773	349	101	57709	1689
1987	682	3498	3150	798	383	104	60093	1666
1988	710	3616	3454	998	417	211	64471	1593
1989	719	3659	3818	1027	448	211	66375	1587
1990	756	3795	4213	1050	459	220	72997	1444
1991	776	3993	4414	1057	465	219	75805	1425
1992	778	4095	4526	1055	470	228	76938	1464
1993	799	4206	4663	849	* 485	233	80047	1443
1994	822	4280	4902	853	* 496	242	84883	1396
1995	827	4253	4986	859	* 498	260	85805	1416
1996	858	4513	5143	853	* 505	262	88454	1407
1997	865	4523	5121	853	* 513	262	89929	1418
1998	872	4551	5155	852	* 514	263	90659	1440
1999	879	4583	5185	855	* 530	264	92174	1448
2000	876	4635	5171	856	* 531	274	93907	1456
2001	907	4625	5230	879	* 541	272	97945	1427
2002	906	4590	5308	862	550	285	98264	1454
2003	906	4554	5290	907	552	289	98684	1479
2004	916	4582	5301	906	552	289	99908	1492
2005	919	4632	5334	907	556	289	101490	1483
2006	924	4712	5336	906	560	288	102073	1508
2007	945	4755	5349	903	562	290	103285	1544
2008	948	4794	5310	908	561	293	103037	1575
2009	968	4813	5345	906	572	293	103708	1592
2010	972	4842	5344	909	577	304	104137	1701
2011	972(R)	4842(R)	5374	909(R)	584	304(R)	108137	1665

.. : Not available

Source: Ministry of Health, Planning & Development Division

* : The decrease in MCH since 1993 as against last year is due to exclusion/separation of family welfare centres from MCH structure in Khyber Pakhtunkhwa

P : Provisional data in respect of Punjab province

R: Repeated

TABLE 11.2

REGISTERED MEDICAL AND PARAMEDICAL PERSONNEL (Progressive)
AND EXPENDITURE ON HEALTH, (Calendar Year Basis)

(Number)

