



President Mamnoon Hussain conferring Hilal-i-Pakistan upon Dr. Margaret Chan, Director-General World Health Organization, during a special investiture ceremony held at the Aiwan-e-Sadr on 12 March 2014

WHO-PAKISTAN BIENNIAL REPORT 2012-13



Prime Minister Syed Yousaf Raza Gilani with the WHO Representative Dr Guido Sabatinelli during a conference on Dengue Control



Islamabad 12 March 2014; DG World Health Organization, Dr. Margret Chan, called on Prime Minister Muhammad Nawaz Sharif at PM house.



Dr Margaret Chan, Director-General World Health Organization, in a meeting with the President Mamnoon Hussain at the Aiwan-e-Sadr on 12 March 2014.



Dr. Ala Alwan, Regional Director WHO, called on President Asif Ali Zardari at Aiwan-e-Sadr on 07 August 2012.



A delegation of World Health Organization (WHO) led by its Country Head, Dr. Nima Saeed Abid, called on President Mamnoon Hussain at the Aiwan-e-Sadr, Islamabad on December 23, 2013.

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FOREWORD

The World Health Organization (WHO) is the leading health technical agency of the United Nations constituted on 7th April 1948. The 193 Member States of WHO form its Governing Body namely the World Health Assembly, while its Executive Board has 34 members and there are six WHO regional offices. Pakistan falls within the Eastern Mediterranean Region comprising of 23 countries and the regional office is located in Cairo. Its 147 Country Offices including that in Islamabad, Pakistan execute its core functions of articulating policy and advocacy positions; managing information; setting the agenda and promoting research; catalyzing change through technical and policy support, fostering national and global partnerships, and validating the proper implementation norms and standards, while developing new technologies/guidelines for disease control, risk reduction, health care management, and service delivery.

Pakistan is a key member state of the World Health Organization. Although the collaborative activity between the WHO started soon after its creation, the Basic Agreement between WHO and the Government of Pakistan became effective on the 15th February 1960. Over the ensuing 53 years, WHO has assisted the country at policy and programmatic levels in over thirty collaborative areas with significant health gains. It has also supported the development and implementation of legislation on several critical issues. The WHO was also instrumental in facilitating the launching of the community-based cadre of lady health workers in 1994 in order to link the communities to the health facilities.

The work of WHO in Pakistan is largely guided by a medium term Country Cooperation Strategy which covers six years encompassing three biennial work plans. For the next biennium 2014-15, the following priority programs were agreed with the government: vaccine-preventable diseases, non-communicable diseases, nutrition, reproductive, maternal, newborn, child and adolescent health, health and the environment, Integrated people-centered health services, access to medicines and health technologies and strengthening regulatory capacity, health systems information and evidence, alert and response capacities and epidemic- and pandemic-prone diseases. The collaborative activity is ongoing in these collaborative areas.

Meanwhile, it is my proud privilege to present a brief summary of our activities in the biennium 2012-2013 just ended, which saw dramatic changes in Pakistan's Health Sector owing to decentralization from the federal to the provincial level consequent to a major constitutional amendment.

I must immensely thank the WHO Representative and all the staff members of WHO Pakistan during the biennium 2012-13 for showing unrelenting commitment to the cause of WHO while performing their duties. WHO is proud of its technical team comprising of some of my foremost public health professionals both internationally and nationally. The administrative, finance and human resource teams have also lent enormous support to our activities often under times of stress.

For the editing of this document, I am grateful to all members of the technical team, particularly to Dr Ghulam Nabi Kazi, Dr Zulfiqar Khan, Ms Sadia Iqbal, Dr Farah Sabih and Ms Maryam Yunus for their kind inputs. However, in some way each staff member of WHO Pakistan has contributed to the development of this document for which my gratitude.

Dr Ni'ma Saeed Abid

WHO Representative in Pakistan a.i.



I. PAKISTAN - HEALTH AND DEMOGRAPHIC STRUCTURE

Pakistan is a large country with an area of around 800,000 kilometers and an estimated population of 184.35 million making it the fifth most populous country in the world and the largest in the Eastern Mediterranean Region (EMR) of WHO. The country is divided into five provinces namely Punjab, Sindh, Balochistan, Khyber Pakhtunkhwa and the relatively smaller Gilgit-Baltistan, as well as three territories, namely Federally Administered Tribal Areas (FATA), Azad Jammu & Kashmir (AJK) and Islamabad Capital Territory (ICT). The country has suffered several natural and other disasters following the massive earthquake of 2005, while militancy in its northern belt has created several security-compromised areas making access to healthcare problematic. A consistently high population growth rate exceeding 2% annually has led to Pakistan being quite a young nation with over 35% of its population being under the age of 14 years. Despite a well-developed and multi-tiered health infrastructure, the country has to contend with its poor health indicators such as a high MMR, IMR, under-5 child mortality, high burden of communicable diseases such as Tuberculosis, Hepatitis B&C in addition to non-communicable diseases.



II. SITUATION OF HEALTH

In pursuance to a constitutional requirement; virtually all the major responsibilities in respect of health have been devolved to the federating units or provinces, while certain critical residual national health functions have been distributed amongst six ministries and divisions of the Government of Pakistan. There are huge disparities amongst the provinces in terms of capacity, infrastructure and level of governance. The disparities are often exacerbated by security issues or natural calamities in this disaster-prone country. Meanwhile, the UN system in Pakistan is piloting the Delivering as One agenda with 14 UN agencies, funds and offices working for Health and Population with a strong and heavy agenda that can serve as a good vehicle for promoting inter-sectoral action. The latter is particularly warranted in view of the several social determinants of health such as income poverty, lack of basic education particularly to rural females, lack of adequate safe water and sanitation facilities and gender inequities also pose impediments to the delivery of health care particularly to the marginalized segments of the population.

III. HEALTH SECTOR FINANCING

Foreign assistance has played a critical role in developing the health sector of Pakistan, with the country historically receiving large volumes in aid. In 2007, Pakistan received more than US\$ 2.2 billion in Official Development Assistance (ODA), ranking it as the sixth largest recipient of official aid in the world. Generally speaking, public sector investment in the development of health care services is quite low, with the overwhelming share of health costs continues to be borne



through out-of-pocket expenditure by majority of the people with low average per capita income. The urgency of donor support is highly visible as a pre-requisite to attaining the MDGs as the current pace of effort in maternal, neonatal and child health care and communicable disease control is not commensurate with the required targets, necessitating a substantial up scaling of investment alongside more forceful interventions.

IV. REGULATING THE PRIVATE HEALTH SECTOR

With regulation, the sizable private sector can complement the health authorities, particularly in the provision of social safety nets to the underprivileged population segments. It is also widely understood that the initial point of contact of the general public is with private practitioners making it imperative to train them on the protocols of important public health initiatives such as IMNCI, EmONC, TB-DOTS, MCE, to ensure standardization of the best practices across the board within the Health Sector.

V. WHO PRIORITIES AND STRATEGIC FOCUS

Over the last decade, the collaborative efforts of WHO were characterized with a strong continued focus on Polio Eradication and improvement in routine immunization; emergency response, recovery and rehabilitation, Health System Strengthening, support for maternal, neonatal and child health (MNCH), Family Planning, Primary Health Care, Nutrition, Tuberculosis Control, Malaria Control, Prevention & Control of Hepatitis, promoting community-based initiatives, environmental health interventions mainly for safe water and sanitation, gender and health issues such as gender-based violence and health promotion with a particular emphasis on the Tobacco Free Initiative. The current strategic agenda of WHO in Pakistan has been developed after an exhaustive situation analysis and an intensive consultative process encompassing all stakeholders and tiers within the health sector. The strategic way forward for the health sector in Pakistan calls for some revamping of WHO priorities for engagement with a more strategic focus on cross-cutting critical areas such as Health System Strengthening to create an enabling environment for provision of effective MNCH, communicable disease control, nutrition support interventions, and health promotion strategies. There is also an enhanced emphasis on social determinants of health, particularly gender and human rights issues. In the context of devolution, the strategic vision of WHO technical support to Pakistan is being mainly guided by the enhanced technical assistance needs of the provincial Departments of Health. The WHO Country Office is assuming a more proactive role as the principal technical adviser to the Government of Pakistan and all provincial governments on health issues, through strengthening of capacity to enable effective execution of expected roles and functions in a rapidly changing environment.

VI. UN COLLABORATION

The UN “Delivering as One” initiative is the result of a UN Reform process that brings together the strengths of all UN agencies to increase efficiency and efficacy in a transparent and accountable manner for better services delivery to the beneficiaries and better coordination with and support to the government, donors and implementing partners thereby contributing significantly towards human development for the people in Pakistan – especially the Millennium Development Goals (MDGs) – and to deliver humanitarian assistance when necessary and further aligning its activities with national priorities and procedures in line with Paris Declaration on Aid Effectiveness. The UN System aims to continue supporting federal and provincial governments, as well as civil society and its other constituents. In this regard, the second generation One Programme (OP-II) has been developed for 2013-2017 after extensive consultations at all levels while building on the foundations of the pilot to ensure continuity in actions. The One Programme has provided a platform upon which to engage with the government and other constituencies, based on a continuous dialogue at all levels. A series of consultations with the government counterparts has taken place prior to the



launching of the programme to deliberate on the six (6) strategic priority areas (SPAs) of the OP-II. WHO is co-convenor for SPA 1 and also the Area Administrator for the Federally Administered Tribal Areas (FATA). WHO, the lead agency in Health, is represented in SPA 1, 3, 4, 5 and 6. While each SPA contributes to national goals, WHO's priority interventions sufficiently correspond to the strategic results based on national priorities and the internationally agreed Millennium Development Goals. The table below gives the co-relation of the SPAs to our interventions through CCS/JPRM 2014-15:

SPAs	Description	WHO Interventions
1	Vulnerable and marginalized populations have equitable access to and use of quality services	Polio, Health Systems Strengthening, Disease Early Warning & Response System, Environmental Health, Maternal Neonatal and Child Health, TB, HIV/AIDS, Malaria, EPI etc.
2	Inclusive economic growth through the development of sustainable livelihoods	WHO will be working directly on these issues in the context of Healthy Cities Initiative, through the GAVI-HSS interventions.
3	Increased national resilience to disasters, crises and external shocks	Emergency Health Actions, Disaster Risk Management and Reduction, Health Cluster
4	Strengthened governance and social cohesion	Health interventions for Afghan Refugees in Refugees Affected and Hosting Areas (RAHA) and mainstreaming
5	Gender equality and social justice	Gender and Human Rights in Health
6	Food and nutrition security for the most vulnerable groups	Facility-based life-saving interventions for children with Severe Acute Malnutrition (SAM) with complications

VII. HEALTH PRIORITIES

a. Eradication of Poliomyelitis

Regional Implications of the Endgame Strategy

The Government of Pakistan is a signatory to the World Health Assembly resolutions in support of polio eradication, and absolutely committed to the goal of a polio free world and the achievement of this global public good. Efforts began in 1994 with first national immunization round in Pakistan. A dramatic decrease was seen in cases from the estimated 20,000 to 25,000 cases per year to a few hundred. Wild Poliovirus type 2 has been eradicated and not been found in Pakistan since March



1997, and wild Poliovirus type-3 has not been isolated after April 2012. The number of infected districts went down from 94 in 1997 to 49 districts in 2003, 18 in 2005 and 17 in 2007. However the country faced an outbreak in 2008 and reported 117 polio cases followed by 89 in 2009 and 144 in 2010.

The continued transmission of poliovirus in Pakistan turned the polio eradication situation into a national emergency. A National Emergency Action Plan developed on the directive of the then President of Pakistan aimed at interrupting wild poliovirus transmission by end-2011. The main objectives of the Emergency Action plan included a) Achieving consistent government oversight, ownership, and accountability for polio program performance at each administrative level b) Ensuring consistent access to children in security compromised areas and c) Ensuring that all children are consistently immunized in the districts/agencies and populations that are at highest risk of sustaining transmission of poliovirus. The goal set in the National Emergency Action Plan (NEAP) could not be achieved due to inadequate implementation of the planned strategies especially in the key high risk areas resulting in reporting of 198 polio cases, highest in the world in 2011. The emergency action plan was augmented in 2012, focusing on enhanced ownership of the program by the Federal and provincial governments. The augmented NEAP resulted in more localized poliovirus transmission in 2012; a total of 58 Wild Polio cases were reported from 28 districts/towns/agencies/areas. In 2013, Pakistan has reported a total of 92 wild polio cases from 22 districts/towns/tribal agencies/areas.



The intensity of WPV transmission is mainly localized to the Federally Administered Tribal Areas (FATA) and Khyber Pakhtunkhwa province, which have reported 82.6% (76/92) of the total wild polio cases this year. Genomic sequencing results indicate that in 2013, more than 80% of polio cases are linked to intense WPV circulation in Central KP. Gadap town Karachi has its ongoing indigenous circulation that also appeared in Quetta Block in Balochistan and Dadu in Sindh. Thus the key geographic areas of highest concern currently are agencies of North & South Waziristan, Bara tehsil of Khyber Agency in (FATA), Central Khyber Pakhtunkhwa (KP) and some areas of Karachi (especially UC-4 of Gadap town).



Current epidemiological challenges in Pakistan can be simply classified into the following categories:

Barriers between the vaccinators and the children

1. Ban on polio campaigns since more than 18 months in the key areas of North and South Waziristan.
2. Ongoing military operations in Bara tehsil of Khyber Agency leading to inconsistent access.
3. There is a serious direct threat to the lives of the frontline polio workers in Peshawar, other districts of central KP and Karachi (particularly Gadap Town). Despite making all the possible security arrangements for the campaigns, it has not been possible to optimally implement the

vaccination campaigns without compromising the quality.

4. Increasing misconceptions about the polio program in view of the Abbottabad incident have severely eroded the program's credibility over the last year or so.

Management, oversight and accountability issues

There are some management related issues in key areas of Peshawar, Hyderabad and Quetta Block. Although the latter has been without polio cases; the trend of campaign quality has been worrying in 2013 mainly due to inadequate accountability.



Maintaining progress in areas without polio cases

The country program really needs to maintain the progress in other areas, especially the high risk belts like central Pakistan, Rawalpindi and Islamabad that have history of being repeatedly infected and the potential to get the viral circulation established.

SINDH

Sindh has reported nine type-1 polio cases so far in 2013, one each from Bin Qasim and Gadap Towns of Karachi in addition to the Dadu district. Eight samples (of 25 finalized) from Gadap town and two consecutive samples from Gulshan-e-Iqbal Town Karachi tested positive for WPV. One vaccine derived poliovirus type-2 (VDPV-2) case was reported from Gadap town Karachi in 2012 and four in 2013 so far. The environmental samples from Gadap town Karachi were persistently positive for wild poliovirus in year 2012 (two thirds of samples) and 2013 (38% of samples). The samples collected from Hyderabad were persistently positive for WPV-1 in 2012 and first half of 2013 however after extensive quality vaccination activities the samples collected in last quarter became negative indicating interruption in circulation. Sukkur had persistent positive environmental samples in 2012, however, became negative since last quarter of 2012. Insecurity in Gadap town compromising access for vaccination especially UC-4, wide population movement with KP and FATA resulted in not only persistence of WPV circulation but also VDPV-2 outbreak.



