Expanded Programme on Immunization

Financial Sustainability Plan

2003-2012

Islamabad

30 November 2003

(Federal EPI/CDD Cell)
National Institute of Health
Ministry of Health
Government of Pakistan

List of Abbreviations

AD	Auto Disable
ADB	Asian Development Bank
AHP	Accelerated Health Programme
BCG	Bacille-Calmette-Guerin (tuberculosis vaccine)
CBO	Community Based Organization
CDC	Communicable Diseases Control
CIDA	Canadian International Development Agency
CDD	Control of Diarrheal Diseases
DFID	Department for International Development
DHO (P)	District Health Officer (Preventive)
DPT	Deptheria, Pertussis, Tetanus
DSV	District Superintendent Vaccination
EC	European Commission
EDO (H)	Executive District Officer (Health)
EPI	Expanded Programme on Immunization
FSP	Financial Sustainability Plan
GAVI	Global Alliance for Vaccines and Immunization
GOP	Government of Pakistan
GOJ	Government of Japan
Hep B	Hepatitis B
Hib	Haemophilus influenzae type b
IDA	International Development Agency
ILR	Ice Lined Refrigerator
JICA	Japan International Coordination Agency
LHW	Lady Health Worker
MMR	Measles Mumps Rubella Vaccine
MNT	Maternal & Neonatal Tetanus
MOH	Ministry of Health
NGO	Non Government Organization
NPFP & PHC	National Programme for Family Health Planning & Primary Health Care
OPV	Oral Polio Vaccine
PC1	Planning Commission Form 1
PDS	Pakistan Demographic Survey
PHC	Primary Health Care
PSDP	Public Sector Development Programme
SAP	Social Action Programme
TDL	Total Debt Liabilities
THE	Total Health Expenditure
TT	Tetanus Toxiod
UCI	Universal Child Immunization

UNICEF	United Nations Children's Fund
UNFPA	United Nations Family Planning & Population Agency
WHO	World Health Organization

Note : Calculations in this document are based on constant exchange rate 1US$=Rs 58.00 for 2003-2012, except where mentioned otherwise.

Table of Contents

1. Executive Summary

Pakistan is seventh most populous country in the world having an estimated population of 151.202 million[1].The national per capita income for 2003 is about US$ 492 equivalent. Incidence of poverty has been increasing since 99's and presently it is estimated to be at 30-35 percent of the population. Due to increases in population, the proportion of poor rural and urban household increased. Poverty is considered more widespread in rural areas. A large proportion of population is employed in agriculture sector, which had suffered from seasonal conditions in recent years.

Domestic and external debt accumulated to 115 percent of the gross domestic product in 2001.

Health indicators

After independence the population increased by a factor of four. Mortality rate declined leading to substantial improvement in expectancy at birth, especially for females, with an increase from 48.7 to 64 years between 1965 to 2003. The government of Pakistan has improved access to health care, which resulted in improvement of health indicators. IMR decreased from 102.4/1000 live births in 1991 to 82.9/1000 live births in 1999. Key issues confronting the health sector are the health of the poor and the women.

Expanded Programme on Immunization

Expanded Programme on Immunization was launched in 1978 as a continuation of small pox eradication programme. Current specific objectives includes interruption of polio virus, increasing coverage and ensuring safety of injections. The average EPI routine annual expenditure increased from US $ 21-24 million in late 90s to US$ 32 million in 2003.
In Pakistan, the EPI has till recently focused on the six diseases that have low cost vaccine readily available. In 2001 vaccination against Hepatitis B for infants was added to routine EPI with the assistance of GAVI.

Immunization Coverage

Up-till 1981 the immunization coverage for fully immunized child was less than 2%. It gradually increased and Pakistan achieved UCI in 1990. During the period 1991 to 1995 the coverage decreased from 86% to 47%. The main reason for this was withdrawl of donor support in 1991, besides decrease in health budgets including EPI, other health priorities, and institutional constraints at the district level, inadequate training and diminishing cold chain capacity. Since 1998 the coverage has shown generally upwards

1 based on 1998 census data and average population growth rate of 2.3 %

trend, with reported coverage of 68% DPT3 in 2002, mainly because of GOPs priority for EPI in allocation of resources out of health budget.

Vaccines

Since the beginning of the EPI , GOP procured vaccines through UNICEF from its own resources. Lately vaccine against Hep B has been supplied by GAVI. This support will end by mid 2006. Therefore from mid 2006 this relatively expensive vaccine will also be financed by GOP. The country plans to include pentavalent DPT-Hep-Hib from 2008 subject to justification based on Hib burden assessment, which is currently underway. The initial 5 year of this pentavalent vaccine which will require about US$ 510 million will be supported by GAVI under its window for new and underused vaccines.

Hard ware for EPI

EPI has planned for strengthening of hardware (cold chain & transport etc) through developing EPI GAVI PC1s. However even beyond the GAVI support period, GOP will mainly be financing these essential components of the program.

Finance

Considerable sourcing has been realized through the Social Action Plan (SAP) which began in the early 1990s to increase government social services delivery performance. The first phase of SAP (1992-1996) achieved its expenditure and performance targets in the health and population welfare sectors. Increases in social sector expenditures realized during the first phase stagnated during the second phase (SAP-II) effecting quality of services. Since the initial phase of SAP, public health spending has been at about 0.8% of GDP. The Public Sector Development Programme 2003-04 costing Rs. 160 billion allocated Rs. 4.7 billion for health sector.

EPI Partners

Apart from Government of Pakistan, a number of donor agencies are financing the Public Health Programmes. The main partners in EPI are , WHO, UNICEF, JICA, World Bank , CDC, Rotary International and DFID. The current major supporter of the EPI routine program is GAVI through its Vaccine Fund

Current Program Cost and Sources of Financing.

Current Program Cost for the year 2003 is estimated to be US$ 31.8 million (Rs.1952 million). The breakup of the sources of funds for the program is as under:-

Government of Pakistan	US$ 18.7 million
External Partners	US$ 13. 1 million

Total **US$ 31.8 million**

Expenditure for Routine EPI.

The total average annual expenditure on routine EPI activities over 1995-1999 period was approximately $ 21-24 million. This cost has significantly increased to $ 32 million in 2003, largely as a result of the addition of HBV vaccination and use of AD syringes. The Federal and Provincial Governments contribute 59% of all funds for routine EPI with majority of support being in the form of salaries. Of the salary component, GoP provides 97% of the resources. External support is primarily used towards cost of vaccine (Hep B), syringes and cold chain equipment.

Social mobilization

In EPI Government of Pakistan has been major source of support for social mobilization. NIDs have benefited greatly from this activity; however efforts in field have not been applied to routine EPI as vigorously. There is a little demand for immunization services in remote areas. Social mobilization, in the form of advocacy meetings, mass media communications and distribution of leaflets to parents etc are planned for coming years mainly with the support of EPI partners.

Future Plans and Goals of the Program

Key objectives for EPI are to achieve 80% converge of all EPI vaccines by 2005, to interrupt transmission of polio in 2005, eliminating neonatal tetanus nationally and reducing the burden of measles to 80 % of pre-vaccine era by 2004.

Financing Plan 2003-2012.

Total cost of strengthening and upgrading EPI for the plan period, if Pentavalent vaccine is added to EPI, is estimated at US$ 1,106.8 million. The Federal and Provincial governments are likely to provide 22% & 14% of this requirement respectively. 6.4% is already committed by GAVI, while another 46% (US$ 509 million)is likely to be supported by GAVI from 2008-2012 The remaining 11% (US$ 119 million) will be supported by EPI partners, who have collectively supported much larger amounts than this in the past.

However if it is decided not to include pentavalent vaccine in EPI, then the total project cost will be US$ 680.7 million. 42% and 23% of this cost will be supported by Federal and Provincial governments respectively. EPI partners will be expected to support 17.5% of the projected cost. The remaining 10.5% of the cost is already committed by GAVI.

2 Section - I

Impact of Country and Health System Context on Immunization Program Cost, Financing and Financial Management

2.1 General Introduction-Pakistan

2.1.1 Land and People of Pakistan

The Islamic Republic of Pakistan emerged on the map of the world as an independent country on 14th August 1947 as a result of the division of the former British India.

Spread over an area of 804 thousand square Kilometers, it touches the Hindu Kush in the north and extends form the Pamirs to the Arabian sea. It is bounded by Iran and Afghanistan in the north west, India in the east and south east and Arabian sea in the south and a common border with China along side Gilgit and Baltistan in the North.

The variety of landscape divides Pakistan into six major regions. The North High Mountainous Region, the Western Low Mountainous Region Balochistan Plateau, the Plateau Uplands, the Punjab and the Sindh Plain.

With an estimated population of around 151.202 million in 2003, Pakistan is the 7th most populous country in the world and 4th in the Asia and pacific. The historical trends indicate a continuously increasing growth in population. The first doubling of Pakistan's Population took almost 50 years (1901-1951) and the next about 25 years. With the present growth rate of 2.1% the population will increase four fold i.e 570 million in the next 66 years.

The multi ethnic population of Pakistan is mostly settled in separate different areas of the country with considerable mix in the metropolitan cities.

2.1.2 Government

The Constitution of the Islamic Republic of Pakistan provides for a Federal Parliamentary System of government, with President as the Head of State and the popularly elected Prime Minister as Head of government. The Federal Legislature is composed of the National Assembly and the Senate. There are a number of Ministries and Divisions for different functions.

2.1.3 Administrative Units

Pakistan, for the purposes of EPI is administratively divided into four provinces, AJK and three territories. The percentage population of these administrative units[2] and total population estimated for 2003, along with No. of administrative units is given in the following table.

Table: Provinces / Territories and population

Province	Percentage of Total Population	Population in thousands	No. of districts/Agencies etc
Punjab	54.03	81,694	34
Sindh	22.32	33,748	21
Balochistan	4.85	7,333	26
NWFP	13.07	20,714	24
Territories			
AJK	2.16	3,266	7
FATA	2.34	3,538	7
FANA	0.65	983	6
Islamabad Capital Territory	0.59	892	1
Total	**100**	**151,202**	

The provinces, AJK and FANA are divided into districts while FATA is divided into Agencies. The districts are further divided into Tehsils and these are further divided into Union Councils.

2.1.4 Ministry of Health and Provincial Health Departments.

At the federal level, Ministry of Health is responsible for policy development, coordination, monitoring, evaluation and research, collaboration with International agencies and provision of services through federal health institutions. Since health is the provincial subject, the provincial health departments are responsible for provision of the health services with in the policy frame work of federal ministry of health. Besides providing policy guidelines Ministry of Health (MoH) designs national Programs/ projects in collaboration with provincial departments of health, arranges necessary funds, provides technical assistance, monitors and evaluates. Currently a number of programs are being run for provision of better health services to the masses, these include National Programme for Family Planning & Primary Health Care (LHWs Programme), National EPI Programme including Polio Eradication Initiative, Elimination of Meternal

[2] Based on 1998 Census

and Neonatal Tetanus (MNTE) special Immunization activities, National AIDS Control Program, Women Health Project,TB Control Programme, Malaria control programme, National Nutrition Project and Reproductive Health Project.

2.1.5 Devolution

For improving the management and encouraging the decision at grass-root level the concept of decentralization and devolution has been put into practice by the National Reconstruction Bureau. There has been devolution of political power and decentralization of administrative and financial authority to the Local Government in all the districts of the four provinces. The purpose is to establish good governance, make service delivery more effective and decision-making more transparent through institutionalized participation of the people at the grass-root level.

The District Governments under the Devolution Plan have been working satisfactorily through an institutionalized arrangement. As per the Local Government Ordinance these governments have been executing all administrative and financial powers devolved upon them. The system of grassroots level participation has given increased impetus to the delivery of local functions which interalia include health. The fiscal transfer mechanism to the district government has been put in place through PROVINCIAL FINANCE COMMISSIONS which through their Awards, interalia, devise formulae for distribution of resources between the provinces and the districts to be called as PROVINCIAL RETRAINED AMOUNTS and the PROVINCIAL ALLOCABLE AMOUNTS. The Award also suggests the distribution of PROVINCIAL ALLOCABLE AMOUTS between various districts. Following the presentation of Provincial Budget, but before the announcement of next financial year, annual budget of each district government has to be submitted to the District Assembly for approval. The system of fiscal transfer to the districts has been functioning smoothly.