Year	Regis- tered Doctors ***	Regis- tered Dentists ***	Regis- tered Nurses ***	Register- ed Mid- wives	Register- ed Lady Health Visitors	Population per		Expenditure(Mln. Rs)^*	
						Doctor	Dentist	Develop- ment	Non-Deve- lopment
1963	1,049	17	..	..	..	46,615	..	34.55	80.00
1964	1,325	81	..	..	..	37,970	..	75.22	78.00
1965	1,591	151	..	..	..	32,533	..	46.47	84.00
1966	2,008	195	..	..	..	26,524	..	35.31	86.00
1967	2,588	233	..	..	..	21,170	..	70.80	92.00
1968	2,668	273	..	..	..	21,128	..	59.79	99.00
1969	3,322	332	..	..	..	17,459	..	67.99	128.00
1970	3,913	384	..	..	..	15,256	155,468	61.70	151.00
1971	4,287	446	..	..	..	14,343	137,870	57.62	141.10
1972	4,802	511	..	..	..	13,190	123,953	95.55	171.90
1973	5,138	549	..	..	..	12,824	120,018	175.67	210.10
1974	5,582	610	946	522	51	12,164	111,311	363.00	278.00
1975	6,018	650	1,985	1,201	118	11,628	107,661	629.10	360.64
1976	6,478	706	2,526	1,637	197	11,133	102,153	540.00	439.20
1977	7,232	733	3,204	2,577	246	10,278	101,405	512.00	558.60
1978	9,142	781	3,892	3,106	341	9,526	98,079	569.00	641.60
1979	10,167	846	4,552	3,594	453	8,695	93,309	717.00	661.89
1980	11,860	928	5,336	4,200	547	7,549	87,672	942.00	794.82
1981	14,996	1,018	6,110	4,846	718	6,101	83,369	1037.00	993.10
1982	18,256	1,121	6,832	5,482	928	5,087	77,948	1183.00	1207.00
1983	21,942	1,222	7,348	6,031	1,144	4,308	73,560	1526.00	1564.00
1984	26,700	1,349	8,280	7,078	1,374	3,605	68,490	1587.00	1785.12
1985	31,107	1,416	10,529	8,133	1,574	3,160	67,041	1881.50	2393.81
1986	35,102	1,558	12,014	10,315	2,144	2,865	62,580	2615.00	3270.00
1987	39,639	1,636	13,002	11,505	2,384	2,594	61,180	3114.41	4064.00
1988	43,921	1,772	14,015	12,866	2,697	2,396	57,963	2802.00	4519.00
1989	48,342	1,918	15,861	13,779	2,917	2,228	54,927	2681.00	4537.00
1990	52,935	2,068	16,948	15,009	3,106	2,082	52,017	2741.00	4997.00
1991	56,616	2,184	18,150	16,299	3,463	1,993	50,519	2402.00	6129.65
1992	61,081	2,269	19,389	17,678	3,796	1,892	49,850	2152.31	7452.31
1993	64,038	2,394	20,245	18,641	3,920	1,848	48,508	2875.00	7680.00
1994	67,224	2,584	21,419	19,759	4,107	1,803	46,114	3589.73	8501.00
1995	71,718	2,747	22,299	20,910	4,185	1,455	44,478	5741.07	10613.75
1996	75,239	2,933	24,776	21,662	4,407	1,689	42,675	6485.40	11857.43
1997	79,474	3,154	28,661	21,840	4,589	1,636	40,652	6076.60	13586.91
1998	83,696	3,434	32,938	22,103	4,959	1,590	38,185	5491.81	15315.86
1999	88,117	3,857	35,979	22,401	5,299	1,578	35,557	5887.00	16190.00
2000	92,838	4,165	37,528	22,525	5,443	1,529	33,629	5944.00	18337.00
2001	97,260	4,612	40,019	22,711	5,669	1,516	31,579	6688.00	18717.00
2002	102,644	5,058	44,520	23,084	6,397	1,466	29,405	6609.00	22205.0
2003	108,164	5,531	46,331	23,318	6,599	1,404	27,414	8500.00	24305.00
2004	113,309	6,128	48,446	23,559	6,741	1,359	25,107	11000.00	27000.00
2005	118,113	6,734	51,270	23,897	7,073	1,310	25,297	16000.00	24000.00
2006	123,146	7,438	57,646	24,692	8,405	1,254	20,839	20000.00	30000.00
2007	128,042	8,215	62,651	25,261	9,302	1,245	19,417	27228.00	32670.00
2008	133,925	9,012	65,387	25,534	10,002	1,212	18,010	32700.00	41100.00
2009	139,488	9,822	69,313	26,225	10,731	1,184	16,814	37860.00	41000.00
2010	144,901	10,508	73,244	27,153	11,510	1,222	16,854	18706.00	23382.00
2011	149,201	10,958	76,244	27,153(R)	11,510(R)	1,206	16,426	26248.00	28873.00

R : Repeated

Source : Ministry of Health, Planning & Development Division

.. : Not available

^* : Expenditure figures are for respective financial years 2011 = 2011-12

*** : Registered with Pakistan Medical and Dental Council and Pakistan Nursing Council.

Note: Data regarding registered number of Doctors/Dentists is vulnerable to few changes as it is affected by change of province or if there is any change in registration status from time to time

Date for medical personal for the year 2011 is estimated by adding the output actually achieved during the year to the medical manpower in 2010.

TABLE 11.3
DATA ON EXPANDED PROGRAMME OF IMMUNIZATION VACCINATION PERFORMANCE (0-4
YEARS), (Calendar Year Basis)