BALUCHISTAN

Balochistan province has not reported any polio case in 2013 so far, while two VDPV-2 cases have been reported, one each from Mastung and Jaffarabad districts. Wild poliovirus has been isolated from four samples in 2012 whereas only one out of 36 samples collected in 2013 tested positive; WPV was not isolated from Quetta after February 2013. There was VDPV-2 outbreak in Killa Abdullah district in 2012

reporting 15 cases. A total of 4 polio cases were reported in 2012 and 73 in 2011. The problems in Balochistan were mostly localized in three districts namely Quetta, Pishin and Killa Abdullah that constitute the Quetta Block, which reported 3 polio as well as 15 VDPV-2 cases in 2012. It is important to recall that 53 cases during outbreak in 2011 were from the Quetta Block.

KHYBER PAKHTUNKHWA AND FATA

As mentioned above, Khyber Pakhtunkhwa and FATA together have reported 82.6% of polio cases in 2013 and remain one of the two key areas globally with most intense WPV circulation; the other being Northern Nigeria. It is significant that while the entire KP province has reported 11 cases, the remaining 65 are from FATA. More than 80% of polio cases in 2013 are either reported from or genetically linked to Central KP circulation.

PUNJAB

Seven polio cases have been reported in 2013; from Mianwali (1), Mandi Bahau Din (1), Sheikhpura (1), Toba Tek Singh (3), Sahiwal (1) representing viral introduction from endemic zone of Central KP. Four environmental samples from Rawalpindi (of 9 collected), two from Multan (of 26 collected) and one from Faisalabad (of 27 collected) tested positive for WPV. Punjab reported two polio cases in 2012 and nine in 2011. It is important that all WPVs in Punjab after August 2012 were new introductions. Reporting of WPV isolates and Lahore after a significant period without any positive isolate is of concern.

Way Forward

- Removing barriers between children and vaccinators
 - a) Negotiated access
 - b) Protected campaign
 - c) Transit and mobile population strategies
- Maintaining progress in polio free areas
 - a) Vigorous oversight and accountability at all levels with Federal and Provincial Task Forces, District and UC Committees
 - b) Ministry for National Health Services, Regulations and Coordination strengthened for core functions
 - c) Aggressive case response immunization strategy
 - d) Monitoring and evaluation
- Improved oversight and operational problems
 - a) Establishment of Special District Task Teams
 - b) Deployment of Emergency Rapid Response Team, led by Prime Minister's Polio Monitoring and Coordination Cell



Polio Rehabilitation Initiative (PRI)

Since 2007, efforts have been made to improve the quality of life of children suffering from polio related disabilities in Pakistan with the initial funding from International Islamic Relief Organization (IIRO). Due to meager resources the project was only being implemented in the province of KP and FATA. However in November 2011, after becoming the grant recipient of Bill & Melinda Gates Foundation (BMGF) the Polio Rehabilitation Initiative (PRI), gained impetus and now the project activities including medical as well as social



rehabilitation are being implemented across the country. The project is a unique combination of home-based and institution-based rehabilitation and is designed to take on a multi-faceted approach which includes the engagement of eminent community elders from different backgrounds, building of partnerships with the community based organizations and designing of locally appropriate social mobilization strategies.

The Polio Rehabilitation Initiative (PRI) has provided comprehensive rehabilitation services to the polio affected children and delivered medical rehabilitation services to more than 500 Post-Polio Paralysis cases. For the provision of social rehabilitation, 115 children have been enrolled in school for inclusive education. Children suffering from post-polio paralysis are in their growing age and need replacement of the orthotic device after every 06 months to 1 year. Therefore, the project caters for this important need as well and not only the new cases are being provided with rehabilitation services but orthotic devices are also being replaced in the children who have previously been rehabilitated. PRI is thus a very innovative and landmark initiative in the country which also exhibits the reflection of the commitment to the polio affected children that they have not been left alone. The program is highly responsive and sensitive to the plight of every child who could not be saved from disability due to polio. This project is also important for the credibility of the Polio Eradication Initiative (PEI) which targets around 34 million children every year. It has infused a lot of confidence to the PEI as the rehabilitated children and their parents are the goodwill ambassadors for the program in the targeted communities. Progress is fragile and serious risks have emerged. Recently, poliovirus from Pakistan has spread to other countries, including Afghanistan, West Bank/Gaza, and Egypt, and to China. Within Pakistan, the risks to polio eradication relate to two particular challenges: first, the emergence of hampering barriers between children and vaccinators; and second, maintaining campaign quality throughout the country.

Steps taken to address challenges

The programme has taken a number of steps to address these current challenges, with the aim to enable effective campaigns, targeted at children most at risk, and vigorous oversight through National and Provincial Task Forces and the District and Union Council Polio Eradication Committees. We are ensuring that every opportunity is utilized to strengthen existing oversight structures, to negotiate access with all relevant parties; to protect campaigns; and to streamline the approach set out in the

National Emergency Action Plan. The national task force for polio eradication, which comprises of the Chief Ministers of the four provinces, the Governor of Khyber Pakhtunkhwa and the Prime Minister of AJK and is headed by the Prime Minister meets periodically. Similar task forces task forces have been or are being established at the provincial level, and some have met. Due to the peculiar challenges in Peshawar and Karachi, special Task Teams have been established under the chairmanship of secretary-level officials and including government departments and security forces. The special task forces will meet prior to each immunization round. In Khyber Pakhtunkhwa, the Frontier Constabulary and Corps will be mobilized where needed, to supplement current security arrangements.

In the Federally Administered Tribal Areas, a Civil/Military Coordination Committee for each FATA Agency are planning to meet regularly. The CMCCs bring together local commanders and political leaders, and will work to coordinate security, access, and protection of polio vaccination teams. Also in FATA, the APEX Committee, which involves the FATA authorities and the armed forces, will now discuss the coordination of polio eradication efforts.



In an initiative by the Regional Director for the Eastern Mediterranean Dr Ala Alwan, an Islamic Advisory Group has been established at the national level, and in Khyber Pakhtunkhwa, Sindh and Balochistan, provincial scholars' task force (PSTF), and district scholars' task force (DSTF) have been set up. These advisory bodies will work to facilitate active participation of religious leaders in advocacy efforts.

Also at the national level, the polio eradication programme has started efforts to utilize polio infrastructure to strengthen routine immunization. Alongside stopping transmission, strengthening routine immunization is one of the core objectives of the Global PEI's Polio Eradication and Endgame Strategic Plan 2013-2018.

The ongoing low transmission season from November 2013 – May 2014 is the best opportunity we have ever had to stop poliovirus transmission in Pakistan. It is the period during which poliovirus is weakest and our vaccine is most effective. The Pakistan polio eradication programme is committed to comprehensively address the remaining challenges with the aim to stop poliovirus transmission in 2014.

b. MDGs 4 & 5: Reducing Maternal and Infant Deaths

Pakistan inherited a very weak healthcare delivery system at the time of independence but over the years it has been strengthened through a reasonable infrastructure to deliver health care services at all levels of care. However despite steady improvement, the healthcare delivery system has not been able to properly respond to the health needs of the community, particularly in relation to Maternal and Child Health. As a result the county is confronted with tremendous



challenges such as high population growth, maternal mortality, neonatal mortality, infant mortality and under 5 mortality rates. Although poverty does contribute to these poor health indicators, other countries with similar socio-economic trends have performed better in this area. Although in Pakistan the indicators have shown some improvement during the last decade, yet the pace of improvement shows great room for improvement. The latest Pakistan Demographic and Health Survey (PDHS), 2013 showed that the under-5 mortality is 89/1,000 live births and Infant Mortality rate is 74/1,000 live births, which depict very marginal improvements. The neonatal mortality rate has been stagnating at around 55/1,000 live births since the last 3 decades warranting the need for focusing on this highly crucial segment of newborns which are at a high risk of dying from maternal or environmental causes.

Furthermore, the PDHS 2007 assessed the maternal mortality ratio at 276/100,000 live births; it was not assessed in 2013. Acute respiratory infections, malnutrition and diarrhea are the main causes of death in under-5 children, while hemorrhage and puerperal infections are the leading causes of maternal deaths. A major gap of our health system is the acute shortage of female doctors and paramedics at the primary health care facility level. The female health care providers that are trained are mainly engaged at the secondary and tertiary care hospitals. The situation is further compounded by the dearth of skilled birth attendants (SBAs) at the community level. The major recent initiatives of the Government of Pakistan include increasing the number of lady health workers from 70,000 to nearly 100,000 and deployment of around 8,000 community midwives in the field through the national programs of primary health care and maternal, neonatal and child health respectively. These are further complemented in the field by the national Expanded Program on immunization (EPI) and Nutrition program, however, the pace of effort needs to be increased with the support of the private sector and the international agencies in order to secure tangible health gains. WHO has been providing technical support at the federal, provincial and district levels for strengthening the health facilities and enhancing the skill of health care providers in areas such as emergency obstetric and neonatal care (EmONC), essential newborn care (ENC), and integrated management of neonatal and childhood illnesses (IMNCI).



Expanded Program on Immunization (EPI)

EPI Pakistan offers nine antigens against vaccine preventable diseases in children and one antigen to pregnant women. This is a top priority program area both for the Government of Pakistan and WHO.

The key areas of WHO support for EPI Pakistan are indicated below:



Measles SIA

The Nationwide Measles Supplementary Immunization Activity (SIA) targeting 9m - <10 year children is planned to begin from December 2013. The Global Alliance for Vaccines and Immunization (GAVI) has provided support for almost half of the cost as it will be paying for 9m-5 year population, with co-financing by the federal and provincial governments. WHO is responsible for effective utilization of the GAVI fund allocated for this SIA. The high-level commitment and oversight by federal and provincial authorities is crucial for the success of this SIA and will be provided by the government.



1. Effective Vaccine Management (EVM)

EPI Pakistan utilizes approximately US\$200 million worth of vaccine annually. A significant portion of these vaccines are made available with donor support. Effective management of these expensive vaccines is crucial to ensure safety, efficacy and reduce wastage. If requested by the government, WHO would like to provide technical support to the country in EVM assessment using its EVM assessment tool focusing on nine criteria of vaccine management. Such assessment is a mandatory prerequisite for submission of any new application to GAVI for any new vaccine introduction.



2. Comprehensive Multi-Year Plan (cMYP)

The current cMYP of EPI Pakistan is for the duration of 2011-2015. However, in the context of devolution and new vaccine introduction the current cMYP is now outdated and has outlived its utility. Hence the country needs to develop a new cMYP with critical analysis of all program areas over the next five years. This new cMYP will help both government and partners in identifying areas for resource investment in coordination. As in the past, WHO is willing to provide and mobilizing necessary technical support along with other partners for developing the new cMYP.

3. PEI-EPI Integration

A high level meeting was held in Islamabad during 4-5 July 2013 for agreement about utilizing Polio Eradication Initiative (PEI) assets for strengthening routine immunization (RI) in Pakistan. A draft document titled "Optimizing the contribution of the Polio Eradication Initiative to broader immunization and disease control goals in Pakistan" was shared with the partners during the high level meeting. A general consensus was made in utilizing existing PEI assets in 16 selected districts in 2013



for improvement of RI. Specific program areas were identified in consultation with the national and provincial authorities. A general orientation of WHO/UNICEF PEI staff in accordance with the curriculum was held at Islamabad 10-12 September 2013. Provincial and District level workshops with inclusion of government officials from the respective health departments is now under process. It is expected that the intervention will be in place and functional in all selected districts by the end-2013.

New EPI Management

The Ministry of National Health Service, Regulations and Coordination has recently revamped the entire Federal EPI top management. The new management needs and expects extensive Technical Assistance especially in the area of HR and capacity building from WHO. A draft document highlighting expected roles of the Federal EPI and a suggested organogram with TOR of different crucial technical positions has been developed and shared with the new management. Upon agreement of the government, WHO will process recruitment of these technical HR for the federal EPI. WHO is also willing to provide similar support to the provinces. In addition WHO regional and country level staff undertook a number of missions to assist the country in various aspects of EPI and carried out capacity building workshops for vaccine management, surveillance, data management and the Reaching Every District (RED) approach.

c. MDG 6: Communicable Disease Control

1. Malaria Control

- Estimated disease burden 1.6 million annually
- Reported clinically diagnosed and treated cases 4.1 million annually
- Total confirmed cases reported from at PHC level facilities and treated all over the country were 4.343 million in 2012
- Proportion of falciparum amongst all positive cases was 24%
- Outbreaks were detected in 91 localities of the countries in 2011
- Annual Parasite Incidence (API) was highest in Balochistan region (7.68/1000) followed by FATA (7.06/1000) while the maximum burden reported from flood affected areas of Sindh (114,651 +ve cases)
- Overall falciparum Ratio (FR) out of total positive in Pakistan was 24% in 2012, which was lowest for the last 2 years



Program Focus

The main focus of the Federal Directorate of Malaria Control and provincial programs is to coordinate country-wide efforts towards securing 50% reduction in the malaria burden and also vector population from Pakistan. By the year 2015, over 70% of the high risk population of Pakistan will have the access and use of effective malaria



prevention and treatment in line with the MDG 6 target. This will eliminate vector-borne diseases as potential public health threat to the general population. In order to achieve this there is a need of greater resource mobilization for enhanced coverage of interventions. Furthermore, provincial capacity building in planning and management of malaria control programs is also a dire necessity following the devolution of health functions. Program policies and guidelines also need to be aligned with existing epidemiological situation and based on WHO recommendations.