The district government system lays a great emphasis on internal controls which include inspection, supervision and transparency. Every citizen has a right to information about any office of district government. Furthermore the MONITORING COMMITTEEIES are responsible for monitoring of functioning of the offices of district government and evaluate their performance in relation to achievement of targets. In this view of the matter, in the devolved setup the service delivery system of the EPI is going to be more assured and effective

2.1.6 Health Care Delivery System

Pakistan has an extensive health care delivery system consisting of a mix of both public and private sectors. Health care delivery operates through both the public and private sector. However preventive health services, including EPI are almost exclusively provided by Public sector health delivery system.

2.1.6.1 The public sector health delivery system

Primary Health care services are offered through a network of Basic Health Units and Sub Health Centers (5230), Rural Health Centers (541), MCH Centers (879) and dispensaries (4,625). Besides provision of secondary and tertiary care services through tehsil, district and teaching hospitals(907).The public sector also provides preventive care services through vertical programs e.g. Expanded Program on Immunization, TB Control Program , National Programme for Family Planning and Primary Health Care, Aids control Programme, Malaria Control Programme, Women Health Programme, Nutrition Programme and Reproductive Health.

Table: Health Facilities and Health Care Workers in Pakistan-2001-2002

Health Facilities & Health Care Workers (Nos.)	
Basic Health Units and sub Health Centers	5,230
Rural Health Centers	541
Maternity & Child Health Centers	879
Hospitals	907
Dispensaries	4,625
TB Centers	272
Beds in Hospitals and dispensaries	97,945
Registered Doctors	96,248
Registered Dentists	4,669
Registered Lady Health Visitors	5,669
Registered Midwives	22,771
Registered nurses	40,019
Population Per	
Hospital Beds	1,490
Doctors	1,516
Dentists	31,579

Source: Statistical Supplement Economic Survey 2001-02 Government of Pakistan

2.1.6.2 Outreach and Community Based Services

Immunization, sanitation, malaria control, maternal and child health and family planning services are also provided by outreach workers, which include, EPI Vaccinators, LHWs of NP for FP & PHC, Communicable Diseases Supervisors (CDC Supervisor) and Trained Birth Attendants (TBAs).

2.1.6.3 The private health sector

The private health sector in Pakistan consists of a number of qualified and unqualified practitioners. This sector is mainly focused on curative aspect with almost negligible contribution to the preventive health besides being largely unregulated

The EPI services provided through private health sector are mostly availed by only the highest income group families. These immunizations often include other antigens than routine EPI like MMR, Hib etc

Under the EPI Pakistan Policy and Guidelines[3] , the private sector is to be encouraged for playing its role in provision of the EPI Services.

2.1.6.4 NGOs

There are more than 200 NGOs currently registered in the country. In selected areas a few of these NGOs are actively involved in provision of EPI services in collaboration with provincial health departments. The role of certain NGOs especially in social mobilization activities has been particularly evident during NIDs for Polio. As for private health sector, under the EPI Pakistan Policy and guidelines, the NGOs are also to be encouraged to assist in EPI activities.

2.1.7 PRSP FOR HEALTH, NUTRION AND POPULATION WEAFARE SECTORS

Pakistan has long lagged behind many low –income countries in terms of health and fertility outcomes. Spending on health and population through public sector is low amounting to 0.5%[4] of GDP. Population growth rate estimated at 2.1% in 2001 is still relatively high. The total fertility rate is 4.1%[5] compared to 5.4% at the beginning of the 1990s[6]. The contraceptive prevalence rate is estimated at 27.6% Maternal mortality ratio is around 530 per 100.000 live births. According to PDS 2001, the Infant Mortality Rate is 77.1 per 1000 live births compared to 101in 1991/93[7].

2.1.7.1 Policy Response and safety nets:

Pakistan‘s Interim Poverty Reduction Strategy Paper (1-PRSP) of 2001 places the revival of growth and the reduction of poverty as twin challenges for Pakistan and

[3] Awaiting formal approval.
[4] 1-PRSP November 2001, Page No.54
[5] Pakistan Demographic Survey, 2001(unpublished results)
[6] Pakistan Demographic and Health Survey, 1990/91
[7] Pakistan Integrated House hold survey, 1995/96

states the government's commitment to improving public service delivery as central to achieving these goals. The human development strategies focus especially on women and children, the most vulnerable sections of society[8]. The national Health Policy (NIP) of 2001 focuses on health sector investments as part of poverty alleviation and accords priority to primary and secondary healthcare services. Both IPRSP and NHP refer to tackling malnutrition and other nutritional deficiencies. Which afflict mostly women and children.

The interim Population Sector Perspective Plan[9] states population stabilization as a means of achieving the goals of the PRSP. The plan proposes to reduce by 2004 the population growth rate to 1.9% and 1.6% by 2012. In health the focus is on public health services through programs for immunization, HIV/AIDS prevention, TB control, Malaria Control for provision of PHC services through 70,000 Lady Health Workers who are in place to cover 50% of country's population and devolution of health services to the district government up to the level of district hospital .

The major challenges facing health sector

Analysis of the burden of disease (BOD) conducted in 1996[10] indicated that around 60% of BOD is because of poverty related communicable diseases, children illnesses, reproductive health problems and malnutrition. Major impact of these diseases is borne by poor segments of society and vulnerable groups. Thus the major challenges are slow progress in improving the indicators related to maternal health, morbidity and mortality caused by communicable diseases. These areas are also integral part of "Millennium Development Goals "(MDGs) 4.5 and 6. Therefore focus of the health and population sector in line with National Health Policy and Perspective plan, is to reduce the poverty of opportunity by addressing MDGs 4.5 and 6.

Child Health

The target for MDG 4 is to Reduce by two third between 1990 and 2015 the under five mortality.Indicators to measure this target comprise: under five mortality rate, infant mortality rate and proportion of under one year old children immunized against measles.

Mortality and its causes

According to the Pakistan Integrated Household Survey (PIHS) 2001/02, the overall infant mortality was 82 per 1000 live births for the period 1997-99 which has fallen from 101 per 1000 live births for the period 1991-93. The IMR was as low as 49

[8] Poverty Reduction and Human Development Strategy for Pakistan Human Development Forum. GOP (Planning Commission), January 2002
[9] Interim Population Sector Perspective Plan 2012. GOP (Ministry of Population Welfare). February 2002
[10] Pakistan towards Health Sector Strategy, World Bank. 1998.

per 1000 live births where mother had education of 10 years or more. The Pakistan Demographic Survey 2001 estimated IMR at 77 per 1000 live births in year 2000 much higher than India and Bangladesh[8].

Globally deaths among children are generally due to ARI (12%) malaria (8%) measles (5%) HIV/AIDS (4%) peri-natal causes (22%) and other cause (29%). In 60% deaths, there is association with malnutrition. The causes of children mortality in Pakistan are not fully known. However a study covering rural areas of Balochistan and NWFP quoted diarrhea and ARI (43.3% and 18.9%) as major causes of infant deaths[9].

Immunization Program:

The program for immunization has substantially reduced morbidity and mortality from vaccine preventable diseases of children. The overall coverage of fully immunized children consistently remained below 50%[11] However there were improvements during 2000/01 as fully immunized children were 73% in Punjab followed by 57% in Sindh, 48% in NWFP and 37% in Balochistan[12]. With GAVI inputs, Pakistan has introduced immunization for Hepatitis-B including beefing up of cold chain and district immunization programmes.

The immunization coverage will be improved through :institutionalizing micro planning at locality level: using dropout rates as an indicator of performance and coordination with LHWs to trace dropout and un-immunized children and women :annual feedback from the localities where coverage is low; province wise assessment of non-salary budget to identify shortfalls and find out options to fill in the resource gap; decentralizing repair and maintenance of cold chain; alternate ways to reduce reliance on mobile strategy like contracting out services to local Non Governmental Organizations (NGOs) and Community Based Organization (CBOs). The low performing areas will be continuously mapped and options developed to improve coverage including skill development of low performers.

Challenges

They are mainly at implementation level. There is no vaccine management guideline. The system of repair and maintenance of cold chain is ad hoc. The community feedback is not obtained from low performing areas nor is the concept of tracing dropouts. The guidelines for participation of private sector in the delivery of immunization are not defined. In some provinces/areas , the management staff is lean and does not respond to program needs.

[11] PIHS round 1,2 &3 , Federal Bureau of Statistics.
[12] Provincial Third Party Evaluation

2.1.8 Overall Vision for Health Sector

The overall national vision for the health sector is based on "Health-For-All" approach. The new Health Policy aims to implement the strategy of protecting people against hazardous diseases; promoting public health; and upgrading curative care facilities.

A series of measures, programmes and projects have been identified as the means for enhancing equity, efficiency and effectiveness in the health sector through focused interventions EPI is one of the identified programmes

The present policy document is a blueprint of planned improvements in the overall national health scenario. It will require commensurate investments and interventions by the provincial governments for improving health infrastructure and health care services. The federal government will continue to contribute its share besides playing a supportive and coordinative role in key areas like communicable disease control programmes including EPI.

2.1.9 Introduction of EPI

Pakistan's Expanded Programme on Immunization is the almost exclusive provider of immunization services in Pakistan. It provides routine, clinic based and out reach immunization services of infants (BCG, OPV, DPT, Measles and Hep B) and TT against pregnant women. For last five years EPI is also managing Pakistan's Polio Eradication Initiative (PIE) involving national, sub-national and regional campaigns. These campaigns are the manifestation of the national commitment to free the country from polio by 2005[13].There after the focus of the immunization programme will have to shift to increased expansion of basic immunization, immunization with Hep B vaccine, Hib vaccine along with specific efforts to enhance measles and tetanus vaccination coverage. The national government is cognizant of this situation and is developing the PC-1 for the next five years federal planning cycle.

Immunization programmes are one of the most cost effective public health interventions having had considerable success in many countries. Within Pakistan the national immunization programme has till recently focused on the six diseases that have low cost vaccines readily available. The seventh disease (Hepatitis B) was also targeted through introduction of Hepatitis B vaccine for routine immunization of Infants in 2001.

Besides generous funds allocation by the Ministry of health, EPI got a boost in recent past by receiving and utilizing the GAVI support under its three windows. The service delivery system for immunization which includes vaccines, cold chain, transport, programme management, supervision and monitoring systems, disease surveillance,

[13] Current focus is to interrupt Polio virus transmission by end 2005.

training of health workers and immunization policies and procedures are already established and the deployment of additional vaccines could be conducted at relatively low operational cost.

2.1.10 National Health Policy, Millennium Development Goals (MDGs) And Poverty Reduction Strategy Paper (PRDP)

Cognizant to these Millennium Development Goals (MDGS) the National Health Policy 2001 places health at the center of the economic growth and the same has been incorporated in the Poverty Reduction Strategy Paper (PRSP). In this regard the new Health Policy is having the following 3 key features;

1. Health sector investments are viewed as part of Government's Poverty Alleviation Plan;

2. Priority attention is accorded to primary and secondary sectors of health to replace the earlier concentration on tertiary care.

3. Good governance is seen as the basis of health sector reform to achieve quality health care.

2.2 Socio Economic Situation & Health Financing

Throughout the 1990s the incidence of poverty was estimated to increase to about 30-35 percent of the population. During this period the proportion of the poor rural and urban households increased. Poverty is considered to be more widespread in rural areas where small land holding, large family size, unemployment and inadequate services and adverse seasonal conditions in recent years have constrained development.

The national per capita income of Pakistan is about US $ 492 in 2003.

2.2.1 Health Care Financing

Health Sector would continue requiring funds from public exchequer and
it is impossible for health institutions to generate adequate revenue either through cost-sharing or cost recovery to meet their expenditures. The aggregate public sector expenditure on health picked up very slowly and gradually from the low percentage of 0.4 to 0.6 of the GNP in the early seventies to 1.0 percent of the GNP in 1987-88. This declined to 0.75 percent of the GNP in 1997-98.