Vaccine/doze.	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011(R)
B.C.G.	5,070,031	4,777,166	5,114,865	4,862,494	5,203,061	5,364,136	5,790,371	5,884,435	6,133,378	5,924,868	5,924,868
POLIO											
0	1,734,707	1,842,279	2,132,474	2,352,552	2,625,604	2,846,229	3,098,116	3,428,749	3,650,026	3,773,055	3,773,055
I	4,583,673	4,543,243	4,819,735	4,512,848	4,858,592	5,250,568	5,645,107	5,556,128	5,884,871	5,852,612	5,852,612
II	4,079,328	4,014,687	4,281,717	4,098,187	4,387,392	4,869,878	5,178,706	5,034,410	5,402,701	5,526,671	5,526,671
III	4,023,674	3,780,170	4,035,457	3,916,351	4,159,987	4,738,953	5,070,490	4,819,065	5,277,352	5,422,439	5,422,439
IV	-	-	-	-	-	-	-	-	-	-	-
BR	226,529	138,207	105,640	77,721	49,428	33,007	46,615	60,917	35,842	81,322	81,323
COMBO											
I	-	-	-	-	-	-	3,999,759	5,071,729			
II	-	-	-	-	-	-	3,720,089	4,612,518			
III	-	-	-	-	-	-	3,656,495	4,356,169			
D.P.T											
I	4,688,768	4,558,086	4,768,665	4,427,751	4,581,347	5,275,075	1,710,723	-	-	-	-
II	4,175,545	4,038,630	4,227,754	4,025,465	4,126,599	4,886,576	1,523,243	-	-	-	-
III	4,112,538	3,795,573	3,982,974	3,839,571	3,918,794	4,756,441	1,479,364	-	-	-	-
BR	46,518	22,626	5,959	2,418	105	284	55	-	-	-	-
H.B.V											
I	-	1,772,217	4,482,628	4,212,720	4,458,183	5,053,306	1,617,799	-	-	-	-
II	-	1,290,550	3,892,582	3,879,701	4,065,343	4,692,279	1,441,447	-	-	-	-
III	-	965,850	3,576,321	3,616,543	3,840,703	4,571,006	1,401,189	-	-	-	-
Pentavalent											
I	-	-	-	-	-	-	-	-	5,924,991	5,862,892	5,862,892
II	-	-	-	-	-	-	-	-	5,461,294	5,555,135	5,555,135
III	-	-	-	-	-	-	-	-	5,338,521	5,407,251	5,407,251
T.T											
I	4,179,310	4,678,265	3,590,786	3,391,488	4,539,131	4,069,365	3,877,897	4,307,085	4,919,757	5,050,174	5,050,174
II	3,286,376	3,539,711	2,969,663	2,649,564	2,857,932	3,133,454	3,048,345	3,384,967	3,791,733	4,065,119	4,065,119
III	868,820	1,278,078	1,423,277	765,268	793,128	894,639	810,023	865,694	937,769	897,008	897,008
IV	310,995	310,448	337,968	292,941	519,086	286,368	239,055	279,024	284,879	268,213	268,213
V	163,747	159,402	163,699	131,888	157,382	176,530	141,288	152,080	168,861	164,970	164,970
MEASLES											
II	4,546,632	4,105,614	4,163,032	4,124,958	4,387,211	5,050,347	5,386,101	5,277,766	5,297,362	5,299,641	5,299,641
II	-	-	-	-	-	-	-	-	1,806,309	2,799,723	2,799,723

- not available

Source: Ministry of Health

B.C.G. Bacillus+Calamus+Guerin

D.P.T Diphteira+Perussia+Tetanus

T.T Tetanus Toxoid

Note: The DPT from the year 2007 onward has discontinued and is replaced by Combo - a combination of DPT and HBV