Program Achievements

- Control of malaria outbreaks in flood-affected districts
- Integration of dengue control interventions with malaria control at provincial level and adaptation of WHOPES recommendations and specifications in procurement, application and management of public health pesticides
- Development of provincial dengue control plans for Swat, KP
- Successful implementation of Technical Assistance supported by Global Fund in flood-affected districts for the prevention and control of malaria outbreaks
- A total of 210,000 Long Lasting Insecticide treated bed Nets (LLINs) distributed in flood-affected districts through district health departments provided by WHO-USAID joint support in 2010-2011
- 1.3 million Combo RDTs and 5,600 ACT courses provided to provinces during 2010-2011
- Resources mobilization from Global Fund in R-10 and USAID for highly endemic districts and flood-affected areas of the country. US\$57 million have been committed for the next 5 years by GF
- A survey for monitoring antimalarial drug efficacy was initiated in sentinel sites in Balochistan and Sindh in 2011 and completed in March 2012
- A rapid malaria programmatic assessment was carried out by WHO-EMR mission in April 2013 for situation and gap analysis of national and provincial programs
- Malaria program review through a desk review has been completed
- International consultants are already been identified for the field review component by WHO-EMRO and Global Fund
- Annual survey for monitoring antimalarial drug efficacy was initiated in sentinel sites in Balochistan and Sindh in 2012 and has been completed in March 2013
- National consultative workshop was arranged for dissemination of findings of drug efficacy survey and also to generate and build consensus for judicious use of anti-malarial drugs
- Integrated PC1s or project documents were developed for FATA and KP
- WHO is participating in preparation of a strategic plan in coordination with health development partners, harnessing support from Global Fund, actively supporting provincial capacity building, strengthening surveillance and information sharing, and enhancing cross border collaboration with Iran and Afghanistan

Challenges and Way Forward

- There is a huge gap in resource mobilization, surveillance, strategic planning and policy guidelines development that is being bridged following devolution
- Enhancing provincial capacity for situation analysis, strategic planning, M&E and implementation

- Deteriorating security situation in Balochistan, FATA and KP with mass movement of internally displaced persons and devastation of the health infrastructure in some places
- Low coverage of prevention and case management services
- Weak and partially functioning malaria surveillance system in border areas
- Unregulated private sector care delivery system

2. Tuberculosis Control

- Pakistan has the 5th highest TB burden globally and accounts for 44% of the TB burden in WHO's Eastern Mediterranean region, which comprises of 23 counties
- In case of multi-drug resistant (MDR) Tuberculosis, the country is projected as having the fourth highest burden globally
- It is currently estimated that there are around 700,000 TB patients of all types in Pakistan, while every year 420,000 new persons develop TB with an estimated incidence of 231/100,000 population
- The prevalence of TB-HIV co-infection rate is around 1,500 and the mortality due to Tuberculosis of 59,000 per year
- 19% of the Tuberculosis cases detected in Pakistan are children



The outcomes achieved during 2013 were highly encouraging:

Treatment Success Rate (TSR)	91%
Case Detection Rate New Sputum Smear Positive Cases (CDR NSS+)	64%
Case Detection Rate TB Cases of all types	72%
Case Notification Rate (NSS+)	62/100,000
Case Notification Rate (All cases)	167/100,000

Key Program Achievements

1. The number of diagnosed TB cases notified increased from 20,707 in 2001 to 270,394 in 2011. Since the revival of the program in 2001, NTP has successfully treated over 2 million TB cases free of cost. The current case detection rate of new TB cases is 63% while the treatment success rate is 91%.
2. 5,800 diagnostic and treatment centers (TB Management Units) have been established in the



public sector across all districts which provide free TB testing and treatment services. However there is yet the need to access the private sector as well.

3. National TB guidelines and training modules have been developed including those for childhood TB, difficult to diagnose TB, and MDR-TB. NTP has trained thousands of doctors, paramedics, laboratory technicians and LHWs all over the country.
4. Resources have been secured for 50% requirement of TB drugs for next 5 years through the Global Fund to Fight against AIDS, TB and Malaria.
5. NTP is establishing drug management system and refurbishing all warehouses.
6. Approximately 1,200 microscopy centers have been established all over the country and approximately 600,000 TB suspects are tested each year free of cost. In addition, NTP has established and functionalized BSL-3 reference laboratory at National level. Five more BSL-3 labs will be established during this year in the provinces.
7. TB/HIV guidelines and manuals have been developed for the screening and management of TB/HIV co-infected patients. Sixteen sentinel sites have been selected and strengthened; through collaborative efforts of TB & AIDS control programs and non-governmental partners for screening, care and support of TB/HIV co-infected patients.
8. MDR-TB management has been started at eight pilot sites. GFATM resources have been secured for comprehensive management of 15,000 MDR-TB patients including diagnosis, treatment and social support.
9. Childhood and difficult to diagnose TB case management started through piloting in 30 DHQ hospitals and 27 tertiary care hospitals. The program is providing free pediatric drugs and Purified Protein Derivative (PPD).
10. NTP has a functional research unit with linkages with national and international institutions. Several operational research activities have been carried out, the findings widely disseminated while some major studies are currently undergoing including a large country-wide TB Prevalence survey from 2010-11 to estimate the exact burden of TB in the country, an incidence study using the capture-recapture method and a drug resistance study.

WHO is a strong technical partner of the NTP and has been supporting the Program since 2001. The support is mainly focusing on the capacity building of the NTP, PTPs and districts using the following strategies:

- Revised the existing recording and reporting tools in 2008, which were adopted by NTP and introduced in January, 2010 all over the country
- Supports NTP in arranging Joint Review Missions to identify and address key challenges with the help of technical and funding partners
- Fostered operational research by technically supporting all the studies
- Supporting public-private mix in TB-DOTS in Pakistan with the help of leading private sector institutions, and capacity building of the national staff through exposure to international and national meetings

The Way Forward

Initial estimates of the prevalence survey show that the disease burden may be greater than estimated and the pace of effort will need to be doubled in order to achieve the targets

- Public-private mix may be the way forward as the case detection of the public sector has reached a plateau and most patients going initially to private practitioners are being missed
- Three models of public-private mix are being tested in the country to determine which one is the most effective; WHO also plans to organize regional and country level consultations on the same
- Quality assurance of laboratory facilities is being strengthened at all levels
- MDR-TB services are being enhanced to bring them closer to those needing them

d. HIV/AIDS Control

- Pakistan is experiencing the concentrated epidemic of HIV with prevalence exceeding 5% in 02 of the High Risk Groups
- Prevalence of HIV in IDUs is 32%
- Prevalence of HIV in transgender 6.9%
- More than 6,000 known cases of HIV +ve persons in the country while the estimated number stands at 130,000
- More than 2,500 persons taking ARVs in 16 HIV treatment centers all over the country



Disease Situation

In Pakistan, the HIV epidemic is in second stage of the epidemic i.e. concentrated epidemic with the prevalence in two traditional risk groups exceeding 5%. The groups surpassing this threshold are injecting drug users (32% prevalence) and transgender sex workers (*Hijras* 6%). Of the estimated 150,000 injecting drug users nationwide, national surveillance data shows rates of infection ranging from 15% to 50% in most major cities of Pakistan such as Sargodha, Faisalabad, Peshawar, Quetta, Karachi, Larkana, Hyderabad, Mandi Bahauddin and Lahore. In addition, there have been “mini-outbreaks of HIV epidemics” in rural communities like Jalalpur Jattan, district Gujrat as a result of alarming overlap between injecting drug use, unsafe hospital infection control practices/therapeutic injections, and commercial sex. UNAIDS/WHO estimates around 130,000 HIV positive persons in Pakistan with an overall general population prevalence of <0.05%. However, certain significant risk factors raise concern for a wider spread of HIV such as in Lahore 13% of internally migrant men reported extramarital sex with an average of 8 partners (38% non-commercial) in the past year. In another study, 30% of men from the general population reported some non-marital sex in their lives and 11% in the

past 3 months. Only 16% used condoms while 4% had a sexually transmitted illness (STI). Another significant concern is the fact that Pakistan has high rates of unscreened blood transfusions and a very high demand for therapeutic injections and poor infection control practices in hospitals and clinics nationwide.

The Partnership Environment

Many different partners are working with National and five provincial HIV and AIDS control programs in the country. These include UN partners where WHO is collaborating with UNAIDS, UNICEF, UNFPA, UNWOMEN, UNODC, IOM, WFP, UNHCR in controlling the infection from rising in High Risk Groups and then spilling over into the general population. These efforts are supplemented by large number of NGOs that are working with the programs to implement crucial harm reduction services for MARPs. The program interventions are being implemented by these NGOs through contracts that are being given to these NGOs.

Programme Achievements

1. Annual rounds of Integrated Biological and Behavioral surveys are carried out in High Risk Groups
2. Provincial AIDS control programs functional with capacity to implement and monitor activities
3. Service delivery contracts being given NGO networks providing crucial harm reduction services to injecting drug users, female/transgender sex workers, and long distance truck drivers
4. Establishment of 16 HIV treatment centers all over the country with 07 functioning PMTCT centers where more than 2,500 HIV positives are getting Anti-Retroviral treatment
5. Secured 02 GFATM rounds of more than 100 million USD to supplement the national efforts
6. Free provision of all ARVs in HIV treatment centers
7. Free provision of baseline tests and Viral Load and CD4 tests to all HIV positives
8. Procured 03 PoC PIMA machines for PACP Punjab and Sindh to improve treatment monitoring through CD4 testing
9. Developed new national strategy and testing protocols for diagnosing HIV, Hepatitis B and C through rapid tests
10. Procured HIV, Hepatitis B/C rapid tests to be used by health care providers with the new protocols
11. Conducted assessment of HIV treatment program in Punjab based on WHO Cascade analysis tool and sharing of results with all stakeholders in a consultation workshop
12. Participation of Provincial and National HIV programs in dissemination meeting for the release of new WHO ART guidelines in Morocco in 2013
13. Revision of National ART guidelines underway based on new WHO recommendations
14. Conducted a KAP study in Gujrat to find reasons for the spread of blood borne infections in the district. The results were shared with all stakeholders in a workshop

Issues of importance

1. Diminished funding for HIV for maintaining HIV preventive interventions at the current pace
2. Program strengthening in the post devolution scenario
3. Expansion of HIV treatment services at district level in a phased manner according to WHO proposed Continuum of Care model
4. Provision of Viral Load and CD4 diagnostics and other ancillary services under one roof and in an integrated service delivery model

Highlights of the WHO's current collaborative activity in the country

WHO support in the area of HIV and AIDS is based on its comparative advantages as outlined by the UN Country Team (UNCT), whereby areas such as prevention of HIV transmission in healthcare settings, blood safety, counseling and testing, management of sexually transmitted infections, strengthening in HIV treatment services such as Anti-Retroviral Treatment monitoring, prophylaxis and treatment of opportunistic infections for both adults and children, in addition to HIV/AIDS surveillance. HIV treatment services need to be expanded further to districts based on evidence of relatively high prevalence.

e. Viral Hepatitis B & C

Pakistan Medical and Research Council conducted a National population survey to find actual prevalence of hepatitis B (HBsAg) and Hepatitis C (Anti HCV) in Pakistan in 2008. Out of the 47,043 persons screened, the HBsAg prevalence came as 2.4% (95% confidence interval of 2.3-2.6) and anti HCV 4.9% (95% confidence interval of 4.7-5.1), making an aggregate of 7.4% thus showing HBV & HCV exposure in about 12 million population. Frequent use of therapeutic injections (30% population taking more than 10 injections per person per year) and reuse of syringes, showed strong association with HCV. The survey identified a total of 30 districts that showed a very high prevalence for HBV and HCV disease. In order to control the spread of Hepatitis in Pakistan, the Government launched the National Programme for Hepatitis Control in the country in 2005.



The major components of the program were:

- a) Hepatitis B vaccination to high-risk groups (health care providers, prison inmates, patients with chronic renal failure, hemophiliacs, thalassemics, patients with hepatitis C, others like relatives of high risk groups, at sites of high prevalence disease).
- b) Safety of blood and blood products
- c) Safe injections, invasive medical devices and solid hospital waste management
- d) Prevention and control of viral Hepatitis A&E
- e) Behavior change communications through media and interpersonal communications

- f) Capacity building for prevention and control of viral hepatitis
- g) Surveillance, diagnostic laboratory services and epidemic response
- h) Operational research including monitoring and evaluation
- i) Counseling and treatment interventions at teaching and DHQ hospitals

Provincial Programs

After devolution all provinces have their own Hepatitis control programs under the Chief Ministers' initiative for control of this disease. The main focus is on providing treatment but other aspects of prevention and control are neglected.

WHO support

In Pakistan very few partners are working for Hepatitis control. WHO has been working with the national program since its inception in 2005, and particularly assisting in the areas outlined below:

- Constitution of a Technical Advisory Group on Hepatitis in Pakistan
- Development of national guidelines for infection control
- Normative guidance on prevention, testing and treatment of Hepatitis B and C
- Technical assistance in developing national guidelines on treatment and surveillance
- Provision of blood screening kits to blood banks
- Injection safety equipment to all health facilities in 25 targeted districts of Pakistan, in addition to pilot tertiary care hospitals such as Jinnah Post Graduate Medical Center Karachi, Benazir Bhutto Hospital Rawalpindi and DHQ hospital Gujrat
- Training of health care providers on treatment, prevention, infection control, hospital waste management and surveillance
- We are also working to increase the awareness of masses on Hepatitis transmission and prevention in 25 targeted districts of Pakistan
- We have procured conventional Interferon worth 450,000 USD to be given to selected treatment sites in the country

Key areas needing development

1. Need major policy shift to focus more on prevention than treatment
2. Development of national and provincial surveillance systems for Hepatitis
3. Resource mobilization for provision of baseline testing and treatment for Hepatitis B and C
4. Intensive awareness campaigns for the general population
5. Injection safety including infection control and hospital waste management

Issues

- More focus on treatment and less on prevention by the provincial programs
- No surveillance system existing that could give information on burden of disease in the country
- Uncontrolled private sector and quackery causing rapid spread and mismanagement of cases
- Very high injection use in the population
- Injection safety system is quite weak
- Lack of awareness of masses on Hepatitis B and C transmission and prevention

f. Blood Transfusion Safety

- Only 50% of the estimated 1.5 million blood bags transfused in Pakistan are screened for blood borne pathogens according to a study
- Most of the transfusions are happening in private sector which is un-controlled
- Sero prevalence of blood borne pathogens namely Hepatitis B and C are high in the general population while HIV is rising.
- Quality of blood screening is low leading to transmission of infections through blood transfusion
- Separation of blood into its components is rare in most of blood banks
- Most physicians are not aware of clinical use of blood and its products. Resultantly most of the transfusions are whole blood
- Ratio of voluntary donation of blood is very low and most donations are family or replacement donations

Safe Blood Transfusion in Pakistan

In Pakistan, according to USAID, only 50 percent of the 1.5 million blood bags are screened (Final Report for the IMPACT Project in Pakistan, Oct 2002-Sep 2007). About 50% of transfusions are being given in the private sector. As per the WHO criteria, 6-16 units (average of 11 units) of blood are required per hospital bed. At the existing levels, shortage amounts to as much as 40%. The problem is further compounded by inappropriate use of blood which is up to 25-45%. Most transfusions are



whole blood (80-85). According to International Red Cross if blood was used more appropriately, the number of transfusions could be brought down by 30%. Although seroprevalence of HIV infection is low, studies estimate that HCV infection is 2%-7% and HBV infection in the range of 3%-5% among replacement and voluntary non remunerated donors. Pakistan has a fragmented blood transfusion system which is poorly regulated. The large and medium size hospitals have their own blood banks which cater to the hospital needs. In addition, private blood banks also operate with varying standards

of quality. This highly fragmented and non-professional delivery system poses high risks for all the stakeholders involved that includes the donors, the professional personnel and the patients. According to a 2005 report, most of the blood transfusion facilities have inadequate physical space, unhygienic and overcrowded environment, poor quality of donors, sub-standard material supplies, lack of privacy and confidentiality, obsolete and non-functioning equipment, lack of valid reagents, poor storage facilities, unsatisfactory screening for transfusion transmittable infections, highly unsafe waste management and inappropriate to complete absence of documentation and archiving. Latent resistance and pessimism among the blood transfusion professionals combined with inconsistent and substandard supplies of consumables and reagents result in inconsistent processes and procedures in most of the centres.