This raises the issue of shifting some recurrent burden to the users or to the private sector. This applies particularly to the hospitals, which consume the major share of the non-development budget. Deliberations are needed to explore as to which modalities of

user charges will meet with less public resistance relative to their revenue-generating potential. However user charges for EPI are not likely to be imposed in near future.

In the past it was assumed that minimum 5% of GNP should be spent on health sector by the developing countries .Now the study by WHO commission on Macro Economics and Health shows that the per capita expenditure on health should be raised to at least 34 US $ by 2007 to achieve Millennium Development Goals (MDGs). Pakistan is currently spending only 4 US $ per capita as public expenditure on health (World Health Report 2002). The same report shows that out of pocket expenditure is US $ 14 in Pakistan, thus presently total per capita expenditure is US $ 18 and it needs to be raised to US $ 34 by 2007 to put the health sector spending on right track for achieving MDGs. Federal Government expenditure shows that 75% of health budget of PSDP is spent on PHC while 10-30% of development expenditure is spent by the provincial government on PHC. In Pakistan, Total Health Expenditure (THE) is 3.5 % of GNP and out of this only 0.7% is by public sector while 2.8% is out of pocket expenditure.

2.2.2 The Macro Economic Status

Pakistan has by and large made a steady progress in economic status as reflected in the table given below:

Table : Performance of Growth and Stabilization Indicators

	1998-99	1999-00	2000-01
GDP Growth Rate	4.2	3.9	2.2
Total debt servicing as (%of GDP)	11.7	11.8	10.3
Budget Deficit (%of GDP)	6.1	6.6	5.2
Total Revenue (%of GDP)	15.9	16.3	16.2
Public Expenditure (%of GDP)	22.0	22.5	21.0
Current Account Deficit (%of GDP)	4.1	1.9	0.9
Growth rate of money supply	15.1	11.7	8.3
Inflation Rate	5.85	2.78	6.04
Depreciation of Normal Exchange Rate	10.1	3.4	10.6

Source: Economic Survey of Pakistan, 2002-2003.

2.2.3 Pakistan's current Economic Situation

There have been significant improvement in Pakistan's economy over the last three years that include, among other, a comfortable balance of payment position, strong build up in foreign exchange reserves, stable exchange rate, surplus in current account, relatively low budget deficit, low inflation, declining interest rates and improved credit rating in the international capital markets. Fiscal year 2002-2003 has consolidated these

gains and has further built upon the strong foundation laid during last three years. Based on the first eight months' figures of fiscal 2003 the GDP growth target of 4.5 percent is expected to be realized as against the last years provisional estimate of 3.6 percent[14]. During this period the overall performance of tax collection has exceeded the fixed targets and as against the target growth of 14 percent the net tax collection grew by 15.7 percent. Expenditure on the other hand has been managed prudently. Social sector and poverty related spending has gathered momentum. Fiscal deficit has remained under control. The external balance of payments has improved significantly despite inhospitable external environment. Exports have grown by 19 percent and the current account balance continues to remain in surplus. All in all Pakistan's economy in the recent years has assumed the path of resilience.

Pakistan initiated the implementation of a number of structural adjustments and stabilization programmes in the 1980s and carried them through 1990s in order to make the economic system more efficient and to bring about macro economic stability.

2.2.4 Domestic And External Debt

Despite a small increase in the overall debt stock during the year 2002-2003 Pakistan's debt profile witnessed a significant improvement of the second successive year, with a sharp reduction in the cost of debt, a lengthening of the maturity profile, reduced dependence on external debt, as well as a sharp fall in the debt to GDP ratio.

Infact the growth in Pakistan's overall debt stock has slowed significantly in recent years, driven primarily by the government's improved fiscal position, prepayments of expensive debt and the strengthening of domestic currency. This was also evident in year 2002-2003, pushing down the debt to GDP ratio from 104.3 percent in year 2001-2002 to 95.1 percent in year 2002-2003.

After an unusual dip in year 2001- 2002 public domestic debt resumed its traditional upward trend in year 2002-2003 rising by 7.8 percent to reach Rs. 1852.4 billion at end June 2003. However, the fiscal 2003 growth rate is significant lower that the double digit average growth rate for the past five years (both excluding and including fiscal 2002). This slowdown in the growth rate is attributable interalia to (i) greater fiscal discipline by the government and public sector enterprises as well as (ii) the increased availability of external financing (lowering the domestic financing requirements).

Pakistan's Total External Debt and Liabilities (TDL) fell for the fourth successive year in year 2002-2003. Infact the 2.8 percent decline in the TDL amounting to US $ 1 billion during the year reduced the outstanding stock to US $ 35.5 billion by end June 2003.

[14] Review of Economic Performance during the First 8 month (2002-2003), GoP, Finance Division (Debt Office), April 04,2003.

All in all the key indicators of Pakistan's debt and liability in year 2002- 2003 suggest a declining debt burden and continuing improvement in the country's solvency and liquidity position.

2.2.5 Fiscal Responsibility and Debt Limitation ACT 2003

The Government of Pakistan has also taken the bold step to legislate to provide for elimination of revenue deficit and reduction of public debt to a prudent level by effective debt management and for this purpose a bill has been moved in the Parliament for approval. The bill provides that inter alia following shall be the principles of sound fiscal and debt management:

a) Reducing the revenue deficit to nil not later that the 30th June 2008 and thereafter maintaining a revenue surplus;

b) Ensuring that within a period of ten financial years beginning from 1st July 2003 and ending on the 30th June 2013, the total public debt at the end of the tenth financial year does not exceed 60 percent of the estimated gross domestic product for that year and thereafter maintaining the total public debt below 60 percent of gross domestic product for any given year;

c) Ensuring that in every financial year beginning from the Ist July 2003 and ending on the 30th June 2013 the total public debt is reduced by not less that 2.5 percent of the estimated gross domestic product for any given year provided that the social and poverty alleviation expenditures (which includes expenditure on health) are not reduced below 4 percent of the estimated gross domestic product for any given year.

The proposed law therefore sets the policy direction of the government and its resolve and commitment to be fiscally responsible and to limit the public debt to a prudent level, at the same time ensuring protection of the expenditures on social and poverty alleviation which will not be reduced below 4 percent of the estimated gross domestic product for any given year. This expenditure includes bedside others the expenditure on public health, immunization programme of which is one of the most important component.

2.2.6 Commitment by GOP in the Perspective Plan (2001-2010)

The five year Development Plan (2003-04 to 2008-09) and the Perspective Plan (2001-2010) places special emphasis on the immunization of children. Expanded Program on immunization has been highlighted as a separate titled program in the Chapter on Health in the plan document. Commitment of Government of Pakistan has been reiterated in the chapter towards this important national program which has been delivering the immunization services to the children through a network of almost 2,649

fixed centers, 4,564 outreach workers, 98 mobile units. The 70,000 lady health workers (LHWS) are planned to be trained to offer EPI services to the communities. Up to 2005, the number of these workers will be increased to 100,000 and so almost 70% of the country will be physically covered, by the LHWs for assisting EPI in provision of immunization services regularly.

Financially the commitment of GOP is apparent from the fact that it is the second biggest program on the development budget of GOP since 1992 when the donors assistance was withdrawn. The Perspective Plan (2001-2010) of GOP has an allocation of almost Rs.21 billion for EPI under four different titles i.e. routine EPI, Hepatitis B, high-risk-area-approach for control of neonatal tetanus and reduction of Measles. This allocation is almost 28 % of the Health sector allocations during the plan period. (Annex-21)

2.2.7 Conclusions

To sum up Pakistan's economy has regained resilience in the recent years. The stabilization policies and the implementation of wide ranging structural reforms are paying dividends. These policies and reforms have enhanced the capacity of the economy to withstand the adverse effects of exogenous shocks. Pakistan's debt situation is also moving toward a sustainable path. The Government is committed to take steps which are financially prudent through the proposed Fiscal Responsibility and Debt Limitation Act 2003, enabling it to have an increased fiscal space for provision of the desired funds for social sector as reflected in the Perspective Plan 2001-2010. Furthermore since the expenditures on social and poverty related expenditures which include expenditure on health are proposed to be protected under the proposed law, there should be reasonable assurance that the Government expenditure on immunization will be fully catered for during the period.

3 Section II

Programme Characteristics, Objectives and Strategies

3.1 Expanded Programme on Immunization (EPI) – Pakistan

The national vaccination program in Pakistan began in 1976 on a pilot-scale and expanded nation-wide by 1978. Activities were intensified through Accelerated Health Programme (AHP) as Expanded Program on Immunization (EPI) in 1982. Historically, six diseases were targeted through vaccination namely poliomyelitis, neonatal tetanus, diphtheria, pertussis, measles and childhood tuberculosis. Within a short time i.e. seven/eight years the success of the program was apparent from the coverage figures. In 1984 according to an international evaluation coverage, 59% children of 12-23 months were fully immunized. Then in 1991 another International evaluation of the program certified the achievement of target of Universal Child Immunization (UCI) as 86% of children between 12-23 months were found to be fully immunized besides 72% coverage of T.T. for women.

In the early 1990s the program was hampered by the withdrawal of financial support of key donors. This led to a marked decrease in vaccination coverage. A Pakistan Integrated Household Survey (PIHS) in 1995-6 indicated that only 47%, of children had been fully immunized.

Since 1996 financial support recovered, management improved and therefore coverage rates have increased. Progress towards polio eradication has been on-going, hepatitis B vaccine has been added to the routine immunization schedule and TT campaigns have been conducted in high-risk areas.

3.1.1 Organization of EPI

The national vaccination program is coordinated by the federal EPI cell in Islamabad, where activities such as planning, vaccine procurement and international coordination are performed. Provincial governments undertake delivery activities with vaccination being provided from 2,649 fixed centers, 4,564 outreach teams and 98 mobile teams. Lady Health Workers (LHWs) assist the program through community mobilization and by administering tetanus toxoid (TT) vaccine to women. The Federal EPI cell and the Provincial EPI have the following roles as spelled out in the Federal EPI PC-I for 1998-2003.

3.1.1.1 Role of Federal EPI/CDD Cell

- planning, policy making and strategy development
- purchase of syringes, vaccines, logistic needs: supply to provinces
- providing technical guidance and support to provinces
- coordination with international agencies
- monitoring, evaluation and reporting of national data
- coordination of training needs
- provision of mid-level management training
- national activities for social mobilization

3.1.1.2 Role of Provincial EPI Cell

- distribution of vaccines, syringes and logistic needs
- supervision of EPI delivery services
- monitoring, evaluation, reporting of data from the provincial and district levels
- training of all EPI workers, other than mid-level managers
- providing salaries and allowances for personnel
- management of transport, repair and POL, cold chain repair

3.1.2 Immunization Coverage

In 1981 the number of fully immunized children was less than 2%[15]. It has gradually increased so that by 1990 the target of Universal Child Immunization (UCI of 80% coverage) was achieved. From 1991 to 1995 the immunization coverage decreased from 86% to 47 %.The main reason of decline was heavy dependence of the programme on donor support which was withdrawn during this period. However by late nineties, realizing the importance of country support for such an important public health programme GoP began to divert gradually increasing resources to EPI. As a result the coverage began to improve from 1998 onwards with little fluctuations among the years.

Following tables depicts the reported and assessed immunization coverage over the years.

[15] Reported Coverage, Federal EPI Cell.