R: Repeated

TABLE 11.4

DOCTOR CONSULTING FEE IN VARIOUS CITIES

Period	(In rupees)											
	Faisal- abad	Gujran- wala	Hyder- abad	Islam- abad	Karachi	Lahore	Pesha- war	Quetta	Rawal- pindi	Sukkur	Average	
November	73	10.00	10.00	10.00	15.00	15.00	10.00	20.00	10.00	15.00	10.00	12.50
"	74	15.00	15.00	20.00	18.75	20.00	15.00	20.00	17.50	20.00	16.00	17.73
"	75	20.00	15.00	20.00	20.00	25.00	15.00	20.00	25.00	22.50	17.50	20.00
"	76	20.00	20.00	23.75	23.75	27.75	17.50	23.13	28.13	27.19	20.00	23.12
"	77	20.00	20.00	28.75	35.00	25.00	20.00	25.00	35.00	35.00	20.00	26.38
"	78	20.00	20.00	32.14	22.50	34.00	20.00	33.13	40.00	35.00	20.00	27.68
"	79	40.00	20.00	33.75	..	48.00	28.33	35.00	35.00	45.00	35.00	32.01
"	80	40.00	32.00	35.00	50.00	54.44	47.50	37.50	37.50	50.00	35.00	41.89
"	81	70.00	32.00	36.00	50.00	60.00	47.50	50.00	32.50	50.00	25.00	45.30
"	82	30.00	32.00	50.00	60.00	60.00	50.00	12.00	37.50	50.00	40.00	42.15
"	83	50.00	..	58.75	60.00	60.00	50.00	12.00	37.50	50.00	50.00	42.83
AVERAGE DOCTOR CALL FEE IN VARIOUS CITIES												
"	84	20.00	20.00	45.00	55.00	36.11	10.00	15.63	45.00	50.00	50.00	34.67
"	85	20.00	32.00	55.00	50.00	30.00	10.00	20.00	45.00	50.00	35.00	34.70
"	86	20.00	32.00	55.00	50.00	26.39	14.17	20.00	45.00	50.00	30.00	34.26
"	87	20.00	32.00	55.00	26.25	26.70	24.29	20.00	46.25	25.42	30.00	30.59
"	88	20.00	32.00	50.00	26.25	26.54	24.29	20.00	67.00	25.42	30.00	32.15
"	89	48.33	32.00	50.00	26.88	25.91	24.29	20.00	67.00	25.42	30.00	34.98
"	90	51.67	32.50	50.00	26.88	26.54	30.00	22.50	57.00	25.83	35.00	35.79
"	91	42.00	32.50	50.00	27.50	27.09	24.64	22.50	60.00	26.67	40.00	35.29
"	92	31.67	32.50	66.67	27.50	26.49	24.64	22.50	52.50	29.17	75.00	38.86
"	93	32.54	43.75	80.00	27.50	28.85	27.14	27.50	52.50	29.17	75.00	42.40
"	94	32.50	40.00	65.00	27.50	31.00	24.64	30.00	82.50	29.17	70.00	43.23
"	95	37.50	40.00	65.71	27.50	32.24	30.00	30.00	90.00	30.00	75.00	45.79
"	95	30.00	40.00	53.00	32.50	31.88	27.86	30.00	80.00	30.00	55.00	41.02
"	97	35.00	40.00	46.25	32.50	31.88	27.86	30.00	80.00	30.83	60.00	41.43
"	98	35.00	40.00	33.75	33.44	31.60	33.21	30.00	107.50	30.00	30.00	40.45
"	99	35.00	40.00	33.75	33.44	32.17	33.93	30.00	107.50	31.25	30.00	40.75
"	2000	40.00	40.00	33.75	33.13	32.40	38.93	30.00	107.50	32.92	30.00	41.86
"	2001	40.00	40.00	33.75	33.13	33.00	41.96	43.33	107.50	33.75	30.00	43.64
"	2002	40.00	50.00	30.00	33.13	35.00	41.25	43.33	95.00	33.96	30.00	43.17
"	2003	40.00	50.00	31.25	45.00	36.35	41.96	50.00	100.00	38.75	30.00	46.33
"	2004	41.25	50.00	33.00	45.00	36.25	41.96	50.00	100.00	38.75	30.00	46.62
"	2005	41.25	50.00	33.75	46.25	38.08	44.29	50.00	100.00	42.08	30.00	47.57
"	2006	41.25	50.00	33.75	55.00	41.73	52.68	50.00	100.00	43.75	50.00	51.81
"	2007	43.75	50.00	50.00	55.00	55.00	52.68	50.00	120.00	43.75	75.00	59.52
"	2008	75.00	65.00	50.00	75.00	80.00	63.21	100.00	130.00	61.67	75.00	77.49
"	2009	75.00	65.00	50.00	75.00	93.85	68.93	100.00	120.00	61.67	75.00	78.45
"	2010	75.00	75.00	60.00	90.00	93.85	68.93	125.00	130.00	71.67	100.00	88.95
"	2011	80.00	75.00	68.75	100.00	93.85	70.00	166.67	180.00	85.00	100.00	101.93

" Not available

Source: Pakistan Bureau of Statistics