Documentation is mostly manual, cumbersome, and haphazard with much duplication. Another difficulty in Pakistan is the absence of a planned system of donor motivation, recruitment and retention and therefore some reliance on paid / professional donors who donate blood for money. Adequate stocks of safe blood can only be assured through regular donation by voluntary unpaid blood donors, because the prevalence of blood borne infections is lowest among these donors.

Programme Achievements (Including status of Health related MDGs)

1. Establishment of national and provincial blood transfusion programs
2. Start of a new blood transfusion program with GIZ and WHO funding with establishment of 13 regional centers connected and feeding to 78 hospitals based blood banks. Construction of regional centers in underway
3. Launching a national program to encourage general population on voluntary blood donation and replacing the tradition of family donations
4. Training of health care providers on clinical use of appropriate blood components
5. Strengthening blood screening system

WHO Support

In Pakistan there are very few partners working for the control of Hepatitis in the country. WHO is working with the national program since its inception in 2005, and has assisted in the critical area of normative guidance, technical assistance in developing national guidelines and training of health care providers on the developed guidelines.

Under OFID funds, WHO is supporting National and Provincial Blood Safety Program in the following areas:

1. Strengthening blood screening to prevent transmission of infections through blood transfusion
2. Have conducted a national assessment of blood screening system in Pakistan
3. Developed the first national testing strategy for Transfusion Transmitted Infections (TTIs)
4. Conducted trainings of blood bank technicians on Quality Assurance in blood banking based on WHO training modules



5. Procurement of blood screening kits worth 8.4 million USD from USAID support to be used in all blood banks of the country for 02 years
6. Conducted training workshops on National testing strategy for TTIs in provinces
7. Have developed a plan for strengthening blood safety in Pakistan for next 03 years and submitted to HQ for support through OFID funding

g. Situation of Communicable Disease Surveillance in Pakistan

Communicable diseases are a major public health concern and account for 40% of the disease burden and 45% of the mortality in Pakistan. The country is at high risk for epidemics because of its over-crowded cities, unsafe drinking water, inadequate sanitation, poor socio-economic conditions, low health awareness, low vaccination coverage and inadequate health system. To a large extent, the epidemics that can occur are predictable through the monitoring of local epidemiological trends. Early detection is essential for the control of the emerging, re-emerging, and novel infectious



diseases outbreaks which in turn require investments in public health surveillance, a recognized public good and responsibility of the government. However, in Pakistan the Information systems are present mostly at first level care facilities (FLCFs) and in national programs, and culture of continuous data reporting exists at this level. Currently, these systems are highly fragmented and often vertical leading to duplication of efforts. The vertically operating multiple small initiatives in surveillance without an integrated system is not in a state to generate good quality information for making key public health decisions. The public hospital system in Pakistan lacks a standardized information system and most of them maintain their own information system without a regular reporting mechanism. There is also no system to gather information from large private sector for the state to undertake its function to protect public interest. The above situation of information systems is a direct result of weak institutional mechanism including lack of ownership and organization support for data collection and information generation. The fragmentation is a result of lack of organizational unit or structure at the federal, provincial and district level responsible for integrated disease surveillance, lack of legal framework for disease reporting and lack of skilled manpower and resources for this important function. In addition, no public health laboratory network in the provinces exists except a Public Health Division Laboratory in National Institute of Health in Islamabad. Early warning function of the disease surveillance is fundamental for national, regional and global health security.

Disease Early Warning and Response System

In Pakistan, before the 1990s, several vertical programs with categorical disease-specific information systems resulted in fragmented data transmission, which made assessment of program effectiveness difficult. The fragmented system creates inefficiencies and increases workloads at all levels but particularly at the district level. To address the issue, in 1998, WHO in collaboration with National

Institute of Health launched a pilot comprehensive surveillance project, the Disease Early Warning System (DEWS), in Pakistan to augment already existing HMIS. The Disease Early Warning and Response System (DEWS) in Pakistan started as a weekly review of health facility data and notification of epidemic prone diseases from the health facility (HF) level in 1999. The DEWS oversight is placed in the Epidemic Investigation Cells (EIC) centrally at National Institute of Health (NIH) and in the four major provinces, but few District Health Offices have surveillance officers. DEWS remained part of the Ministry of Health since 2000 but underfunded and undeveloped after the initial pilot testing except in emergencies. The DEWS was first revived in 2005 in the earthquake-affected districts with support of WHO and started to function at its full potential to achieve its primary goal of reducing morbidity and mortality due to communicable disease by early detection and timely response to outbreaks. The effectiveness of the DEWS model of the Communicable Disease Surveillance and Response was evident in the post-earthquake control of communicable disease and the system was expanded to all provinces of Pakistan during the subsequent disasters (IDP crisis and floods). After the 2010 floods the DEWS coverage expanded to 104 districts in all provinces, AJK, FATA, ICT and GB. By then, the list of diseases had expanded and very closely matched the list of communicable diseases on the District Health Information System (DHIS) monthly reporting form.

WHO supported the revival, implementation and expansion of DEWS during disasters. After the 2010 and subsequent floods WHO deployed 74 Surveillance officers at districts health offices, supervised and supported by Provincial coordinators and National core team. The DEWS remained functional in 95 districts in all provinces, AJK, FATA, ICT and GB and around 3000 health facilities continued participating in the weekly reporting. WHO support to DEWS, builds human and material capacity of the DHO for outbreak response. During the period between 2009 and March 2013, total 24,570 health care providers have been trained on Disease Surveillance and outbreak response (10,515), on electronic DEWS reporting (3794) and case management (1777) through 320 different training sessions. In their position in the DHO office, DEWS Surveillance Officers (SOs) interact with and augment measles, polio, malaria, dengue, influenza, leishmaniasis, and hepatitis surveillance and control programs. WHO support through DEWS also includes technical/material support to Public Health Laboratories Division of National Institute of Health (NIH).

The DEWS model of the surveillance system has evolved over the years and the electronic version of the DEWS (eDEWS) has been implemented in all the districts after successfully pilot testing. In response to the need for improving the speed and efficiency of weekly data collection and analysis and providing a platform for linking with DHIS, WHO in collaboration with NIH and national health authorities developed the online system of reporting which provides automatic compilation and analysis of data at district, provincial and national levels with automatic generation of alerts based on defined criteria of surpassing median endemic index and of individual or clusters of cases. The weekly reports from the health facilities are submitted either by mobile phone format or web-based internet format from health facilities.

Achievements during the 2012-13

1. DEWS started as pilot project in 1998, reactivated in October 2005 after the earthquake is now functional in 95 in 2013 and is **one of the biggest functioning early warning and response systems in Pakistan**, having alerts and weekly reporting covering 95 districts in 4 provinces, AJK, ICT and 3 agencies in FATA, as validated by external assessment in 2011. During the biennium the DEWS continued as a functional Integrated Communicable Disease Surveillance and Response system in the country. The software and the electronic reporting of the DEWS successfully piloted and introduced. WHO support continued to consolidate the DEWS functions however the presence of the WHO supported Surveillance officers reduced and deployed at divisional level.
2. DEWS has been recognized now as one of the best model of the communicable disease surveillance (early warning and response) systems because it is: Integrated Communicable Disease Surveillance: covering water-borne diseases, vaccine-preventable diseases, respiratory infections and meningitis; Since January 2012 till December 2013, DEWS detected, investigated and responded to 16,269 alerts; averaging more than 156 alerts per week; Trained Health Care Providers were trained on disease surveillance, alert investigation, outbreak response, and case management; stockpiled diarrhea kits, ORS, Aquatabs, ARI kits, RDT, ACT, ADS, Ribavirin, TIG, erythromycin syrup; 80% of the 16,269 alerts were responded within 24 hours of reporting; and 2,009 outbreaks identified and contained.
- 3.

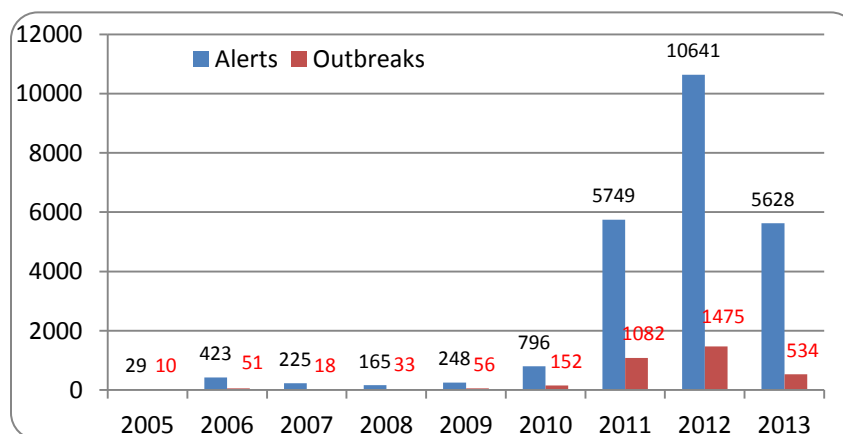
Table 1: Alerts and Outbreaks reported and responded by Province territory Jan 2012-Dec 2013

Province/Region	Alerts	Outbreaks
Khyber Pakhtunkhwa	4,268	349
Punjab	4,171	269
Sindh	4,229	843
Balochistan	2,157	417
FATA	702	81
Gilgit-Baltistan	75	3
ICT	110	15
AJK	557	32
Total	16,269	2,009

Table 2: Alerts & Outbreaks detected and responded by disease in DEWS from Jan 2012-Dec 2013

Type	Suspected Disease	Alerts	Outbreaks
Water Borne Diseases	Acute Diarrhea	403	11
	Acute Jaundice Syndrome	162	28
	Acute Watery Diarrhea (Cholera)	798	233
	Bloody Diarrhea	191	14
	Typhoid Fever	834	24
Vector Borne Diseases	Crimean Congo Hemorrhagic Fever	158	88
	Dengue Hemorrhagic / Dengue Fever	475	95
	Leishmaniasis	1,521	129
	Suspected Malaria	161	74
Vaccine Preventable Diseases	Chicken Pox	21	1
	Suspected Diphtheria	144	35
	Measles	9,279	1,093
	Meningitis	6	0
	Mumps	8	2
	Neonatal Tetanus & Tetanus	909	0
	Pertussis	412	157
	Others	787	25
	Total	16,269	2,009

- Human and material Capacity Development:** 10,515 health care providers trained on disease surveillance; standard case definitions and alert thresholds; data collection and reporting (including electronic DEWS reporting); alert generation and outbreak response. In addition 1,777 health care providers were trained on case management specifically Cholera/Diarrheal diseases, Acute Respiratory Infections, Dengue Fever, Malaria, Leishmaniasis.
- To build the data management capacity of provincial and district health department, IT equipment distributed in 103 districts and 3 provincial Epidemic Investigation Centers. District IT equipment set include Desk top, Fax, printer, scanner and photocopier.

Fig 2: Number Alerts and outbreaks detected and responded in DEWS by each year




6. **Laboratory Supplies:** It has been a regular feature to provide lab supplies and reagents to the NIH from the WHO assistance funds, which is a strong component in the field of epidemic detection, prompt diagnosis and response to avert/ limit or contain the spread of disease. 25,515 samples were collected from the field and transported for laboratory confirmation of diagnosis to NIH.

The Way Forward

Sustainable DEWS – Integrated Disease Surveillance and Response

The way forward for the sustainability and ownership of the surveillance programme by the federal and provincial governments is strong advocacy and capacity building of the provincial health departments. In order to have an integrated and sustainable information platform for DHIS and DEWS, WHO is working with the provinces to develop planning and financial documents for handover in 1-3 years' time. WHO has started reducing the Human resource support in phases. In the first phase the Surveillance Officer deployment at the districts have been reduced to divisional (comprises of 4 -5 districts each) level. By June 2015 and onwards WHO will maintain technical teams at Provincial and National level for monitoring and overseeing the surveillance activities and capacity building of the Department of Health.

Challenges and Issues

- Nonexistence of an Integrated communicable Disease Surveillance and Response system in the country except the DEWS supported by WHO
- The DEWS programme activated as a response to the disasters with the support of WHO and financial resources received through EHA funds. The financial support exhausted when the emergency is over, risking the collapse of the system if support is stopped at an earlier stage. Gradual exit and maintaining WHO support and oversight at national, provincial and divisional level is crucial at this stage.
- In order to make the DEWS programme sustainable, the public health sector needs to own the programme and integrate into the DHIS system.
- The biggest challenges after devolution of the Ministry of Health as a result of 18th amendment are.
 - Absence of a central body responsible to maintain a uniform Disease Surveillance and Response system in the country
 - Sustainability of the successful DEWS programme and ownership by provincial Health Departments
- To overcome these challenges WHO is working with and supporting the provincial health authorities in developing PC 1 to incorporate the DEWS activities in the provincial annual health plan.

Implementing International Health Regulations 2005

- The International Health Regulations 2005 (IHR) are an international legal agreement binding upon 195 countries worldwide since 2007. States were required to develop, strengthen and maintain minimum national core public health capacities related to surveillance and response to public health events; capacity requirements for the IHR related hazards of Infectious diseases, zoonosis, food

safety, chemical, radio nuclear and capacity requirements by 15 June 2012. In addition to the technical public health capacities, all countries must have a sufficient legal framework that supports all of their public health requirements and functions in all areas covered by the IHR. State parties unable to meet this deadline were asked to apply for a two year extension supported by a plan of implementation of IHR (2005) by the new deadline of 15 June 2014.

- We are conscious of the fact that Pakistan is not among those countries that are fully implementing the IHR requirements both operationally and building public health capacities for surveillance, response and reporting the Public Health Event. The reason for Pakistan's slow implementation of the IHR is the transition period due to devolution process, which necessitated streamlining many procedures and functions after the 18th constitutional amendment.
- Currently, the laws, standing operating procedures and guidelines are in place at national, provincial and different institutional levels of health. Similarly rules have been framed for air and sea ports which also need amendment and renewal in accordance with the WHO IHR (2005). There is gap in coordination, however, among health and other stakeholders such as food and agriculture, fisheries and livestock, tourism, education, transport, defense, finance, and communication under WHO IHR article 44 and annex 1.1(b). Reporting on events of public health concern need further strengthening with an integrated communicable disease surveillance system.
- The disease surveillance in Pakistan is generally fragmented and highly dependent on donor assistance. A passive reporting of selected health events including seventeen communicable diseases is underway through the District Health Information System (DHIS).
- The Disease Early Warning and Response System (DEWS) with alert generation and response component along with surveillance and weekly reporting of seventeen priority diseases is being implemented in the country primarily through WHO assistance as a part of emergency response This system is operational in 95 districts covering public sector primary and secondary level health facilities. The mechanisms for effective risk communication during a public health emergency exist, however, they need further strengthening.
- Although we identify all these gaps in the Public Health Core Capacity requirements for the IHR implementation yet we are committed to fulfill our responsibility for the global health and making progress towards full implement the IHR 2005.
- The draft legislation for the implementation of IHR "Pakistan Public Health (Surveillance and Response) Act 2010" needs certain amendments after the decentralization and is being revised in the light of 18th constitutional amendment and necessary approval from the cabinet.
- WHO-EMRO team has conducted the Assessment of Public Health Core capacities requirements for the implementation of International Health Regulation in Pakistan in February 2013. We are currently seriously considering implementing the recommendations of this mission. Pakistan has obtained extension for the implementation of IHR by 15th June 2014 and a plan of action has also been submitted by the Ministry of Health Services Regulation and Coordination, the designated National IHR Focal Point. We are quite confident that the requisite targets will be achieved by the targeted date. Meanwhile, we are working closely with the WHO country office on all issues relevant to IHR implementation.

h. Health Systems Strengthening: Challenges, Priorities And Options For Future Action

Pakistan healthcare system is 3-tiered encompassing primary, secondary and tertiary care. Starting from the gross root level health house provides community healthcare services through a lady health worker (LHW), with is connected to a basic health unit (BHU) with an upward referral pathway of rural health center (RHC) – tehsil or sub-district HQ hospital and district HQ hospital. Pakistan also has well equipped tertiary level teaching hospitals. However, this extensive healthcare infrastructure has not translated into an optimal healthcare delivery due to number of issues related to all six building blocks of the health system, such as poor motivation of health workforce due to lack of good career structure and work environment, urban-rural mal-distribution and lack of national human resources for health (HRH) policy. Pakistan spends only 0.5 percent of its GDP on health, which is very low. It is estimated that the total expenditure on health (THE) in Pakistan is US\$ 18 per capita out of which the total government health expenditure (GHE) is US\$ 4 per capita. This inability of the government to provide the required medicine and laboratory support to healthcare delivery leads to a high out of pocket expenditure of around 70%. The Health Information System is not producing quality data for planning purposes; moreover use of data by health managers is at the lowest web.