EPI-PAKISTAN FULLY IMMUNIZED CHILDREN COVERAGE
% comparision between national/provincial coverage as assessed through PIHS/3rd party surveys

Surveys/Reported	YEARS	Pakistan	PROVINCES			
			Punjab	Sindh	NWFP/ FATA	Balochistan
Pakistan Integrated Household Survey (PIHS)	1995-96	47.0	49.0s	45.0	40.0	60.0
	1998-99	55.0	62.0	39.0	57.0	55.0
	2001-02	57.0	63.0	46.0	59.0	38.0
EPI Cluster Surveys	1997	52.0				
	1999	49.0	52.0	49.0	47.0	22.0
	2000-01	60.5	68.9	49.6	55.3	43.7
Reported Coverage	1997	74.0	80.0	74.0	70.0	38.0
	1998	76.0	74.0	91.0	79.0	42.0
	1999	81.0	84.0	91.0	75.0	50.0
	2000	75.0	67.0	93.0	84.0	54.0
	2001	75.0	73.0	79.0	89.0	49.0
	2002	68	69	74	66	43

NATIONWIDE IMMUNIZATION COVERAGE EVALUATION
(12-23 MONTHS)

(In Percentage)

Province	1984 International	1987 National	1988 International	1991 International
Punjab	78	83	85	94
Sindh	30	56	74	68
NWFP/FATA	60	75	89	95
Balochistan	17	6	40	42
AJK	30	38	85	85
PAKISTAN	59	69	81	86

Reasons for poor coverage

A number of surveys have been undertaken to better understand the reasons for poor coverage in some areas. In a study by Rafi et al (1995) in Karachi during 1993, 6,647 mothers were asked why they failed to vaccinate their children. The principal responses were a lack of awareness of vaccination and lack of motivation. The range of responses is provided in the following table.

Reasons cited by patient's mother for failure to vaccinate

Reasons	Group A (%) Children 0-11 months N=1,872	Group B (%) Children 12-16 months N = 4,775
Did not know	54	42
Facility for immunization too far	6	9
No time/busy in other chores*	5	9
Forgot*	8	11
No finances for travel	3	4
Vaccinator did not visit home	4	4
Vaccinator/vaccine not available at facility	4	4
Vaccination refused by facility	3	3
Unwilling*		
(a) Because of family tradition	3	5
(a) Same child		
(b) Other child	3	2
No reason given	6	5

Lack of motivation. Source: Expanded program of immunization in Karachi. Department of Pediatrician. Civil Hospital Karachi. Aug. Sept. 1993. JPMA Vol. 45, No. 2 Feb. 1995 by Sadia Rafi, Imdad Ali Shah and Abdul Ghaffar Billoo

A study by Faish et al (2002) identified risk factors for complete un-immunization or under immunization of children under 2 years of age. A cohort of 2000 children attending Pediatric outpatient (Karachi Dockyard Board Tertiary Hospital), inpatient and pediatric casualty between 1st October 1999 and 31st May 2000 was analyzed. Delivery at the hospital was associated with 67.8% vaccination while delivery at home was associated with 32.2% vaccination, as was awareness of significance of vaccination by parents. Educational level of the mother was associated with higher percentage of vaccination.

It is worth mentioning that access to immunization is moderately high but full vaccination course completion is low. Reasons for high drop-out include difficulties in traveling to fixed immunization centers, failure to trace defaulters and lack of demand in remote communities.

Since effective social mobilization is an integral part of EPI, the Federal EPI cell plans to undertake a thorough evaluation of its impact in 2006-07 as per Federal EPI GAVI PC1 .

3.1.3 Overall Objectives

The overall objective of EPI is the reduction of morbidity and mortality resulting from the seven EPI target diseases by immunization of children of less than one year of age and pregnant women. These objectives are in line with the emerging global priorities:

Specific Objectives

- Attaining and sustaining over 80% routine EPI Coverage in each district by the year 2005 and achieving 90 % and above coverage nationally from 2008 onwards.
- Elimination of NNT by the year 2005.
- Reduction of measles morbidity by 90% and mortality by 95 % by year 2010.
- Interruption of poliovirus by the year 2005.
- Reduction of Diphtheria, Pertussis, Neonatal Tetanus, Hepatitis B and Childhood Tuberculosis to a minimum level.
- Assure steady supply of vaccine/needles/syringes
- Ensure safety of injection
- Control of other disease such as Haemophilus Influenzae type b by introduction of new vaccines in EPI schedule as and when they are available.
- Using EPI as a spearhead for promoting other PHC activities and finally integration of EPI in PHC.

3.1.4 Key Strategies for reaching the objectives.

Based on the multi year strategic EPI plans for federal and provincial levels (EPI GAVI PC1s and EPI policy and strategic guide lines 2003). The following strategies are planned to reach the overall objectives of EPI for next 10 years

- Improved management, through regular and refresher trainings of all EPI management cadres.
- Improved Quality of Programme through regular and refresher trainings of the EPI service delivery staff, and improving disease surveillance system.
- Expansion of service delivery through, increase in EPI staff, integration with

other health programmes, involvement of NGOs and private sector.

- Strengthening of EPI services through provision of adequate hardware (transport, cold chain equipment and office equipment etc).
- Adoptation of cost effective measures for minimizing the wastages particularly in EPI vaccines.
- Increase demand for EPI through effective social mobilization
- Regular (annual) district level assessments of the Programme
- Research studies
- Ensuring adequate resources for sustainability of EPI through greater Government commitments and increased input from donor.
- Introduction of new vaccines, and providing additional doses , subject to recommendation of the "National EPI Advisory Group"
    - Plan to introduce 2nd dose of measles vaccine (age 15-18 months) from 2005
    - Plan to introduce pentavanent vaccine (DPT-Hep B- Hib) from 2008 onwards
    - Plan to introduce Hepatitis B birth dose in gradual fashion from 2008 onwards

4 Section - III

Pre –Vaccine Fund and Vaccine Fund Year Program Costs and Financing

4.1 Program Expenditures and Costs

In this section the annual forecast expenditure for the national immunization program is presented and compared with costs observed in the late 1990s using the analysis outlined in study conducted in Pakistan by World Bank in 2000. Similar cost categories, which include vaccines, supplies, staff, training, capital costs, are shown for 2003 expenditures. The expenditures for the routine EPI and polio eradication are shown separately because of differing cost profiles and funding sources.

4.1.1 Trend in EPI Expenditure

The Federal Government expenditure on routine EPI rose from US$ 2-4 million annually in early 80's and 90's to about US$12 million annually in late 90's.[16] The average annual expenditure of Federal and Provincial Government for routine EPI during 1995-99 was US$ 14 million i.e 68% of total routine EPI Expenditure during this period. The expenditure on routine EPI both by Federal and Provincial Government during 2003 is estimated to be US$ 19 million i.e 59% of total routine EPI expenditure during this period[17]. The above figures reflect a clear trend of gradual increase of Government inputs in the EPI.

4.1.2 Pre Vaccine Fund Era Expenditure on routine EPI

Pakistan began receiving GAVI Fund support in 2001 (Window-1). For the purposes of this document, annual yearly expenditure during 1995-99 has been taken as "pre vaccine era expenditure on routine EPI'. As expenditure on EPI varies from year to year, an average based on the 5 year expenditure will give more realistic figure for the purpose of future financial planning.

Table: Annual Expenditure for Routine EPI

Item	Annual expenditure (1995-1999)			Forecast expenditure (2003)		
	US$ m	Rs. m	(%)	US$ m	Rs. m	(%)
Recurrent						

[16] Immunization Financing in Pakistan, The World Bank, 2000
[17] GOP & ADB , Asian Vaccination Initiative, EPI Pakistan , Options for 2005-2009

Vaccine (basic)	5.56	250	27%	6.88	413	22%
Vaccine (HBV)	-	-	0%	5.50	330	17%
Supplies	1.31	59	6%	4.16	249	13%
Staff	9.29	418	45%	10.08	605	32%
Other recurrent	3.06	138	14%	4.05	243	13%
Sub-total	19.23	865	92%	30.67	1,840	96%
Capital Expenditure						
Vehicles	1.10	50	5%	0.31	19	1%
Cold chain	0.53	24	3%	0.55	33	2%
Office equipment	0	0	0%	0.25	15	1%
Miscellaneous	0	0	0%	0.01	0	0%
Sub-total	1.63	74	8%	1.12	67	4%
Total	**20.86**	**939**	**100%**	**31.77**	**1,906**	**100%**

Note: Assumes average exchange rate of 45 Pak Rupees to US$ over late 1990s & US$ 1 = Rs. 60 for 2003

Table: Sources of Funds for Routine EPI by Categories

Item	Annual Sources of Funds (1995-1999)			Annual Sources of Funds (2003)		
	GoP	Other	Total ($m)	GoP	Other	Total ($m)
Recurrent						
Vaccine (basic)	40%	60%	5.56	100%	0%	6.88
Vaccine (HBV) [(a)]	0%	0%	0.00	0%	100%	5.50
Syringes [(b)]	9%	91%	1.31	0%	100%	4.15
Salary and Allowances [(c)]	100%	0%	9.29	97%	3%	10.08
Other recurrent [(d)]	71%	29%	3.06	47%	53%	4.05
Capital Expenditure						
Vehicles	43%	57%	1.10	0%	100%	0.31
Cold chain	5%	95%	0.53	0%	100%	0.55
Office equipment	0%	0%	0	0%	100%	0.25
Miscellaneous	0%	0%	0	0%	100%	0.01
Total [(e)]	**14.3**	**6.6**	**20.9**	**18.7**	**13.1**	**31.8**

Notes: (a) HBV vaccine purchased under GAVI (Window I) support. Other vaccines purchased by GoP

(b) GAVI are supporting injection safety (AD-syringes) until the end of 2005

(c) GoP support the majority of EPI staff. Additional vaccinators are being hired, primarily in Sindh, under GAVI (Window II) support

(d) GAVI, UNICEF and WHO provide support in the form of technical assistance, social mobilization, research and training. GoP support vehicle and cold chain operating costs

(e): Average annual expenditure / source

The total average annual expenditure on routine EPI activities over 1995-1999 period was approximately $21-24 million[18]. This cost is likely to significantly increase to $32 million in 2003, largely as a result of the addition of HBV vaccination and use of AD syringes. In 2003, expenditures for staff accounts for 32 % of total routine EPI costs, while those for vaccines make up 39% . Other capital expenditures on cold chain, vehicles and office equipment is almost 4%.

Figure 1 : Routine EPI Expenditure 2003

As of 2003,the federal and provincial governments contribute 59% of all funds for routine EPI - with the majority of support being in the form of salaries. Of the salary component, GoP provide 97% of the resources. External support is primarily used for vaccines (Hep B) , syringes and cold chain equipment.

Of total routine EPI annual expenditures for 2003, GoP is providing US$ 18.7 million, whereas external donors/EPI partners are providing US$ 13.1 million

4.1.3 Expenditure for NIDS (National Immunization Days) and SNIDS (Sub-National Immunization Days) for Polio

Polio NIDs costs have increased substantially since the late 1990s as efforts to eradicate this disease have intensified. During NIDs, oral polio vaccine and Vitamin A are distributed to children under the age of five. The average cost per annum for NIDs was approximately $9.6 million during the late 1990s (World Bank 2000), and has increased to an estimated $39 million per year. The composition of expenditures for the NIDs differs from those for the routine program. Vaccine is the largest category of expenditures (52 percent) and this item has increased by the most substantial amount. In the late 1990s about $7 million was spent on polio vaccines per year, and this has increased to $20 million in 2003.

[18] Immunization Financing in Pakistan, The World Bank, 2000

Table: Average Annual Expenditures for NIDS (Polio)

Item	Annual expenditure (1995-1999)[c]			Forecast expenditure (2003)		
	Total ($m)	Rs. (m)	(%)	Total ($m)	Rs. (m)	(%)
Vaccine	7.07	318	74%	20.00	1,200	52%
Vitamin A	0.06	3	1%	1.00	60	3%
NID/SNID supplies	0.46	21	5%	1.30	78	3%
Staff costs [(a)]	0.38	17	4%	5.50	330	14%
Other [(b)]	1.63	73	17%	10.70	642	28%
Total	**9.60**	**432**	**100%**	**38.50**	**2,310**	**100%**

Notes: (a) Only international and domestic staff supported by WHO included. In practice many EPI staff, who are supported by GoP, would contribute to polio campaigns
(b) Other costs include transport, training, miscellaneous and surveillance
(c) Taken from World Bank (2000) Assumes exchange rate of 45 Pak Rupees to the dollar in the late 1990s

Other expenditures for NIDs included Vitamin A capsules (3 percent), supplies (3 percent), and other costs (28 percent). All expenditures are financed by international organizations. Real staff expenditures are, however, likely to be underestimated in the estimates provided in the above Table as large number of routine immunization staff along with other government staff, are likely to contribute to polio eradication activities. After soon eradication of Polio, the focus of polio activities will change to reflect a greater emphasis on surveillance and more resources are likely to be available for routine EPI.