Mega Health Sector Reform (Devolution under 18th Amendment)

The Eighteenth Amendment to the Constitution of Pakistan, was passed by the both houses of the country's Parliament in April 2010, which led to the devolution of about 18 federal ministries/divisions to the four federating units. The Ministry of Health was also devolved on 29 June 2011 under this constitutional amendment leading to the devolution of powers to provincial governments. The health system has undergone a massive transformation following the 18th Amendment in the



Constitution of Pakistan approved in April 2010 and implemented in June 2011 reverting most autonomy in health matters to the provinces. However; certain critical health functions constitutionally still remain with the Federal Government and were entrusted to a number of divisions and institutions at the Federal level. Lack of adequate planning in the implementation process has led to the apprehension that certain critical federal functions like compliance with International Health Regulations; fulfilling international commitments including the three health-specific MDGs, coordination and resource mobilization are likely to be seriously compromised. Similarly; fragmentation of responsibilities for federal level functions and those that it shares with the provinces became major obstacle to move forward. There was a lack of clarity about which federal institutions will have sustained responsibility for those functions. Over time, different responsibilities have been assigned to new ministries which have do not necessarily have the capacity to perform these functions and, in some cases, lacked leadership and motivation to take on the new tasks.

In view of the above WHO fielded a high level mission in September 2012. The mission's objectives were to review the opportunities and challenges as a result of devolution in Pakistan's health sector at the federal and provincial level and to propose strategies and options that capitalize on opportunities and address challenges arising as a result of devolution in the health sector. During the mission, the team held in-depth discussions with stakeholders in federal and provincial governments, civil society organizations, and other development partners in order to propose strategies and options. The mission observed that there were many problems in the health system before the devolution process established by the 18th Amendment, and recognizing that the preparation for devolution was insufficient, the mission found opportunities and challenges emerging as a result of some of the decisions made by the Implementing Committee during the transition year and subsequent policy changes since.



One of the mission recommendations was to reduce fragmentation of health functions at the federal level and establish a health secretariat/coordination unit/ministry that would represent the federation and perform coordination role. This recommendation became the basis for creation of new Ministry of Health Services Regulation and Coordination under the caretaker government mandated to hold elections. In the absence of any guidance from the former Ministry of Health prior to the devolution, the provincial Departments of Health are facing numerous problems including lack of the requisite organizational capacity for handling the additional responsibilities such as health strategy formulation and managing the devolved structure and institutes, amidst an environment replete with fragmentation of roles and responsibilities, resource scarcity, inefficiency and lack of functional specificity, gender insensitivity and inaccessibility to health care. Despite a gross disparity between the provinces in terms of capacity and organization, they are all facing the same problems in varying proportions. Against this backdrop, each province established and strengthened its Health Sector Reform Unit (HSRU), which acts as a technical think tank and the focal point for policy analysis / policy advice to DoH. WHO and other health partners provided support to the establishment and strengthening of these units.

Human resource development

Human resource development is a major cornerstone in the development of any health system. Pakistan is one of the 57 crisis countries facing numerous challenges such as urban-rural imbalances, lack of proper skill mix, lack of quality and accreditation standards, poor absorption capacity, rural retention issues, immigration both internal and external, poor career structure and lack of a conducive working environment. In order to address the multifarious problems in HRH, a multi-sectoral approach is highly warranted. Pakistan has a huge capacity for the production of health workforces; however, its absorption capacity particularly in public sector is very low.

Furthermore, the country lacks a clear long-term vision for human resource development. The imbalances in health workforce in terms of cadre, gender and distribution are well known in Pakistan. Although there is a growing interest to address the identified shortcomings in human resources including scarcity of dentists, pharmacists, nurses, midwives and skilled birth attendants. A robust HRH strategy and implementation plans are required for addressing the disparities of health professionals and the imbalances in skill mix across the country using a multi-sectoral approach.

WHO supported Pakistan to conduct an HRH stakeholder analysis to establish a multi-sectoral platform in the shape of Country Coordination and Facilitation (CCF) mechanism, alongside a package of activities to support decentralization in view of the emerging realities in the provinces. These activities include:

1. Development of provincial HRH profiles
2. Development of human resources for health (HRH) strategy and plan
3. Establishment of a HRH observatory
4. Development and implementation of Human Resource Information System
5. HRH analysis through an Essential Package of Health Services

Towards Universal Health Coverage: Challenges, Opportunities and Roadmap

WHO has been working with the Government of Pakistan to achieve universal health coverage (UHC) which will help member states to ensure that all people receive the health services they need without experiencing financial hardship. We are quite aware of the fact that in Pakistan out of pocket expenditure is very high which is a big barrier to healthcare and can exacerbate inequity. Pakistan's health system comprises many institutional actors. Over 26% of the population is covered for health care costs to a varying degree. Majority (nearly 74%) pay out-of-pocket health expenses. Even when attending the government funded system, a patient is expected to cover various costs, user's charges as well as medication and consumables. With more than 25% of the population below the poverty line of less than US\$1 a day, many spend catastrophically and are pushed into the 'medical poverty trap', or worst, do not receive any care. Healthcare costs account for over 70% of the economic shocks faced by poor households. In these settings catastrophic healthcare costs can push people into poverty and exacerbate poverty.



However, faced with a precarious economic situation characterized by heavy external debt and faltering productivity, Pakistan's room to maneuver with health sector reform is quite limited. Although the recently announced Devolution Plan provides a window of opportunity, it must go beyond and introduce far-reaching changes in the health and social sectors. Regionalization of health care services in an integrated manner with functional specificity for each level of care is an essential step. Integration of current vertical programs within the framework of a need-based comprehensive primary health care system is another necessary step which will help in reduction of costs and improving access.

Most importantly, fostering a public-private partnership to share the cost of basic primary health care and public health services is another avenue for bringing additional resources for health. We are also pleased to note that next World Health Report is on this important topic which will bring more wisdom to us and enhance our knowledge about different approaches and tools to achieve universal health coverage.

Pakistan has a significantly large primary health care infrastructure, which is underutilized. Due to huge recurrent expenditures in PHC infrastructure (more than 80%), very little funds remain available for the provision of essential medicines. This leads to a large scale out-of-pocket expenditure on medicines. Incessant catastrophes over the past few years have, on the other hand, further deprived the already weak supply chain.

Essential Medicines and Health Products

- Pakistan has a significantly large primary health care infrastructure, which is underutilized. Due to huge salary costs (more than 80%), very little funds remain available for the provision of essential medicines. This leads to a large scale out-of-pocket expenditure on medicines
- Pharmaceutical industry in Pakistan is rapidly growing with over 600 companies and more than 70,000 registered brands. This needs harmonization of product quality and regulation within the country as well as internationally according to WHO-GMP Guidelines and ICH (International Committee for Harmonization)
- Pakistan's National Pharmaceutical Policy needs revision in view of the rapidly changing environment. Weak regulation exists to provide oversight of the standard of medicines and medical equipment. Prescription errors lead to non-adherence to treatment protocols
- Another issue is to integrate into health infrastructure elements such as health insurance coverage, qualification of practitioners, and evidence-based information to guide policy decisions and capacity building along the correct lines
- WHO's essential medicine program is to provide technical support to the regulatory framework in the country to improve access of quality, efficacy, safety and rational use of medicines
- WHO support the Government of Pakistan in all matters related to pharmaceuticals and facilitates the availability of quality and affordable essential medicines, while promoting the best practices in the area of pharmaceuticals regulation in Pakistan
- EMP shares with all stakeholders, standards, norms, best practices and guidelines in the areas of medical technologies,



harmonization of pharmaceutical quality control laboratories standards, bioequivalence study, national medicine policy, public pharmaceutical procurement and supply chain, traditional medicines and vaccine quality and production

- Programme has also supported the country in national emergencies through essential medicines provision to reduce mortality and morbidity in disaster affected population. As a Health cluster lead WHO aim is to focus on filling gaps in essential medicines and supplies in coordination with all stakeholders and to avoid duplication in supplies and rational utilization of medicines

Some of the major achievements of WHO EMP during Biennium 2012-2013 are summarized below:

- i) **Support in medicine tragedies:** Early in January 2012, a terrifying scenario unfolded at Punjab Institute of Cardiology at Lahore, where more than 180 cardiac patients died by intake of contaminated tablets. On the request of Government, WHO Mission consisting of members from CO, RO and HQ visited Punjab to investigate the suspected medicines and furnished their recommendations to avoid such incidence in future. The Mission thoroughly examined the tragic incidence and sent the samples to MHRA UK, for test analysis. The test results revealed that Pyrimethamine was mixed with the ingredients of Isotab (Culprit/contaminated cardiac medicine) during the manufacturing process. After confirmation of the contamination, WHO team provided Anti-dot information for Pyrimethamine overdose to the patients who were under treatment and disseminated anti-dot information to all hospitals and media. After a few months later another drug incident occurred; a cough syrup tragedy, where again tragic loss of lives occurred due to intake of Tyno syrup. WHO supported in provision of reference sample for further testing of suspected APIs during cough syrup tragedy.
- ii) **Support for the establishment and framework of Drug Regulatory Authority of Pakistan**
 - On the recommendation of the WHO mission, and advocacy meetings with representatives from all four provinces for an autonomous drug regulatory authority resulted initially DRA ordinance and later the Drug Regulatory Authority of Pakistan Act materialized
 - Technical assistance provided for drafting medical devices rules
 - Provide technical support on regulation of traditional and alternate medicines
 - Support provided for quality control labs for medicines
 - Although Pakistan stands among few countries who started GMP (Good Manufacturing Practices) in Asia even before Japan, but its implementation in true spirit has remained weak, so WHO assisted three assessments by international experts to formulate the recommendations for development of an effective and stringent regulatory regime in Pakistan
- iii) **Assessment of drug testing laboratories at Lahore and Karachi:** In pursuance of the Contaminated Syrup tragedy another WHO International mission performed gap assessment of two Government quality control laboratories located at Karachi and Lahore. This assessment helped in identifying gaps and immediate needs to be addressed to combat any future incidences.

Recommendations for improving the practices paved the way for for acquiring WHO prequalification for quality control labs.

iv) Training on quality management system(qms) at drug testing laboratory Lahore: To address the gaps identified by WHO HQ mission of QC laboratories, collaboration with International Health Partners (IHP, UK) organized QMS training for drug testing laboratory, Lahore. The focus was on Health, Safety and Environment (HSE), standard operating procedure (SOP), equipment inventory system, documentation, GLP, environment and personnel, sampling and their storage, Improving logbooks, and equipment lifecycle management.

vi) WHO Prequalification Program: Pakistan has weak GMP and GLP compliance. Not a single product is prequalified by any stringent regulatory authority (SRA) or WHO. Efforts were therefore made to advocate and promote WHO prequalification program in the country. Various seminars were accordingly conducted in major cities to disseminate general information about PQ procedures and requirements. Fifteen pharmaceutical firms were encouraged to start work on Expression of Interest (EoI) and submission of



their dossiers to WHO Expert committee. WHO PQP Inspections for one Quality Control laboratory and two pharmaceutical manufacturers have been conducted in 2013. As a result of collaborative efforts, a private sector laboratory has attained WHO prequalification status last year.

vii) WHO workshop on prequalification and dossier assessment: A 02-day workshop (8 - 9 October, 2013) was conducted on WHO prequalification and dossier assessment for pharmaceutical manufactures and regulators in Islamabad. The objective was to provide general information about PQ procedures, requirements and brief about WHO support for development of expertise for product development, manufacturing, quality control and regulation of pharmaceutical products.

viii) Workshop on CTD format for pharmaceutical manufacturers and regulator: Representatives from 50 pharmaceutical companies and 20 regulators both federal and provincial participated in this 1-day workshop, which provided an overview of dossier requirements and guidelines that are used or referenced under WHO prequalification program.

ix) Consultative meeting on health system review in post devolution scenario: development of framework tool for medicines and health technologies assessment: Pharmaceutical sector is a vital component of health system without which the health system cannot deliver optimal health services. After the devolution each province is making efforts to undertake their new responsibilities. A a need was thus felt to rationalize and harmonize the reform process accordingly. This exercise promoted in depth discussions on priority areas requiring attention.

- x) **Consultative meeting on national essential medicines list, Islamabad - 4 December 2013:** WHO in coordination with DRAP organized a consultative meeting on review of NEDL in the light of WHO EDL 2013 and epidemiological trends of Pakistan. This preliminary consultative meeting set directions for NEML revision in early next year. The participants were familiarized with inclusion and exclusion criteria of any molecule and dosage form in NEML based on WHO expert committee guidelines. Identified the specialized areas that have not been included in WHO list but are required in NEML due to high prevalence rate in the country. Experts suggested including Tobacco cessation products, MNCH medicines like Misoprostol and interferon for Hepatitis in the new EDL. This will promote better procurement policy and practices by using a restricted list.