4.2 Total Expenditure of NIP (National Immunization Program)

The total annual cost of the national immunization program in 2003 is estimated to be US$ 72.3 million when the costs of NIDs (Polio), AFP surveillance and SIAs MNTE are added to routine EPI costs. The cost of SIAs MNTE during 2003 is estimated to be US$ 2 million[19]. The recurrent and capital expenditure format for the overall national immunization program expenditure is derived from recommendations outlined in Kaddar *et al* (2000) 'Financing Assessment of Immunization Services' and the approach has been previously used for a financing assessment of immunization services in Bangladesh (Levin *et al* 1999).

It is evident that the greatest absolute increase in expenditure has been associated with the procurement of vaccines. Polio vaccine expenditure as part of NIDs alone has increased by $13 million between 2003 and the late 1990s, while the addition of HBV vaccination to the routine schedule has resulted in an increase in the value of this expenditure item. The greatest relative increase in expenditure is associated with

[19] Support worth estimated US$ 2 million provided by Government of Japan (GOJ), UNICEF and Save the Children US$.

Vitamin A capsule procurement. In the late 1990s this cost item accounted for $0.06 million per annum, and has increased to about $1 m in 2003. Capital expenditure on vehicles and cold chain is less in 2003 than in the late 1990s. As GAVI capacity development funds are utilized over the next 3-5 years, the value of this item will increase.

Table: Annual Expenditures for Routine EPI and Polio Eradication

	Annual expenditure (1995-1999)	Forecast expenditure (2003)	Percent change (%)
Recurrent			
Vaccine	12.63	32.38	156%
Vitamin A	0.06	1.00	1566%
EPI syringes	1.31	4.16	218%
NID/SNID supplies	0.46	1.30	182%
Staff costs	9.67	15.58	61%
Other recurrent	4.69	14.75	214%
Sub-total	28.36	69.17	144%
Capital Expenditure			
Vehicles	1.10	0.31	-72%
Cold Chain	0.53	0.55	4%
Office Equipment	0	0.25	-
Other Capital	0	0.01	-
Sub-total	1.63	1.12	-31%
Total	29.99	70.29	134%

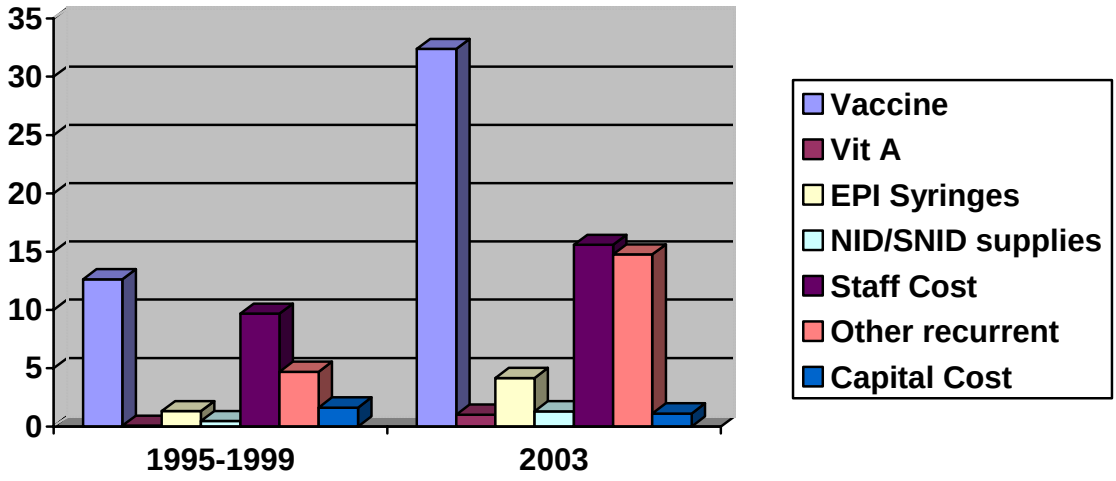
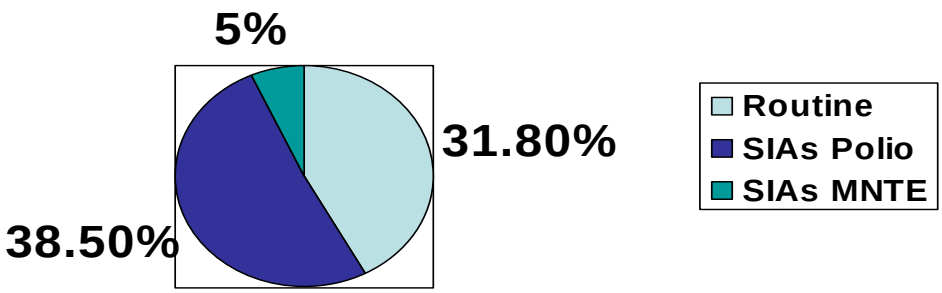


Figure2: Item wise annual expenditure on routine EPI & PEI



Cost Effectiveness

Cost effectiveness ratios of Immunization Programme for Pakistan and Bangladesh are outlined below. It is evident that the cost per FIC averages around the $21-27 level despite the differing incomes, years of analysis and coverage rates in the two countries. The cost per fully immunized child is relatively high in Pakistan due to the current intensity of the polio eradication effort.

Table 1: Cost-effectiveness for National Immunization Programs

Indicator	Pakistan (2003)	Bangladesh (1998)
Number of doses EPI (m)	81	34.4
Number of doses NID (m)	188	32.2
Total doses administered (m)	269	66.6
Cost per dose	$0.26	$0.52
Children fully immunized (m)[a]	2.64 (49%)	1.6 (54%)
Total cost per FIC	$26.99	$21.47
Per capita cost of NIP	$0.49	$0.28

Source: Kaddar, M., Levin, A., Dougherty, L. And Maceira, D. *Costs and Financing of Immunization Programs: Findings of Four Case studies.* Special Initiatives Report No. 26. Bethesda, MD: Partnerships for Health Reform Project, Abt Associates Inc. (a): Fully immunized child is the number of percentage of children receiving valid doses of immunizations (3 DPT shots, 4 OPV, 1 BCG, and 1 measles) by the age of 12 months. Taken from Pakistan Integrated household Survey for 1998-99 – children aged 12-23 months.

Note: Calculation of this section is based on US$ 1= Rs. 60 for 2003.

5 Section-IV

Sustainable Financing Strategy, Actions and Indicators

5.1 External Assistance

There are a number of agencies active in social sector in Pakistan. In relation to health, ADB is supporting two projects, one Women Health project and the other is Reproductive Health project (US$ 60m. and US$ 39m. respectively). In addition to ADB, UNICEF and the OPEC support the Women's Health Project. The WHO, UNICEF, GOJ, DFID,CDC, Rotary International, Save the children US and World Bank are providing assistance in EPI (particularly technical, operational, social mobilization and procurement of Polio vaccine for NIDs/SNIDs and TT vaccine for supplemental immunization activities for MNTE), HIV/AIDS, T.B and Malaria Control Programs.

The European Commission (EC), through the Rural Social Development Program, is assisting NGOs and the EC/United Nation's Population Fund (UNFPA) initiative. The Canadian International Development Agency (CIDA) assists NGOs through a small-scale Women-in-Development Project (Canadian $5.2 million). DFID, EC, the United States Agency for International Development, and others are planning to increase support for Health sector.

The current major supporter of the routine EPI program is the Global Alliance for Vaccines and Immunizations (GAVI). The organization is a coalition of the World Bank, WHO, UNICEF, Bill and Melinda Gates Foundation, NGOs, governments and the pharmaceutical industry. The organization was formed to address stagnating immunization rates and to improve access to vaccines for developing countries.

5.2 Comparative Financial Situation

Public health sector and EPI finance ratios for Pakistan and a number of other selected countries are provided in the Table below. Given the differing GDPs and years of the ratio analyses, it is difficult to make direct comparisons. In case of Pakistan, considerable resourcing has been realized through the Social Action Program (SAP) which began in the early 1990s to increase government social service delivery performance. The first phase of the SAP (1992-1996) achieved its expenditure and performance targets in the health and population welfare sector. Increases in social sector expenditures realized during the first phase of SAP stagnated during the second phase (SAPPII), affecting the quality of services.

Health care financing indicators

Indicator (1998)	Cost of EPI / GDP	Public & private spend on health / GDP	Public health budget / total budget	Government EPI spend / government health budget
Pakistan [a]	0.12%	3.5%	3.4%	4.7%
Morocco [b]	0.03%	3.8%	4.9%	2.2%
Bangladesh [b]	0.1%	3.9%	7.7%	4.4%
Cote d'Ivoire [b]	0.09%	1.3%	7.5%	4.6%

Source: (a): Government of Pakistan (2001), economic Survey 2000-2001, Government of Pakistan. Islamabad
(b): Dr. Ross (eSYS) EPI. Financing Study Pakistan

5.3 Future Plans and Goals of the Program

Since the mid-90s, the apparent decline in immunization coverage has been halted, the incidence of polio appears to be at a historic low, NNT campaigns have been conducted, effective working groups have been established and HBV vaccine has been added to the routine schedule.

Key objectives for EPI until 2005 include increasing coverage of EPI vaccines to 80% in all districts and 90 % nationally by 2008. To interrupt polio virus transmission by 2005, eliminate neonatal tetanus[20] nationally and reduce the burden of measles to 80% of pre-vaccine era by 2004.

5.3.1 Vaccines

The basic EPI program involves the usage of BCG, DPT, OPV, Measles and TT vaccines. The vaccines have been delivered in Pakistan for many years, and are included in the costing analysis using UNICEF 2003 prices along with yearly projected increase (Annex 1b, 2, & Annex15 a-e). Hep B vaccine supplied by GAVI since 2001 will be procured by GOP from mid 2006 [21]. It is planned that pentavalent DPT-HepB-Hib will be introduced in 2008 and its cost for 2008-2012 amounting to US$ 509.3 million will be provided through GAVI. However monovalent Hepatitis B vaccine, for routine EPI from mid 2006 -2007 and for birth dose from 2008 (subject to the recommendation of National EPI Advisory Group) will be procured through GOP resources and will require US$ 18.4 million for period mid 2006-2012.

[20] Less than 1 case/1000 live births
[21] A partial amount of Hep B may have to be procured in 2006 as well. However for purpose of costing this is not calculated separately from GAVI supply.

5.3.2 Supplies

Disposable syringes were being used for routine immunizations for some time. There is a risk of their illegal re-use and corresponding transmission of blood-borne diseases. To reduce this risk, GOP started procuring AD syringes in 2001. As the support under GAVI was available for three years for assistance in procuring AD syringes, GOP utilized this support for 2003-2005. For 2006 onwards AD syringes for routine EPI and measles and MNT campaigns will be procured by GOP at an estimated cost of US$ 36.5 million (Annex 1)

5.3.3 Staff

The poor management and supervision are major factors resulting in coverage and poor performance issues for the EPI program. It was recommended that management capacity in the Federal and Provincial EPI cells be expanded by filling the vacant posts and by recruitment of additional staff. Recently almost all the LHWs are assisting the EPI program. Additionally, with GAVI support, provinces have increased numbers of vaccinators. Cost assumptions relating to current and additional staffing, therefore, shall become part of the provincial non-development budget at the end of GAVI project. The Provincial Governments will be mainly bearing the cost of staff.

Current staff costs were estimated for federal and provincial expenditure with full and part-time commitment to the EPI program. In total, 47 designations were included in the costing, with the major staff costs being estimated for vaccinators (including supervisors), lady health workers and BHU staff. Numbers of staff in various designations were estimated for each of the four provinces, along with FANA, ICT and AJK.

Annual pay per person, allowances, TA/DA and total yearly cost per staff were estimated and the percentage of time devoted to EPI calculated to derive annual EPI-related staff costs.,A total of Rs.688 million, equivalent to US$11.86 million per year is spent by provincial and Federal government on this head . (Annex-4)

The major increase in the staff is envisaged in early years of plan i.e 2003-2007, when the additional staff will be recruited and will cost US$ 4.2 million . The total staff cost for the period 2003-2012 is estimated at US$ 151 million

5.3.4 Short Term Training

A key strategy to improve the programme performance has been emphasis on regular

routine and refresher trainings. Refresher training are recommended to cover the following areas;

- Training of LHWs in relation to their potential role in improving immunization coverage.
- EPI modules for training mid-level managers be revised.
- Senior staff trained in management and supervisory techniques.
- Training about new technical issues, such as the introduction of new vaccines and modified schedule , to facilitate effective vaccine management and administration.
- Special training provided on specialized subjects, e.g. data management, computer use in EPI.

An amount of US$ 1.876 million will be spent on this account under GAVI support from 2003-2007. Beyond this period till 2012 an amount of US$ 3.074 million will be required which will most likely be provided by the donors/EPI partners. (Annex-1)

5.3.5 Social Mobilization

NIDs have benefited greatly from social mobilization; however, efforts in this field have not been applied to routine EPI as vigorously. There is a little demand for immunization services in remote areas. Social mobilization, in the form of advocacy meetings, communications, and distribution of leaflets to parents and provision of extra vaccination sessions is required. The future costs of social mobilization amounting to US$ 1.456 million for 2003-2007 have been earmarked in EPI GAVI PC1s. For 2008-2012 likely amount of US$7.670 million will be provided by donors/EPI partners, as has been the practice in past.

5.3.6 Vehicles

Like cold chain, existing transport capacity needs to be audited and provisions for expansion and replacement examined. Without new transport, any planning to extend routine immunization and ensure effective mobile sessions will be difficult to implement. As the existing transport is becoming rapidly deteriorated in the absence of adequate maintenance and replacement plan, for 2003-2012 large scale strengthening of transport is recommended (Annex-18). This will require approx. US$ 21.690 million as capital cost and US$ 4.962 million as recurrent operational cost. Out of this capital cost US$ 4.339 million have already been earmarked in the EPI GAVI PC1s. The remaining amount of US$ 17.352 million is likely to be provided by GOP and donors/EPI partners in equal proportion (Annex-1)

5.3.7 Cold Chain Development

Much of the current cold chain infrastructure was supplied in the 1980s and is now reaching the end of its useful economic life. To date, limited replacement by UN1CEF and other donors has occurred but has been piecemeal, and not as a result of a systematic review and renewal of the entire cold chain network. Exiting cold chain needs to be replaced and the network of sites offering immunization needs to be expanded from the present inventory of working equipment.

In order to meet the challenges of EPI in future the EPI GAVI PC1s have a major component of cold chain amounting to US$ 4.917 million . Cold chain replacement and expansion plan for the post GAVI period of 2008-2012 (annex-19) requires US$ 4.119 million. This amount is likely to be provided by GOP .(Annex-1)

5.4 Projected Costs and likely source of funding (2003-2012)

The Current GAVI support, which was started in 2001 (window 1), extends upto 2007, as shown below:

	Year						
	2001	2002	2003	2004	2005	2006	2007
Window 1[22]							
Window 2							
Injection safety							

Therefore the post vaccine fund period in this document is taken from 2008 to 2012. As the country usually follows a five year planning cycle, a period of 5 years post vaccine fund is taken for development of this Financial Sustainability Plan (FSP).

The future Programme costs have been determined under following two different scenarios:

Scenario 1 : Pentavalent Vaccine (DPT-Hep B- Hib) is added to the Programme
Scenario 2 : Pentavalent Vaccine (DPT-Hep B- Hib) is not added to the Programme

Programme Cost under Scenerio 1

The expected programme cost during 2003-2012 based on the improvement in EPI as discussed in section 3.1.4 is US$ 1,106.819 million (Annex 1)

[22] For 2006 partial supplies of Hep B will be covered.

The amount likely to be spent on the programme component during this period is as follows:

Sr.No	Component	Amount (US$ million)	Percentage of total programme cost
1	**Routine Recurrent Cost**		
1.1	Vaccine Cost	611.025	55.2
1.2	Syringes & Safety Boxes	53.415	4.2
1.3	Staff Salary (EPI Specific Staff)	97.618	8.2
1.4	Transport (Operational cost)	4.962	0.4
1.5	Trainings	4.950	0.4
1.6	Social Mobilization	9.126	0.8
1.7	Technical Assistance	5.417	0.5
1.8	Performance Rewards	17.612	1.5
1.9	Research & Surveys	6.114	0.5
1.10	Miscellaneous (Administration & Stationary etc)	2.88	0.24
	Sub Total	***813.119***	***71.94***
2	**Routine Capital Cost**		
2.1	Transport (Capital cost)	21.690	1.8
2.2	Cold Chain Equipment	9.036	0.8
2.3	Office Equipment	2.88	0.24
2.4	***Sub total***	***33.606***	***2.84***
3	**Supplemental Immunization Activities**		
3.1	Vaccine cost	73.321	6.1
3.2	Syringes & Safety Boxes	26.746	2.2
3.4	Operational cost of campaigns	106.950	9.0
3.5	*Sub Total*	*207.017*	*17.3*
4	**Other Expenses**		
4.1	Staff salary (non EPI Specific Staff)	53.037	4.4
	Sub Total	***53.037***	***4.4***
	Grand Total	**1,106.819**	**100**

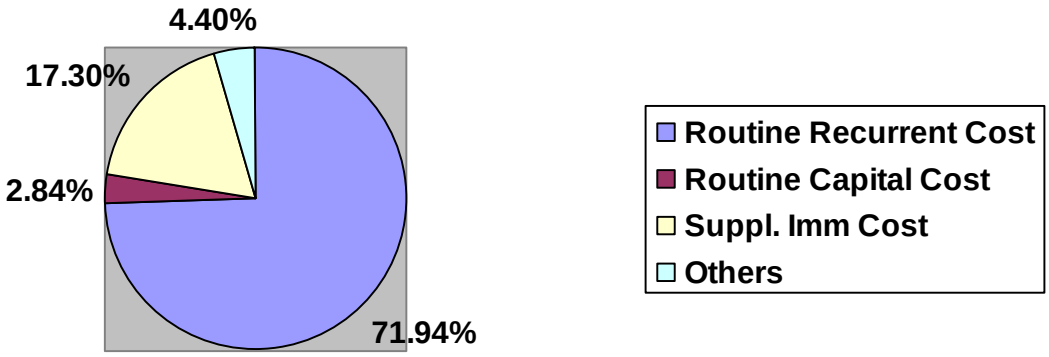


Figure 2 Percentage cost of EPI Components with Pentavalent Vaccine

Programme Cost under Scenario 2

The expected programme cost during 2003-2012 based on the improvement in EPI as discussed in section 3.1.4 but without adding Pentavalent vaccine to EPI is US$ 680.762 million (Annex 22)

The amount likely to be spent on the programme component during this period is as follows:

Sr.No	Component	Amount (US$ million)	Percentage of total programme cost
1	**Routine Recurrent Cost**		
1.1	Vaccine Cost	176.960	26.0
1.2	Syringes & Safety Boxes	61.459	9.0
1.3	Staff Salary (EPI Specific Staff)	97.618	8.2
1.4	Transport (Operational cost)	4.962	0.4
1.5	Trainings	4.950	0.4
1.6	Social Mobilization	9.126	0.8
1.7	Technical Assistance	5.417	0.5
1.8	Performance Rewards	17.612	1.5
1.9	Research & Surveys	6.114	0.5
1.10	Miscellaneous (Administration & Stationary etc)	2.88	0.24
	Sub Total	***387.098***	***56.86***
2	**Routine Capital Cost**		
2.1	Transport (Capital cost)	21.690	1.8
2.2	Cold Chain Equipment	9.036	0.8
2.3	Office Equipment	2.88	0.24
	Sub total	***33.606***	***4.94***
3	**Supplemental Immunization Activities**		
3.1	Vaccine cost	73.321	6.1
3.2	Syringes & Safety Boxes	26.746	2.2
3.3	Operational cost of campaigns	106.950	9.0
	Sub Total	***207.017***	***30.41***
4	**Other Expenses**		
4.1	Staff salary (non EPI Specific Staff)	53.037	4.4
	Sub Total	***53.037***	***7.79***
	Grand Total	**680.762**	**100**

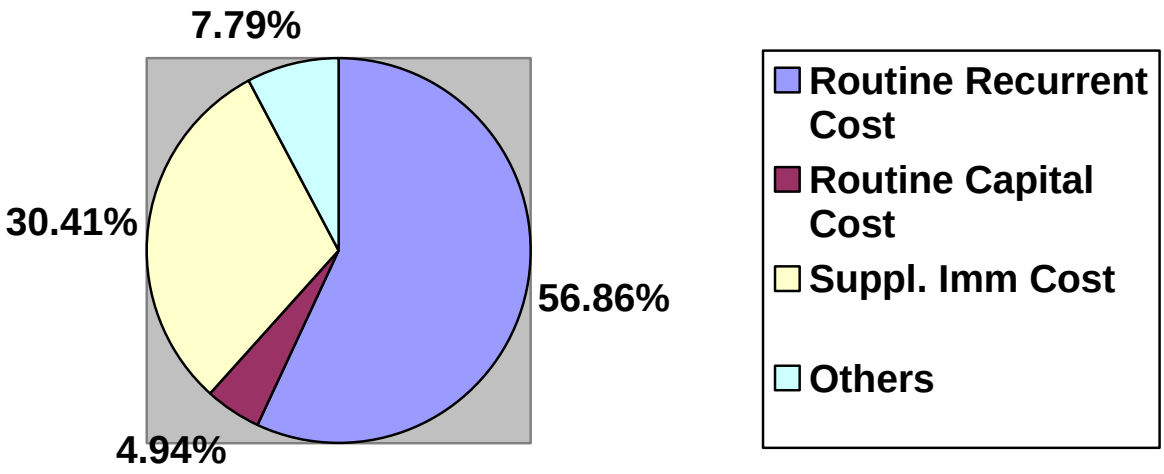


Figure 3 Percentage cost of components of EPI with out adding Pentavalent vaccine

Available Resources

The Ministry of health Government of Pakistan has allocated an amount equivalent to US$ 328[23] million for EPI for in the PSDP for the period 2003-2010 (Annex 21). It is expected that keeping in line with the PSDP allocation trend an amount of at least US$ 71.4 million will be allocated for 2011-2012, i.e the remaining period of this planning document

The federal and provincial Governments currently contribute appx US $ 7.5 million per annum as cost of salary and allowances for EPI specific staff and US$ 4.5 million per annum as cost of salary and allowances for non EPI specific staff (shared cost for their services for EPI). Based on the existing EPI GAVI PC1s and the subsequent projections , over the period 2003-2012 the federal and provincial governments will contribute an amount of US$ 97.62 million for EPI specific staff and an amount of US$ 53.04 for non specific EPI staff as shared cost for EPI. Annex-4

During the remaining GAVI support period i.e. 2003-2007, an estimated 71.226 million US$ support from GAVI is envisaged (Annex-1).

An amount of US$20 million is committed by IDA under its 'Polio Buy Down' Project.

[23] 1 USD = Rs 58

The total likely available funds for EPI during 2003-2012 are therefore US$ 641.286 million

Likely Resources

The country is currently undergoing an assessment of Hib burden. It is likely that Hib vaccine will be included in EPI in due course of time (2008). The cost of Hib Vaccine (Combination pentavalent DPT-Hip-Hop) for 2008-2012 is estimated to be US$ 509.253 million (Annex-2). This cost is likely to be borne by GAVI under its window 1 according to its policy for 1st five year support for new and under used vaccines.

However, if this support is not available, or Pakistan decides not to introduce Pentavalent Vaccine, then the programme cost for the plan period will be US$ 680.762 million. (Annex-22) as discussed above.