Other significant activities during the biennium included

- Assistance to USAID Deliver project to develop provincial Essential Medicines List
- Development of online database for pharmaceutical tracking and management
- Training mid-level faculty for research in pharmacy services and Anti-Microbial Resistance (AMR)
- Technical support in supply chain management (scm) of essential medicines and rational use
- Compilation and printing of standard treatment guidelines (STG) for primary health care
- Support was provided to provincial health authorities in establishing pharmacovigilance centre for effective adverse drug reactions (ADRs)

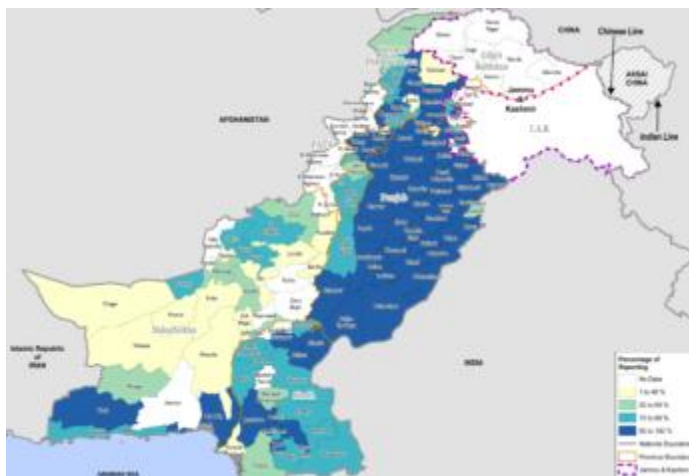


CHALLENGES AND THE WAY FORWARD

- Surmounting the weak or non-existence of stringent regulations on medicines and health products, and implementation capacity at all levels
- The operationalization of Drug Regulatory Agency of Pakistan (DRAP) in line with WHO Guidelines and Stringent Regulatory Authorities (SRAs)
- Revision of the National Medicines Policy is required
- Harmonization of drug regulation and production in country with international standards through up gradation of GMP standards
- Implementation of WHO prequalification for National quality control laboratories to achieve quality manufacturing in country in line with USFDA, WHO, EU or ICH Standards
- Making the provision of essential medicines and management at PHC level a high priority

National Health Information System

National Health Information System is designed to support the Information needs of the health care managers by ensuring timely availability and use of accurate information at sub-district, district, provincial and federal levels. Pakistan’s country wide District Health Information System (DHIS) is a mechanism of data collection, transmission, processing, analysis and information feedback to the first level care facilities both at Primary and Secondary levels. The objective of DHIS is not only to record information on health events but also to monitor the availability of critical physical resources of peripheral health facilities. This newly designed system has been implemented in a phased manner. Currently out of 140 districts 126 districts are successfully trained and are using the data recording and reporting formats of DHIS. Among these nearly 125 districts are now regularly reporting since last two years (2012-2013).



Priority Areas

World Health Organization is providing institutional and technical support for the improvement of Health Information System both at Federal and provincial level Health Departments. WHO has mainly been focusing on support to HIS program, training in new data collection tools, situational analysis studies in information systems, capacity building in areas like data management and analysis, Human Resource Information Systems, development of analytical reports. During biennium 2012-2013, WHO/HIS support also focused on strengthening capacities of provincial HIS Units in use of information in post devolution scenario. A number of new initiatives including promotion of eHealth and Civil Registration & Vital Statistics (CRVS) were also introduced during this biennium.

Table: Overall Implementation Status of DHIS, by Province (Dec 2013)

Provinces	Total Districts in Pakistan	Districts with DHIS Implementation	Districts with DHIS Reporting	% Age DHIS Reporting Districts
Punjab	36	36	36	100
Sindh	23	23	23	100
Khyber Pakhtunkhwa	24	24	24	100
Balochistan	30	30	29	96
AJK	10	5	5	50
FATA, GB, ICT	17	8	8	47
Total	140	126	125	82

Key HIS Achievements during 2012-2013

Strengthening DHIS

- Introduction of standard MIS/ DHIS in all 32 Tertiary Hospitals in Punjab
- Assisted introduction of DHIS in all districts of AJK and GB thus completing countrywide implementation
- Assessment of Health Information Systems using HMN/ COIA Tools in National Workshop
- Development of National DHIS Feedback Report 2013 with Data from 110 districts
- Organization of National HIS Coordination Workshop
- Capacity building on statistical analysis and HIS analytical tools (SARA, AnaCOD, MDSR, HMN)

Commission for Information and Accountability Initiative (COIA)

- Countrywide Assessment of current status of COIA thematic Areas /Baseline Indicators (HIS, CRVS, eHealth, NHA, NHR, MDSR etc.)
- Participatory Development of National/ Provincial COIA Roadmaps /Plans for implementation till June 2016

Vital Registration and Statistics (CRVS)

- Assisted Rapid and Comprehensive Assessments of CRVS Using WHO Tools
- Development of National/Development Roadmaps for CRVS Improvement

Promotion of eHealth

- National eHealth Survey as part of 3rd Global Survey
- Organized eHealth Promotional Seminars for Health Managers (2 Karachi & Islamabad)

Issues and the Way Forward

- Assessment of status HRM data and its use in all Provincial Departments of Health
- National Workshop on HRIS Assessment and Way Forward
- Provincial Consultative Workshops for Development of standard HRIS based on recommendations for DOHs
- Completion of DHIS implementation and follow up in all the provinces including GB and AJK
- Regular transmission and consolidation of DHIS data from all the provinces at Provincial/ National levels
- Regular analysis and development of Feedback reports followed by Dissemination workshops
- Culture of Monthly & Annual Progress Review meetings based on DHIS data
- Rolling out of a standard information system for tertiary care hospitals
- Accelerated use of IT for information systems

VIII. PREVENTION AND CONTROL OF NON-COMMUNICABLE DISEASES BASED ON THE REGIONAL FRAMEWORK FOR ACTION

The Government of Pakistan is determined to make the prevention and control of non-communicable diseases (NCDs) an integral part of its primary health care package. Although we are missing out on our targets relating to maternal, neonatal and child health and communicable disease control, yet we cannot ignore the huge mortality and morbidity on account of NCDs. We assume that 54% of all the mortality in Pakistan is due to NCDs. We are working to implement both the regional framework of action and are updating our national framework while urging provincial governments to take up this issue as a high priority encompassing cardio-vascular diseases, diabetes, cancers, chronic respiratory diseases, preventable blindness and deafness, mental health and substance abuse, injuries, disabilities and rehabilitation. The Government of Punjab has constituted a Task Force for the prevention and control of NCDs and other provinces are expected to follow suit. The theme of World Health Day 2013 was on Hypertension and was used for advocacy of all the NCDs.



Implementation of NCDs Stepwise Survey

Pakistan has embarked upon implementing the NCDs Stepwise Survey in the Punjab and Sindh. The survey is being implemented by the Pakistan Medical Research Council. The data collection process is continuing and expected to be completed by March 2014. The implementation of the Stepwise Survey is being seen as a first step towards preventing and controlling Non-communicable Diseases (NCDs) in the country by generating evidence-based data on NCDs-related risk factors. First time in the history of Pakistan, paper-less environment has been ensured as the survey is being carried out while using the handhelds (PDAs). WHO had organized a three-day comprehensive training for the data collectors. The training was facilitated by the WHO HQ. Salient features of the survey are that a team approach was adopted to do the field interviews ensuring full respect to gender sensitivity. Kish Method on the PDAs was used to select the household for data collection. The female team members recorded the interviews, took blood pressure and measured height, weight & hip and waist circumference wherever female households were selected.



Launching the activity, Dr Tanveer Ahmed Director General Health Services Punjab described it as a major landmark, as Pakistan is suffering from a dual burden of communicable and non-communicable diseases, and until now little attention has been paid to non-communicable diseases or NCDs. At the same time there is sufficient evidence to suggest that NCDs accounts for around 55% of the overall deaths in the country. He described this as quite a breakthrough that will provide sound evidence about the risk factors and prevalence of NCDs in two major provinces of the country. He thanked the World Health Organization and Pakistan Medical Research Council for their support in the survey, which will provide evidence for the requisite investment in this sub-sector of health, which includes cardio-vascular diseases, diabetes, cancers, chronic respiratory diseases, preventable blindness and deafness, mental health and substance abuse, injuries, disabilities and rehabilitation. Ms. Melanie Cowan of WHO HQ facilitated the training along with WHO Country Office and PMRC staff.



Speaking on the occasion, Dr Huma Qureshi Executive Director PMRC pointed out the huge burden of NCDs and thanked the Director General Health and WHO for their support. She pointed out that prevention was perhaps the only viable option in an environment where the treatment options are both limited and expensive, keeping them out of the reach of the majority of the population. This makes it imperative upon all of us to not only take cognizance of the immense burden of NCDs and also address their public health dimensions while adopting a holistic approach.



Tobacco-Free Initiative

Tobacco is the only legally available consumer product which kills people when it is used entirely as intended. The mortality attributed to tobacco has not diminished despite a reduction in the proportion of the population that uses tobacco and an increase in the population covered and protected by the WHO MPOWER measures. The global tobacco epidemic still kills nearly 6 million people each year. Over 5 million of these are users/ex users and more than 600,000 are nonsmokers who die from exposure to second-hand-smoke. If the current trend continues, the tobacco-related deaths are projected to cross eight million per year by 2030 with 80% of these deaths occurring in low-and-middle income countries. The



epidemic has already killed 100 million people during the 20th century and it could kill up to 1 billion during the 21st century. Sufficient evidence is now available that tobacco kills more people than Tuberculosis, HIV/AIDS and Malaria combined and is deadly in any form.

Like cigarettes, smokeless tobacco is also highly addictive and causes cancer of the head and neck, esophagus and pancreas. The use of tobacco is on the rise in Pakistan with an estimated 22-25 million smokers; and 55% of households having at least one smoker (Pakistan Health Education Survey 1991, 1999). Around 36% of adult males and 7% of adult females are tobacco users, giving a male to female ratio of about 5:1 (National Health Behavior Survey 2012). However, a cause of concern is the closing of this gender difference in younger smokers. The Global Youth Tobacco Survey (GYTS) conducted in during 2003-04 and 2008 found the boy to girl tobacco use ratio as 2:1. Tobacco use is not limited to cigarette smoking. Shisha smoking, (*huqqa/sheesha*) water pipe smoking and use of smokeless tobacco like Naswar and *Gutka* are also very common in Pakistan. Similarly, exposure to second hand smoke (passive smoking) is very common in the country.

WHO collaboration

The collaboration between WHO and Pakistan's Ministry of Health has a long history with several successful outcomes. After the implementation of the 18th Constitutional Amendment, the key roles of the Ministry of Health have been devolved to the provinces. Accordingly, WHO has now more focus in the provinces. However, recently the Ministry of National Health, Services, Regulations and Coordination (MoNHSR & C) has been given a similar mandate as the former MoH to facilitate coordination at the federal level.

Some of the WHO-collaborated outcomes

Pakistan joined global tobacco control efforts and promulgated the Prohibition of Smoking and Protection of Non Smokers Health Ordinance in 2002 and ratified the Framework Convention on Tobacco Control (FCTC) in 2004. Moreover, a Cell for the implementation of the FCTC under the Director-General (Implementation) was established in July, 2007. The Cell currently placed in the Ministry of National Health Regulations, Services and Coordination liaises with other ministries with a view to reduce prevalence of tobacco use in Pakistan by



taking administrative, legislative and coordination measures. The Government of Pakistan has taken several measures to curb the epidemic of tobacco in Pakistan. Some of these are: introducing graphic health warnings; creating 100 smoke-free environments in enclosed public places/buildings; barring tobacco industry for giving free gifts; and banning production of cigarette packs containing less than 20 sticks. Besides, Technical Advisory Groups for Tobacco Control; Federal, Provincial and District

Implementation Committees have also been functionalized. Bloomberg assistance to Pakistan is also ongoing for enhancing Tobacco Control in Pakistan since 2008.

The government has prohibited all sorts of advertising on print and electronic media including cable television/close circuit network, cinema houses, branding on clothes or garments including caps and fascia affixed outside shops, kiosk or mobile trolley. WHO would continue advocating for a comprehensive ban on Tobacco Advertising Promotion and Sponsorship (TAPS) in line with the article 13 of the Framework Convention on Tobacco Control taking into account the innovative ways the tobacco industry would adopt to promote tobacco use, sometimes under the garb of “Corporate Social Responsibility.”

Implementation of Global Adult Tobacco Survey

Pakistan seriously lacks updated data on tobacco use in the country. Accordingly, the Government of Pakistan, in collaboration with WHO, Centre for Disease Control (CDC) and CDC Foundation is going to implement the Global Adult Tobacco Survey (GATS) to systematically monitor the adult tobacco use and track key tobacco control indicators. Significant progress has been made including the approval of the GATS Proposal, questionnaire, sample design and budget. The survey will be implemented by the Pakistan Bureau of Statistics. The pilot test training followed by pilot testing is expected to be imparted during February-March 2014. The survey would be completed during 2014. The GATS implementation would not only strengthen tobacco surveillance but also support WHO MPOWER strategies by making available the reliable data on the over 15 years age group on tobacco; that is badly required for success measurement and further planning at national level. The survey will estimate the prevalence of different forms of tobacco use; smoking and smokeless tobacco products, with special consideration to urban versus rural as well as gender differences in Pakistan. It will also track exposure to secondhand smoke, cessation, risk perceptions, knowledge and attitudes, exposure to media, price and taxation issues at the national level and provide nationally representative data on adult tobacco use and key tobacco control measures in Pakistan that can be compared across countries.

Global Youth Tobacco Survey

WHO collaborated with the Pakistan Medical Research Council and Centre for Disease Control (CDC), USA in the implementation of the Global Youth Tobacco Survey of Pakistan. The objectives of the survey were to generate a reliable data on the use of tobacco (smoke) and tobacco products (smokeless tobacco such as *paan*, *gutka*, *mainpuri*, *nas*, *naswar*) among students aged 13-15 years and to know their beliefs about the tobacco products. The sample framework was derived by the CDC from amongst the public schools list sent from Pakistan. A total of 130 schools were identified (26 per province including Federal Capital). The PMRC/WHO organized training sessions in Islamabad, Quetta and Karachi for the data collectors on the survey methodology. The same teams were used which had previously implemented the Global School Health Survey few years back. Computer scan able answer sheets were used for the survey and it took an hour for the class to complete the questionnaire. One senior teacher or the Principal also filled a School Policy questionnaire to gather information from the management.

Out of 130 schools, 125 were completed and 5 could not materialize due to refusals, law and order situation and earthquake in some areas of Balochistan.

Challenges

The law enacted in 2002, however, requires strengthening specifically to bring it in conformity with the FCTC and MPOWER Provisions. The MPOWER Strategies include a) Monitoring tobacco use and prevention policies; b) Protecting people from tobacco smoke; c) Offering help to quit tobacco use; d) Warning about dangers of tobacco; e) enforcing bans of tobacco advertising, promotion and sponsorship; and f) Raising taxation on tobacco. This is backed up by strict Implementation of the existing legislation at all levels and bringing it in conformity with the FCTC provisions, ensuring 100% smoke-free environments in enclosed places, and introducing rotational pictorial health warnings, introducing plain packaging.