It is estimated that the EPI Partners/Donors will provides US$ 99.4 million for the period 2003-2012. This is over and above the credit amount of US$ 20 million already provided under IDA Buy down, as mentioned above, and most likely to be converted into grant by Bill and Mallenda Gates foundation on successful implementation of laid down activities. Keeping in view the trend of support for EPI by Partners during 1995-1999, where on average support of US$ 15.9 million was provide each year, and a colossal support of US$ 51.6 million provided in 2003[24], the required support of US$ 9.94 million each year is much lesser than their usual contribution .

It is estimated that each year a large amount is spent on social services/charity by general public and different organizations. The increasing net work of NGOs in the country is playing a greater role in assisting government by providing social services, including EPI to the masses. Though the magnitude of the financial contribution towards immunization services in the country by the general public/organizational philanthropy and NGOs is not exactly known, it is expected that this will play greater role in the coming years.

Government contribution

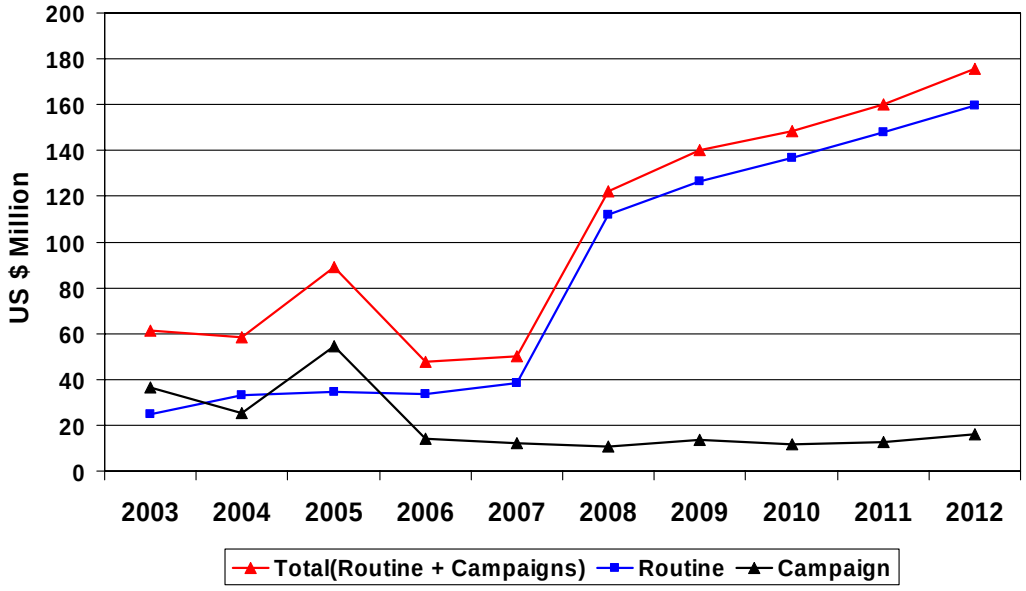
The cost of EPI Vaccines for Routine Immunization (traditional 6 antigens plus hepatitis B vaccine for routine), AD syringes & safety boxes amounting to US$ 115.120 million, during the plan period will be funded by Federal Government. (Annex-1). This will be in addition to US$36.693 million worth of Hepatitis B Vaccine and AD syringes& safety boxes to be supplied by GAVI. Out of total likely cost of US$ 207.02 million for immunization campaigns(including cost of vaccines and operational costs) the Federal Government will bear about 55% of the cost i.e US$ 114.32 million .

[24] GOP and ADB , Asian Vaccination Initiative, Pakistan EPI options for 2005-2009

Although an amount of US$ 399 million will be available through PSD during the plan period (includes US$ 328 million committed for 2003-2010 and US$71.4 million likely , as discussed above), the Federal level expenses are estimated to be US$ 244.842 million(Annex-1) . The balance amount of US$ 154.16 million (38.6% of total PSDP allocation) has been left as a cushion, for absorbing any escalation in the estimate either because of price hike or necessity of adding some activity presently unforeseen or non availability of timely envisaged donor support.

Yearly Expenditure on EPI

The yearly likely expenditure on EPI activities, both routine and campaigns which range from US$ 47.767 million to US$ 175.894 million (Annex 1b) is shown below.



Year wise cost of EPI 2003-2012

Indication of Government's commitment

In order to gauge the Governments contribution towards EPI, the financial planning documents (Referred to as PC1s) are most important indicators. The current Federal EPI PC1 (1999-2000 to 2003-2004) has an amount of Rs 5,336 million (equivalent US $ 92 million) for Federal level expenses of EPI i.e mainly cost of vaccines and AD syringes. The draft Federal EPI PC1 (2004-2005 to 2008-2009) has an amount of Rs. 12,670 million (equivalent US $ 218 million) for Federal level expense of EPI. This clearly reflects the Government contribution for sustaining and strengthening EPI in the country.

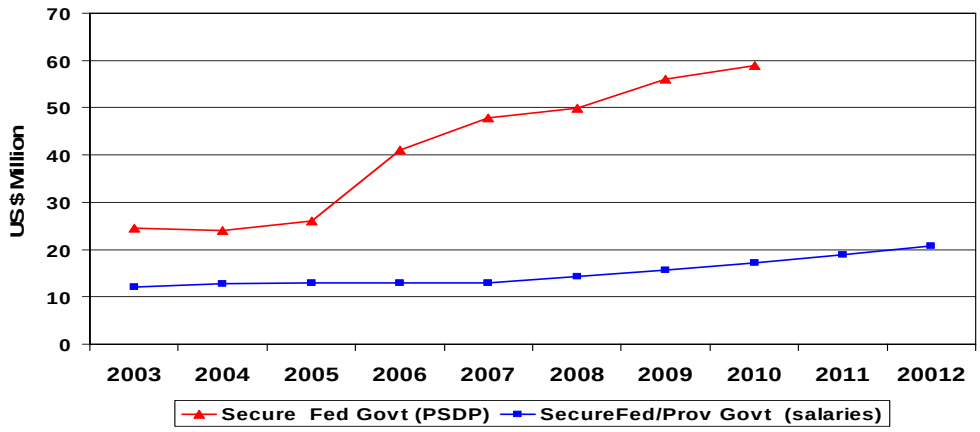


Figure 4 Trend of Secure Government Financing for EPI

Above all the Government of Pakistan stands committed through legislation to support Social sector including EPI in the country[25]

It can therefore be concluded that based on the commitment of Government of Pakistan and pattern of support for EPI by the partners particularly GAVI, the EPI during 2003-2012 despite its considerable expansion, both in terms of volume and range of services, is not going to face lack of funds.

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[25] The Fiscal Responsibility and Debt Limitation Act, 2003 Government of Pakistan.

Section 5 : Stake holders comments

Financial Sustainability Plan (2003-2012) - EPI Pakistan

Comments of WR Pakistan

The Expanded Programme on Immunization (EPI) Pakistan , is almost the sole provider of immunization services in the country. After achieving the Universal Child Immunization (UCI) land mark in 1991, there was a decline in EPI coverage in next few years, mainly because of lack of funds. However EPI has made steady progress since 1995 till date as evident from the assessed coverage of fully immunized children , which was 47% in 1995-96[26] and 61% in 2000-01[27]

WHO has worked hand in hand with the Ministry of Health Pakistan since establishment of its office in Pakistan in 1959. Ever since the launch of EPI in Pakistan, the WHO country and provincial offices are working in close collaboration of Federal and Provincial EPI Cells for strengthening of routine immunization .

WHO as part of the National Inter Agency Coordination Committee and a partner in EPI is proud of providing its technical expertise and consultation for the EPI matters, including Polio Eradication Initiative, besides providing financial assistance for EPI activities through its JPRM.

The partnership between Pakistan and WHO is largely guided through a mutually agreed upon medium term plan for technical cooperation devised on biennial basis. The WHO biennial 2002-2003 for the EPI/PEI for the country was about US$ 45 million.

With the commitment of Government of Pakistan, to improve the social sector , particularly EPI, for which an amount of Rs 20.725 billion (equivalent to US$ 357 million) has been allocated in the National Perspective Plan 2001-2010 , any short fall of funds for EPI is not envisaged , as discussed in this Financial Sustainability Plan. The GAVI resources remain to complement the above noted committed resources, thus ensuring the fulfillment of agreed upon commitments on National Sustainable Financing for the sector.

WHO stands committed in helping Pakistan to achieve the 80% DPT3 coverage target by 2005 with efficient use of the GAVI funds and to take EPI Pakistan to new horizons of achievements in the coming years.

Dr. Khalif Bile Mohamud
WR Pakistan

Islamabad, January 9, 2004

[26] Pakistan Integrated Household Survey (PIHS), 1995-96.
[27] EPI 30 Cluster Survey , for provinces 2000-01

Financial Sustainability Plan (2003-2012) – EPI Pakistan

Comments of Sr. Health Specialist, World Bank, Islamabad.

The Financial Sustainability Plan (FSP) of the Expanded Program on Immunization (EPI) is a commendable effort by the Ministry of Health. The paper was discussed in the Inter-Agency Coordination Committee. The paper outlines the Government of Pakistan's commitment to improve child health outcomes. The broad direction is sensible and in line with the National Health Policy and, the Poverty Reduction Strategy Paper (PRSP). Immunization remains a top priority area within the GOP's overall human development strategy, confirming the federal government's commitment to finance needs of this critical intervention as part of the overall efforts to increase investments in the health sector to enhance the pace of progress in improving health outcomes.

Although FSP is in a good shape, however, in our view there are areas, which could benefit from further analysis and discussion. These include:

a) The recent study of district level variation in immunization coverage indicates that, more inputs while necessary, are unlikely to increase coverage rates in Pakistan if incentives, accountability or motivation systems remain the same. This calls for attention to consider management motivation, accountability and incentives and organizational innovations e.g. use of community based workers (the program is already planning to use community based workers) and non-governmental organizations. FSP could be strengthened by further analysis and include consider fiscal implications of these options.

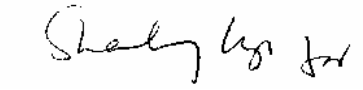
b) FSP could also be strengthened from discussion of financial management and disbursement issues for the program and how do various bottlenecks influence total expenditures and service delivery and how the program envisages addressing them.

c) FSP has an overemphasis of technical strategies pertaining to immunization and there is little discussion on how to mobilize more resources both domestic and external. The technical strategies are somewhat ambitious and one finds it difficult to determine the fiscal impacts of those strategies and how to ensure adoption of least cost options. Also it does not look into fiscal impact of all strategies except use of pentavalent vaccines. This aspect requires further discussion with in the three levels of the government and in the IACC.

d) Some of the costs estimates specially of costs of non-EPI staff appear to be over estimated. In addition, costing analysis need to be made somewhat transparent. We need to remember that FSP will be used for policy discussion about timing, phasing, affordability, and sustainability of the program in the future. In our view as presented, there is insufficient information to assess the real picture of financial sustainability.

e) The challenge for the health sector in general and immunization in particular is to ensure effective implementation and sustain the efforts to ensure Pakistan makes rapid progress towards MDGs. These challenges appear to be increasing in case of immunization; it appears devolution

of administrative and financial powers to the local level may be having an adverse effect on coverage. FSP needs to identify these challenges and indicate also how this would be addressed.



Dr.Inam-ul-Haq
Sr. Health Specialist, World Bank

Islamabad, January 12, 2004

Financial Sustainability Plan (2003 – 2012)
Comments of UNICEF Representative, Pakistan

UNICEF joins other partners in commending the efforts of the Government of Pakistan to develop a Financial Sustainability Plan (FSP) for its immunization program. A draft Plan was discussed at the ICC meeting and most of the comments of the members were reflected in the final version. Given the low coverage of immunization in Pakistan, ensuring adequate and reliable funding for expanding and sustaining coverage is critical.

The FSP must be read in conjunction with the Government's strategy to improve immunization services, the National Health Policy, and GOP's Poverty Reduction Strategy Paper. These documents reconfirm the Government's commitment to maintain and increase its budgetary allocation to immunization services. It is worth noting that Pakistan has been financing its needs of traditional vaccines for many years.

While the FSP in its current shape is satisfactory, there are some additional questions that we would like to be addressed in its next version:

► How will the Government's devolution policy affect the financing of EPI?

► As the Government implements its devolution and governance reform programmes, it is realistic to expect some efficiency gains in the cost of service delivery. Is this reflected in the cost estimates of the FSP, which seems to be based on current expenditure patterns?

► The FSP identified a combination of external/domestic financing options. Analysis of "what if" scenarios would be useful.

► The pentavalent scenario seems to be extremely expensive—twice the cost of the other scenario. A rigorous cost-effectiveness analysis needs to be done before embarking on this option.

In summary, UNICEF Pakistan is satisfied with the process and content of the FSP and hopes that the Plan would remain a living document that would accommodate further improvements in the future.

Omar Abdi
Representative,
UNICEF Pakistan

16 January 2004

Minutes of the Meeting

National Inter Agency Coordination Committee (NIACC) meeting held on 17 December 2003 at National Institute of Health, Islamabad

A meeting of NIACC was held under the chairmanship of Mr. Muhammad Naseer Khan, Federal Health Minister in the conference room of NIH on 17th December, 2003. The agenda of the meeting and the list of participants is placed at Annex-A & B respectively.

Before the Federal Health Minister, who joined later and chaired the meeting, it was chaired by Mr. Matiullah Khan , Senior Joint Secretary (F & D) Ministry of Health.

The meeting started with recitation of Holy Quran. Mr. Matiullah Khan welcomed the participants. Dr. Rehan Hafiz highlighted the objectives of the meeting including the process through which Financial Sustainability Plan EPI 2003-2012 was developed. He appreciated the guidance provided by Mr. Manzoor Hussain former Auditor General of Pakistan in this context.

Dr. Irtaza Ahmad, National GAVI Immunization Advisor briefed the participants about the requirements of Financial Sustainability Plan as outlined by GAVI Financing Task Force.

Dr. Shafiquddin, Chief (Health) P&D presented in detail the salient features of FSP developed by federal EPI Cell. He gave a brief background of general information pertaining to Pakistan, its health care delivery system, overall financial position as explained in the FSP. He informed the participants that the programme cost for 2003-2012 has been estimated primarily under two scenarios. According to the first scenario , if pentavalent vaccine[28] is added to the EPI programme in 2008, the total programme cost for the plan period (2003-2012) is estimated to be US $ 1106.7 million. However if pentavalent vaccine is not included in the EPI, i.e second scenario. the programme cost would be US $ 608 million. He also informed the house that government contribution would be 36.4 % under first scenario and 65.4 % under second scenerio. He added that an amount equivalent to US$ 357 million is already available for EPI for the period 2001-2010 as per Federal Perspective Plan. It was concluded, that keeping in line the trend of the EPI Financing, no likely financing gap is expected for the plan period.

[28] DTP-Hep B-Hib

Mr. Omer Abidi, Representative of UNICEF, Pakistan appreciated the active role of National IACC in the country .He suggested also to consider the possibility of phased introduction of the pentavalent vaccine to avoid its wastage. He also advised to develop annual work plans to meet the 2005 objectives of the EPI.

Mr. Hayee Khan, Chairman of NPPC of Rotary International Pakistan suggested exploring the possibility of manufacturing EPI vaccine in the country. He also suggested undertaking practical steps for developing public private partnership. He was of the opinion that as a first step in this direction a directory of the private services provider should be developed for their involvement in the EPI and AFP surveillance.

Dr. Faizullah Kaker, Medical Officer WHO inquired from the representative of Planning & Development Division if it was possible to divert more resources for Balochistan to help it improve its EPI coverage as it is considerably low compared to the national level. Dr. Shaffiquddin responded that Government policy on the matter has to be followed and active involvement of LHWs in EPI can help increase the EPI coverage.

Mr. Yojiri Ishii, Senior Deputy representative, JICA, Pakistan reiterated the commitment of GOJ in supporting the EPI both through Technical Cooperation and the Grant Aid. However he requested that MOH should expedite the process of PC1 clearance to materialize the technical cooperation within shortest possible time. He regretted that because of poor experience in the other countries regarding quality control GOJ is not encouraging local production of vaccines.

Ms. Yummi Kashiba of JICA , Pakistan appreciated the presentation of the FSP and reaffirmed the support of GOJ/JICA for strengthening the EPI in Pakistan.

Dr. Benjamin Loevinsohn, Sr.Health Specialist World Bank, Washington presented the findings of the World Bank study on “District Level Variation in Immunization rates-Implication for Improving Services Delivery”. He concluded that management motivation, accountability and incentive needs to be improved besides organizational Innovations e.g use of LHWs and NGOs etc for improvement in immunization coverage. He also informed that the study has indicated that where ever devolution has taken place , a dip in the immunization coverage has occurred.

Dr.Shafiquddin pointed towards the complexity of the study design and hence cautioned its interpretation on a wide scale. He also emphasized the need of improvement in the overall public sector as well.

The Federal Health Minster in his concluding remarks informed the participants that Polio Eradication is the most important concern for Federal Health Ministry. He said that an office has been set in the Prime Minister Secretariat to monitor the Polio Eradication activities and he himself is constantly in touch with the provincial Governments on the subject.

He suggested that all the problems pertaining to the health programmes should be brought to his notice along with suggested solutions.

He showed his displeasure on poor EPI coverage in certain districts and asked the National Proramme Manger-EPI to take strict actions against those who are not performing well. He emphasized the need of right person at right position and instructed to remove those who are not fit for their job. He was also critical of the difference in the reported versus assessed EPI coverage. He was not very convinced with the idea of linking the performance with the provision of incentives and poor coverage with overall poverty .He reiterated that those who are unwilling to work will not work even with incentives and poor localities (mostly rural) are more receptive of EPI activities.

He advised the EPI Managers to be result oriented and advised them not to tolerate any slackness by any health worker in improving the EPI coverage in the country.

In the end he thanked all the participants for approving the Financial Sustainability Plan for EPI Pakistan and actively participating in the NIACC meeting .

Annex-A

National Inter Agency Co-ordination Committee (NIACC) Meeting

Date: Wednesday 17 December, 2003

Venue : Conference Room, National Institute of Health, Islamabad

Objectives:

- To discuss the draft Financial Sustainability Plan –EPI
- To suggest modifications if any
- To approve the draft FSP after incorporation of necessary modifications
- To discuss EPI coverage variation study

Agenda

9. 30 am	Registration	
9.55 am	Recitation of Holy Quran	
10.00 am	Opening Remarks	Mr Ejaz Rahim Federal Secretary Health
10.15 am	Objectives of the meeting & the process followed for preparation of FSP	Dr. Rehan Hafiz, National EPI Manager
10.30 am	GAVI requirements of FSP	Dr. Irtaza Ahmad National GAVI Immunization Advisor
10.45 am	Salient Features of FSP	Mr. Manzur Hussain Former Auditor General Pakistan Dr.Shafiquddin Chief (Health) P&D
11.15 am	Working Tea	
11.15 am	Discussion & Comments of the EPI Partners	WHO , UNICEF, World Bank, JICA, DFID , Rotary International, Others
11.55 am	Findings of the study on EPI Coverage Variation	Dr.Benjamin Loevinshon World Bank
12.15 pm	Discussion	
12. 30 pm	Closing remarks	Mr. Mohammad Nasir Khan Federal Minister Health
1.00 pm	Lunch	

ANNEX-B

List of Participants

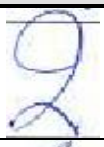
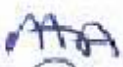
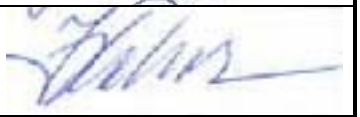
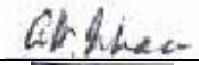
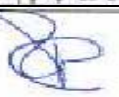
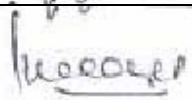
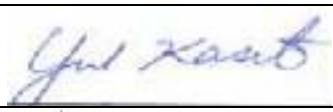
IACC Meeting for Financial Sustainability Plan (FSP)
17th December 2003
National Institute of Health, Islamabad

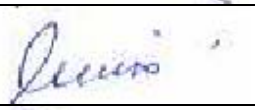
Sr.No	Name	Designation
1	Mr.Muhammed Nasir Khan	Federal Minister for Health
2	Mr. Matiullah Khan	Sr. JS Ministry of Health
3	Dr. M. Shafiquddin	Chief Health Planning Commission
4	Dr. Rehan A. Hafiz	National Programme Manager EPI
5	Mr. Omar Abdi	Representative UNICEF
6	Mr. Abdul Haiy Khan	Chairman NPPC of Rotary International
7	Dr. Faizullah Kakar	WHO/MO
8	Mr. Anthony Mounts	WHO/MO
9	Dr. Benjamin Loevinsohn	Sr. Health Specialist World Bank
10	Mr. Yojiro Ishii	Senior Deputy Res.Rep
11	Dr. Inaam-ul-Haq	Sr. Health Specialist World Bank, Islamabad
12	Ms. Yumi Kashiba	JICA
13	Dr. Sardar Mehmood Ahmed Khan	Provincial EPI Manager AJK
14	Dr. Nusrat-Ullah-Khan	Assistant Director FATA
15	Dr. Bashir Ahmed	ADHS EPI-Punjab
16	Dr. Rajwal Khan	Assistant Director EPI-NWFP
17	Mr. Zahid Shah	St. Assistant EPI-NWFP
18	Dr. Irtaza Ahmad	National GAVI Immunization Advisor
19	Dr. Altaf H.Bosan	GAVI Hepatitis B Advisor
20	Mr. Qadir Baksh Abbasi	NTO Federal EPI Cell
21	Mr.Manzoor Ahmad Mallal	Finance& Admin Manager GAVI
22	Dr. Saleem Ansari	MO Federal EPI Cell
23	Dr. Zulifqar Ali	MO Federal EPI Cell

List of Participants

National IACC Meeting, under the chairmanship of Federal Minister of Health for Financial Sustainability Plan (FSP)
17th December 2003
National Institute of Health, Islamabad

Date. 17/12/2004

Sr.No	Name	Designation	Signature
1.	Mr. Matiullah Khan	Sr. JS Ministry of Health	
2.	Dr. M. Shafiquddin	Chief (Health) Planning Commission	
3.	Mr. Omar Abdi	Representative UNICEF	
4.	Dr. Faizullah Kakar	WHO/MO	
5.	Mr. Abdul Haiy Khan	Chairman NPPC of Rotary International	
6.	Dr. Rehan A. Hafiz	National Programme Manager EPI	
7.	Mr. Anthony Mounts	Senior Medical Officer,WHO	
8.	Dr. Benjamin Loevinsohn	Sr. Health Specialist World Bank	
9.	Mr. Yojiro Ishii	Senior Deputy Res. Rep, JICA	
10.	Dr. Inaam-ul-Haq	Sr. Health Specialist World Bank, Islamabad	
11.	Yumi Kashiba	JICA	
12.	Dr. Sardar Mehmood Khan	Provincial EPI Manager AJK	

13.	Dr. Nusrat-Ullah-Khan	Assistant Director-EPI, FATA	
14.	Dr. Bashir Ahmed	ADHS EPI-Punjab	
15.	Dr. Rajwal Khan	Assistant Director EPI-NWFP	
16.	Mr. Zahid Shah	St. Assistant EPI-NWFP	
17.	Dr. Saleem Ansari	Medical Officer/Federal EPI Cell	
18.	Dr. Zulifqar Ali	Medical Officer/Federal EPI Cell	
19.	Dr. Irtaza Ahmad	National GAVI Immunization Advisor	
20..	Dr. Altaf H.Bosan	GAVI Immunization Advisor for Hep-B	
21.	Mr. Qadir Buksh Abbasi	National Technical Officer	
22.	Mr. Manzoor Ahmad Mallal	GAVI Finance/Admin Manager