Road Safety

Currently more than 1.2 million people are killed on the roads every year and up to 50 million more are injured worldwide. G Jacobs et al, 2000 in their book Estimating Global Fatalities have revealed that 3 deaths occur per 100,000 population in Pakistan annually while data collected from the Bureau of Statistics, the National Highway Authority and Law Enforcing Agencies has shown that the figure varies from 4 to 5 per 100,000 population in different provinces of the country. While these casualties road will increase if action is not taken, most of them are highly preventable through simple interventions. The problem can be solved or at least largely mitigated through a wide range of effective interventions. Experience in several countries has shown that a scientific, “systems approach” to road safety is essential in tackling the problem; which addresses the traffic system as a whole and looks at the interactions between vehicles, road users and the road infrastructure to identify solutions. The need of the hour is to include road safety in health promotion efforts, support research to analyze the risk factors associated with road traffic accidents, and develop policies and practices that protect vehicle occupants and vulnerable road users, alongside strengthening hospital and pre-hospital care for all the trauma victims. It is necessary to bring about better integration of health and safety concerns into transport policies and facilitate this by further developing methods and tools to this effect. We need to invest in medical research to improve the care of trauma survivors and advocate for greater attention to road safety in view of the health impact and costs. The main components of such a plan of action revolve around three critical strategies namely sensitization of policy makers and bringing about inter-sectoral collaboration in order to adopt a holistic systems approach, enhancing skills of health care professionals and providers and creating advocacy amongst general masses.

IX. NUTRITION

The recent National Nutrition Survey of 2011 endorsed in 2013 reveals a picture depicting emergency situation in nutrition for Pakistan with GAM rates more than 15% i.e. above the internationally recognized emergency levels for nutrition in any area or country. Following are the major WHO activities in nutrition:



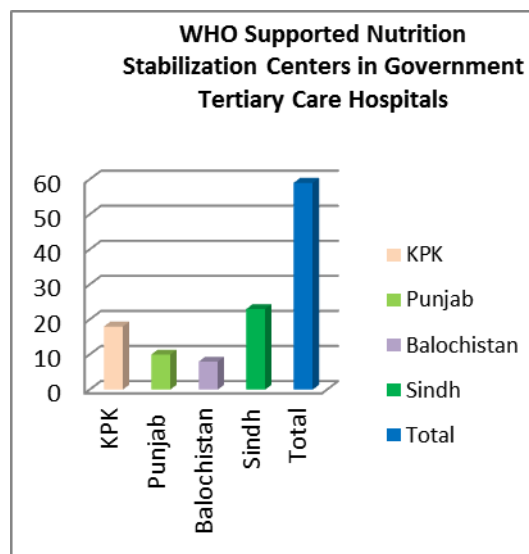
- 59 nutrition stabilization centers are being operated by DoH with the support of WHO across Pakistan. Lifesaving treatment of severe acute malnutrition with complications is provided to children under 5 years of age and also IYCF counseling is provided to mothers and attendants of the malnourished children.

NSC YEAR WISE DATA

Year	Admissions	Cured	Deaths	Defaults
2012	15,030	13,370	134	957
2013	12,061	9,870	83	504
Biennium Total	27,091	23,240	217	1,461

Year	Cure Rate [†]	Death Rate [‡]	Default Rate [‡]
2012	92.4%	0.9%	6.6%
2013	94.8%	0.5%	4.5%
Sphere Standards	>75%	<10%	<15%

[†]All performance indicators supersede the minimum standards



- Stabilization center equipment has also been provided to all the nutrition stabilization centers. Through these centers, 27,091 children under 5 years of age benefited and 23,240 lives were saved with a cure rate of above 90%. IYCF training and counseling were also provided.
- The cure rate in these centers well exceeds the global sphere standard rates of 75% which reveals the quality of care being provided by the health care providers in these centers. 58 health and nutrition sentinel sites are being operated by the provincial health departments through National program for family planning and primary health care with the support of WHO. WHO has provided medical graded anthropometric equipment to the LHWs for anthropometric measurements along with capacity building of their staff
- Capacity building in year 2013 was a major activity and so far over 1600 health care staff has been trained on the life saving treatment protocols of the management of a child of severe acute malnutrition with complications. Similarly, over 800 LHWs have been provided with refresher trainings in the art of nutrition surveillance

- WHO provides technical support to the respective provincial health departments on the issues related to nutrition.
- Multi-sectoral strategy plans and development of PC1s are some of the areas of development where support is provided to the DoH in nutrition
- International monitoring and review missions have been conducted of the nutrition project e.g. Valid International and ECHO and all returned satisfied with the technical and operative strength of the WHO supported programs
- WHO has also provided support to the nutrition programs of other countries of Eastern Mediterranean region, like Yemen and Afghanistan. High-level missions from both countries have been facilitated in the country in order for them to learn from the experience of Pakistan in nutrition. NPO nutrition also visited Afghanistan to actively support the nutrition program of the neighboring country and to jump start surveillance activities
- WHO is also providing technical support to the nutrition cluster in the revision of the CMAM national guidelines
- WHO is part of various TWGs pertaining to different issues of nutrition in the country ranging from NNS TWG to food fortification alliance, and is playing an active role in the SPA 6 and SUN initiatives in Pakistan



X. DISASTER RISK MANAGEMENT

The World Health Organization, along with other UN agencies, through the One UN Joint Program on Disaster Risk Management, worked to achieve the following four outcomes during 2009 - 2012:

- **Outcome 1:** Strengthened policies, norms (gender/rights-based), institutional and coordination mechanisms for disaster risk management with emphasis on preparedness and response
- **Outcome 2:** Reliable integrated multi-sectoral knowledge, information and communication system for disaster risk management that reaches out to the grassroots level

- **Outcome 3:** Capacities of key educational and training institutions and professional bodies enhanced for development of human resources for Disaster Risk Reduction and Response
- **Outcome 4:** Communities, vulnerable groups, grassroots organizations and local authorities in high-risk areas empowered with resources and capacities to prepare for, respond to and recover from disasters

Key Highlights

Establishment of the National Health Emergency Preparedness and Response Network (NHEPRN): WHO assisted the Government of Pakistan in establishing National Health Emergency Preparedness and Response Network (NHEPRN) to strengthen the government capacity in leading the coordination in health response during emergencies. During 2010 floods emergency, WHO further strengthened NHEPRN's capacity and ensured that NHEPRN co lead the health cluster coordination mechanism. The center was inaugurated on 8th March, 2010 by the Regional Director of WHO Eastern Mediterranean.



Provincial Orientation on Health Emergency Preparedness and Response (HEPRN): In the first quarter of 2010, the Ministry of Health and WHO initiated the process of orientation i.e. orientation workshops were held in all the 5 provinces and in Azad Jammu & Kashmir (AJK). In addition, efforts are underway to establish all Provincial HEPRN Units. HEPRN Khyber Pakhtunkhwa has been established while official notifications for Balochistan and Punjab have also been issued.

Technical Support in Emergency Response during Crisis: During the floods in 2010, WHO supported the Ministry of Health, to establish a SHOC (Strategic Health Operation and Coordination) room at the NHEPR center, where the WHO national and international staff closely worked with the Ministry of Health staff to respond to floods of 2010 and 2011.

Health Vulnerability Assessment of health facilities in High Risk districts: Vulnerability assessment of health facilities for 46 priority districts throughout Pakistan was conducted using the *HeRams* tool.

Contingency Planning: WHO has been actively involved in health cluster and inter-agency contingency planning (IACP), for enabling government and UN agencies to be better prepared for the monsoons and winter hazards. The Provincial Departments of Health (DoH) and Provincial Disaster Management Authorities (PDMAs) in all provinces were supported to develop health centered preparedness and response strategy for monsoon 2012-13. Consultative planning workshops are held in all provincial capitals from May to July every year. Moreover, a data base of existing health resources and capacities along with health needs and gaps has been prepared for all high risk districts in Pakistan.

Disease Early Warning System: WHO Disease Early Warning System has been established in approx. 2,273 health facilities in 88 districts spread throughout Pakistan in all provinces. Disaster Information System strengthened down to district level in Punjab, technical, capacity building, equipment and logistics support has been provided to 7 most vulnerable districts in Punjab.



Mass Casualty Management Plan and Drill: NHEPRN is being supported to formulate a MCM Plan for Islamabad Capital Territory by WHO. The guidelines were developed by WHO for Capital Territory Islamabad. In addition, an assessment of major hospitals in Islamabad was also initiated to gauge their response and causality management capacities. Based on MCM guidelines a scenario based drill is scheduled in Federal Capital Territory, Islamabad in Dec 2013.

Community Based Disaster Risk Management: In 2012 WHO initiated community level capacity development through information, education and risk communication for households and communities at risk to promote healthy behaviors to reduce risks and prepare for disasters. Curriculum has been developed in close coordination with NHEPR and NDMA. Training courses of community based health workers were conducted throughout 2013 in AJK, Gilgit and Punjab.

Health Professional Capacity Building: National training on Management of Public Health Risks in Emergencies training was conducted for 30 Health Professionals in 2010. In 2012-13 WHO partnered NHEPRN, to conduct Hospital Preparedness for Emergencies- HOPE training in all provinces; three training courses were conducted in 2012 for 75 health officials while two courses were conducted in 2013. HOPE training for Instructor Course was also organized in Lahore from 10 -14 April 2013 with technical and financial support of WHO. Two more courses are planned in KP and Sindh by Dec 2013.

EMERGENCY HEALTH ACTIONS

Conflict IDPs: Since July 2008, Pakistan's north-western areas of Khyber Pakhtunkhwa (KP) and FATA have experienced significant population movement as a result of security operations between government armed forces and non-state armed groups as well as sectarian violence. At the peak of the crisis in April/May 2009, approximately three million people were displaced including populations from KP. However, renewed fighting between two groups of non-state actors in the Tirah Valley forced the population to displace. The military is currently involved in an operation against both groups in the area, which may extend to other locations, causing the authorities to raise concerns about further displacement. Over the course of 2012-13, the following developments unfolded:

- Continued and new displacements from parts of FATA which are still insecure, including Mohmand, Kurram and Khyber agencies
- IDPs living inside and outside of camps, in both KP and FATA
- Continued instability in parts of FATA, affecting livelihoods and infrastructure and limiting access to basic services
- Restricted access of FATA and areas of KP continues to limit humanitarian assistance

The needs of IDP families differ according to circumstance including the length of their displacement; range of external support structures and whether they are staying in or off-camp. Experience has shown that humanitarian needs related to protracted displacement must be analyzed separately from fresh displacement needs. Dedicated health services, including reproductive health, are being provided in camps while Government health facilities in IDP hosting areas are being supported with essential medicines and disease surveillance.

Monsoon Floods 2013: According to Government figures, 1.3 million people were affected by floods in 2013. Government led the humanitarian response while international and national humanitarian community was not approached for assistance. In 2012 floods, 4.8 million people were affected. Although humanitarian partners were able to assist more than 1.7 million people in response to the 2012 floods, critical gaps remained, because humanitarian partners received only 32 per cent of US\$169 million requested under the Monsoon



Humanitarian Operational Plan. Gaps included water, sanitation and hygiene services for more than 400,000 people and provision of basic health services for at least one million people. The major health threat is still widely prevalent communicable diseases and it is a big challenge to respond to alerts in a timely manner and prevent initial few cases from turning into full-fledged epidemics. This health threat looms equally for areas with stagnant waters as well as for those with waters receding, only difference being the type of communicable disease as the most likely threat. The most common life-threatening diseases seen during the emergency phase are acute diarrhoea, respiratory tract infections, pneumonia, measles, Dengue, CCHF, and malaria. In parallel, focus on provision of safe drinking water and sanitation services to affected population across the affected districts still continues to be a key priority to stave off the risk of outbreaks and protect population from water and vector borne diseases.

Earthquake in Balochistan-2013: On 24th and 28th of September 2013, an earthquake of 7.7 and 7.2 on Richter scale hit the southwestern province of Balochistan. Districts Awaran, Kech, Kharan, Panjgur, Washuk and Gwadar have been affected the most. In District Awaran, the three Tehsils Mashkai, Awaran and Jhal Jao are and in District Kech, Tehsil Hoshab is most affected. In Tehsil Mashkai and Awaran, most of the health facilities are damaged and non-functional; DHQ Awaran is providing health care services to the affected people. There are total of 7 BHUs in District Awaran, out of which only two are intact, not affected and are functional. While three are fully damaged but the health services are provided outside the premises i.e. tents and two are partially damaged but functional. Eight Civil Dispensaries in Tehsil Awaran are damaged and no proper health care services are available. WHO has provided one Trauma Kit and five Emergency Health Kits enough for a population of 100,000 while DG Health Services has requested WHO for more support including 1 Inter Agency Emergency Health Kit (IEHK) and 3 Diarrheal Disease Kits (DDKs) along with anti-malarial medicines, Bed nets, and Environmental Health supplies for the affected districts of Balochistan. Accordingly to the mini MIRA (Multi-Sector Initial Rapid Assessment), 59% of the population did not have access to a health facility

located within 5km from their location. By comparing the three tehsils of Awaran, it was noted that 86% of Jhal Jao, 74% of Mashkai and 59% of Awaran population showed inaccessibility to health facility within 5kms and/or one hour walking distance while Tehsil Hoshab of District Kech each showed that 86% of its population cannot access a health facility within 5km and/or one hour walking distance.

WHO's Emergency Response

Leadership, Coordination and Partnership: WHO, as the Health Cluster lead Agency, continued to fulfill its leadership and partnership development role in leading the Health Cluster in Pakistan during all emergencies. Based on the need of the prevalent emergency, the Health Cluster coordination mechanism was implemented both at the federal and provincial levels. The Health Cluster is co-chaired by National Health Emergency Preparedness and Response Network (NHEPRN) at the federal level and by the Department of Health at provincial level. Health Cluster partners include other UN agencies (UNICEF, UNFPA and IOM), International and National NGOs besides other humanitarian actors. The Health Cluster coordination approach led to a more coordinated and effective humanitarian interventions during the emergencies and ensured no over lapping of resources and efficient filling of gaps given limited scarce resources. Inter-cluster Coordination Mechanism is being implemented at both the federal and provincial level for a more coordinated response by all clusters to the humanitarian needs. Health cluster works in close collaboration with Shelter, WASH, Camp Coordination and Management and Nutrition to ensure a coordinated response to humanitarian needs and to mitigate the morbidity and mortality due to vector and water borne diseases. WHO closely collaborated with government counterparts both at the federal and provincial levels. WHO assisted the Government of Pakistan in establishing NHEPRN to strengthen the government capacity in leading the coordination in health response during emergencies. During 2010 flood emergency, WHO further strengthened NHEPRN's capacity and ensured that NHEPRN co-lead the Health Cluster coordination mechanism.



The collaborative nature ensured mitigation of morbidity and mortality during monsoon floods during the last 3 years. The greatest achievement was to ensure that there was no outbreak of Cholera during floods period through health cluster's proactive approach of establishment of Diarrhoea Treatment Centres (DTCs) across Pakistan. Health Cluster partners provided support to the flood-affected population living in inaccessible areas through mobile health units and free medical camps while support was also provided in areas



where the health facilities were damaged or destroyed by flood water. WHO, UNICEF and UNFPA are closely collaborating with health authorities and implementing partners, to reduce the burden of preventable deaths and illness through life-saving interventions among flood-affected populations since the 2010 mega flood. Health Cluster partners are focusing on the provision of essential primary health care and health services to the affected population; mitigation of communicable disease outbreaks through intensive surveillance and early response to disease threats; environmental health interventions including water quality analysis and treatment with priority given to schools and health institutions; health education informing the general public; ensuring the provision of emergency essential reproductive health services; and the treatment of acute malnutrition and nutritional surveillance.

Below are the main areas where WHO/EHA provide support:

- Providing technical assistance and leadership to government and health sector partners during all phases of crisis
- Assisting the national institutions/departments, provincial and districts departments of health in making policies, plans and strategies, establishing appropriate mechanisms for preparedness and response, strengthening preparedness and response capacities
- Enhancing the delivering capacity of WHO own development programmes and provincial offices to resume their expected role during emergencies, avoiding overlap and maximizing use of available technical expertise within country office
- Building the capacity of the partners and the government counterparts, to ensure effective quality health service provision before, during and after crisis
- Human resource and operational capacity building of health facilities
- Fill the service gap through subcontracting NGOs where other partners are not able to deliver

Health Cluster Response

Currently, the Health Cluster is active at the federal level to deal with the prevalent IDP crisis in Khyber Pakhtunkhwa (KP) and FATA. The provincial Health Cluster is active in KP, with meetings being held fortnightly for both KP and FATA. WHO is co-chairing the cluster with Department of Health, KP. The health cluster meeting at the federal level only deals with the strategic decisions while all the operational and activity related decisions are taken at the provincial level. Humanitarian Regional Team (HRT) is leading the inter cluster coordination amongst all clusters directly involved in the humanitarian response in the IDP crisis.

The overall achievement of the Health Cluster during the past emergencies in Pakistan is:

- Enabling all health cluster partners to work in a collaborative and coordinated manner with each other, including the government authorities and donors to ensure harmonized and efficient humanitarian interventions, effectively integrating cross-cutting issues, and using available

resources efficiently within the framework of agreed objectives, priorities and strategies amongst the health cluster partners

- Greater coordination amongst government authorities with UN agencies and other humanitarian partners for humanitarian response
- A collaborative approach amongst all stakeholders in strategy development & planning, including Community based approaches, attention to priority cross cutting issues and filling gaps
- Ensuring that standards adopted by WHO and Global Health Cluster are applied by all health cluster partners in the field
- Monitoring and reporting of response
- Advocacy and resource mobilization

Below are the Cluster priorities during emergencies in Pakistan:

- Restoration of Health Services: The disruption in access to health services delivered by community based health care providers (the lady Health Workers and the Community Midwives), and damages to health facilities has further reduced access to services in areas which already had low access
- Control of Communicable Diseases: The flood affected population is also at more risk of communicable disease outbreaks due to unsafe living conditions with high risk of disease outbreak which strong disease surveillance and alert response for timely and effective response is required. Displaced population is at high risk for diseases due to disrupted health services, damages to health infrastructure, overloaded HFs, low medicines stock, low human resource capacity etc.
- Life-saving Medicines and Supplies: Immediate assistance is required in shape of medicines and medical supplies – medicines for IDPs in camps, ARI centers, DTCs are immediately needed
- Water Quality Monitoring: Most of the safe water sources are damaged and population is turning towards unsafe sources to meet its needs that may result in rise in the water borne diseases during coming weeks. Water quality monitoring and control need to be enhanced as most of the water sources are contaminated
- Reproductive Health/MNCH: Need of clean delivery kits, equipment and supplies for safe deliveries are needed in all flood affected districts through effective RH/MNCH response
- Malaria and other vector borne diseases: Bed nets and other supplies are needed to protect affected community/IDPs from Malaria and others vector-borne diseases as flood affected population is exposed to unsafe weather conditions
- NGOs Coverage: Health cluster partners presence is very minimal due to lack of funds and other resources



- Immunization and Nutrition: Strong immunization coverage and nutritional support for malnourished children is required as due to multiple reasons the immunization coverage is very low

Challenges and Gaps

- Limited funding for the Health Cluster activities
- Worsening security situation in a number of districts and administrative agencies lead a number of organizations to shut down their programs. Continuous threats, registered attacks, kidnapping and murders of local state health workers e.g. attacks on polio team
- Access to FATA by international organizations is non-existent one imposing limitation for monitoring and evaluation of projects in FATA
- Many of national and international technical standards and guidance identified and shared but not yet adapted as required
- Technically weak contingency and preparedness plans by provincial authorities

Environmental Health

As the link between human health and environmental quality is made clearer, the commitment to safeguarding the natural environment is growing to protect public health. Recent studies in Pakistan have indicated that a) an estimated 44% of the populations are without access to safe drinking water, especially in rural areas, where up to 90% of the population lack such access, b) 60% to 90% of the water supplies for drinking are contaminated (PCRWR 2008); c) around 250,000 children die every year in Pakistan due to diarrheal diseases alone (USAID, 2009); d) Only 3% of the industries treat their wastes while the rest is discharged untreated into roadside channels, rivers, lakes and seas (PCRWR 2008); e) Sanitation facilities are available to only 30% of rural and 65% of urban areas.(PSLM 2008); f) Four critical water quality parameters microbiological, Arsenic, Fluoride and Nitrates are prevalent in Pakistan.



The inter-relationships between water, sanitation and health are familiar, but these links achieve greater importance following a natural or man-made disaster, when diseases may spread easily. Disaster Risk Management (DRM) in Pakistan has traditionally focused upon the management of floods including preparedness, response/recovery and mitigation measures. However, the recent disasters have increased awareness within the government, development community and the public that Pakistan is a high risk disaster



prone country. One of the major commitments of WHO during the emergency period is to ensure that risks related to the environment are recognized and properly managed to protect health.

Enhancing the living environment of the affected population, IDP camps and hosting communities was one of the main objectives of WHO operations in those areas. Specifically, to ensure the control of preventable ill health and to recognize and properly manage risks related to the environment, with special focus on vulnerable, children, elderly, women, disabled and chronically ill populations. WHO has been supporting the NIH for institutionalization of the required capacities within government and sensitization on environmental health concerns, by creating an Environmental Health Protection Unit in the institute. The NIH microbiological testing lab was rehabilitated and the capacity of the lab enhanced. WHO is also assisting in adoption of Pakistan's water quality standards and provincial environmental health strategies. Promoted and Advocated National HCWM Guidelines and Rules as well as "safe management of sharp waste" through training workshops and seminars.

Issues and the Way Forward

- There is inadequate promotion of appropriate solid waste management including hospital waste. There is a need to develop a plan of action based on community participation and appropriate collection and disposal facilities. In the broader context, Provincial environmental health strategies in Pakistan are a critical need that would lead to lay down plan of action for major environmental health issues in Pakistan
- There is a dire need to institutionalize the Occupational Safety and Health in this country. The guiding legal framework for establishment of supervisory and enforcement institutions is provided by the laws enacted by the federal government. A comprehensive situational analysis of occupational health related issues should be carried out so that the gaps identified can be addressed
- Pakistan still lacks central control of chemicals by one organization which leads to confusion in the regulation of their use. Pakistan has controls on import, production and use of chemicals by various departments at different levels. There is also lack of coordination between different stockholders. In order to prepare comprehensive control it is required that the country be made aware and a centralized or coordinated action for control of chemicals, is put in place
- Insufficient consultation with users at the design stage of WASH facilities, is leading to facilities that are not used as intended; insufficient resources provided for maintaining and cleaning public facilities; and inadequate supervision of self-build sanitation programs, lead to incorrect siting and construction of latrines





Operational Planning for the Programme Budget 2014–2015

The first step of operational planning was to align operational planning for the biennium 2014–2015 with country priorities. To this end the senior WHO management and the highest health authorities of Pakistan entered into a dialogue to determine a focused number of priorities under each category and to complete the result chain in a rigorous manner. After intense discussion at the country level; with all the provinces/Administrative Areas (FATA, AJK, ICT) under the coordination of Ministry of Health Regulation Services & Coordination, the following priority programs were agreed under the five categories which will utilize 80% of the JPRM budget:

1 - Communicable diseases

Vaccine-preventable diseases

2 – Non-communicable diseases

Non-communicable diseases

Nutrition

3 - Promoting health through the life-course

Reproductive, maternal, newborn, child and adolescent health

Health and the environment

4 - Health systems

Integrated people-centered health services

Access to medicines and health technologies and strengthening regulatory capacity

Health systems information and evidence

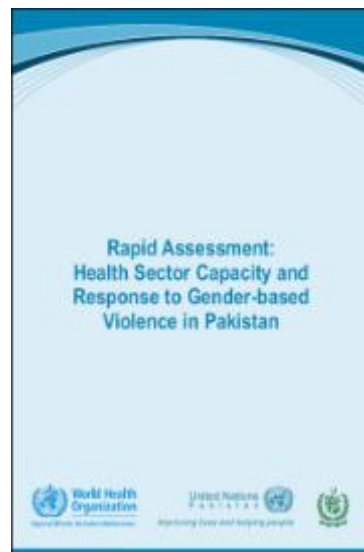
5 - Preparedness, surveillance and response

Alert and response capacities

Epidemic- and pandemic-prone diseases

Gender and Human Rights Interventions in Health

The Sixtieth World Health Assembly adopted resolution WHA60.25 in May 2007, urging Member States to formulate national strategies for addressing gender issues in health policies, programs, research, and planning processes. It also urged to ensure that a gender-equality perspective is incorporated in all levels of health-care delivery and services. The purpose of the strategy is to enhance, expand and institutionalize WHO's capacity to analyze the role of gender and sex in health, and monitor and address systemic and avoidable gender-based inequalities in health. It is widely recognized that integrating gender perspectives into policies and programs is important to the achievement of all Millennium Development Goals. The strategy includes the following strategic directions: building WHO capacity for gender analysis and planning; bringing gender into the mainstream of WHO's management; promoting use of sex-disaggregated data and gender analysis; and establishing accountability. Gender and Health Interventions in WHO Pakistan achieved considerable momentum in key gender equity dimensions of public health response in collaboration with the Federal MoNHRSC and Provincial Health departments on the strategic directions of Resolution WHA60.25. The interventions constituted the health component of One UN Joint Program on Gender Equality Interventions in Pakistan. The program component aims to address the underlying socio-economic determinants of health through policies and programs that enhance health equity and integrate pro-poor, gender responsive, and human rights-based approaches. The progress on key areas of strategic directions given in the resolution is as under.



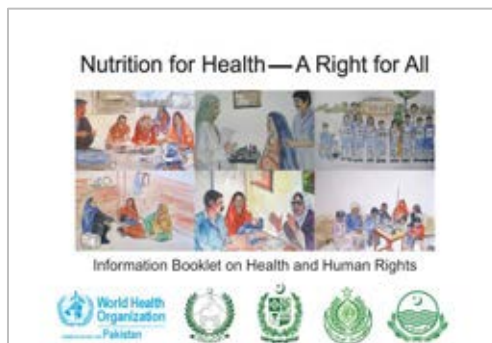
Evidence based research and analysis on Gender and Health

Issues: The resolution emphasizes the need for sex disaggregated data collection, evidence based research and analysis on gender and health issues for the development of informed policies and programs concerning the needs of men, women, boys and girls. The research focus has been on critical Gender-related issues hindering the health care access and response in Pakistan. The evidence-based assessment reports and research studies including "Gender analysis of health care access and utilization"; Organizational Mapping Assessment on Gender Based Violence (GBV) Health Response in Pakistan; Rapid Assessment on Health Sector Capacity and Response to GBV in Pakistan (2011); Rapid Assessment on Gender and Health Impacts of Agrochemicals; assessment on Integration of Health Related Human Rights in Public Health Response of Pakistan- Draft (2013) are currently available to inform health planning and response across Gender dimensions and Human Right based Approaches (HRBA) to Health.



Strengthening Capacities for Gender Analysis Skills and Gender Responsive Health Planning:

Capacity building of the health sector for gender analysis skills, gender responsive health planning and health sector response towards gender based violence at federal, provincial and districts levels form the principal components of the gender and health interventions in Pakistan. Therefore, large number of training workshops and courses on themes such as health sector response to GBV; Gender Mainstreaming in Health; Gender/GBV response to HIV prevention and nutritional support for PLWHA; Gender responsive sexual, reproductive and child health care were conducted at district and provincial levels all over Pakistan during 2009-12. In these trainings and courses health professionals, managers and service providers at all level of Public Health facilities have been trained in targeting the provinces of Punjab, Sindh, Balochistan, KP and AJK. One of the key training outcomes reported by participants is that “GBV is a serious public health problem and health service providers have important role to address this problem”. The training program is ongoing and the impacts of the interventions are expected to lead to increased sensitive responses by health care providers towards GBV survivors as well as responsive health programs and policies on gender and human rights dimensions.

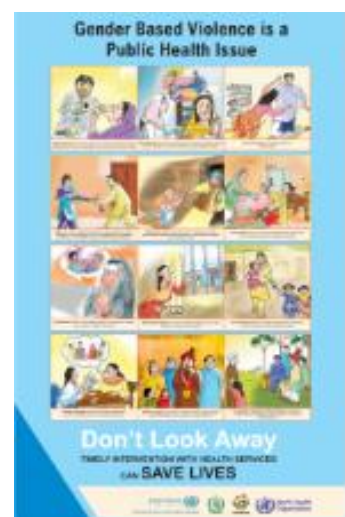


Policy Advocacy with Stakeholders for Gender and Human Rights Mainstreaming

Further to the capacity building portfolio the stakeholders’ consultation workshops at provincial and national level for advocacy and sensitization on Health Sector Response to GBV were organized in 2009-13. Approximately 600 stakeholders as well as key selected civil society organizations in the country were consulted and sensitized on the issue of health sector response to GBV in Pakistan. The key outcome was the development of Draft National Protocol on Health Sector Response to GBV and continuous advocacy on the issue to institutionalize the protocols.

Awareness Raising and Sensitization of Local Communities

Raising the awareness of communities on gender and health related issues is another major activity, with approximately 10,000 households targeted in each program district for awareness raising on Gender issues in health, and safety procedures to prevent health hazards of agrochemicals both for men and women. In the Nutrition Sector, approximately 15,000 households are targeted in each program district through awareness raising on complementary feeding practices as well as healthy nutrition, adequate calorie intake and diet diversity with a 70% proportion of women as per their socially constructed role to ensure appropriate complementary feeding practices; healthy nutrition, diet diversity and adequate calorie intake at household level. Local media campaigns including messages in



Urdu and Sindhi languages for local radio and TV as well as promotional advertisements in local newspapers on issues such as gender aspects of complementary feeding; health nutrition and diet diversity are being developed for the awareness of local communities with wider scope.

IEC Resource Material: A number of training and IEC material including posters, pamphlets, leaflets, visual aids and manuals have been adapted and developed on gender, GBV and other health issues in English, Urdu and Sindhi languages for the capacity building of health service providers. The key international resources that are consulted include WHO training manual on Gender Mainstreaming in Health for Health Professionals and Service Providers and the IPPF manual for improving the Health Sector Response to Gender based Violence for Health Care Professionals in Developing Countries. Furthermore, gender responsive IEC material including posters, pamphlets/tip sheets and leaflets in English, Urdu and Sindhi on health impacts, prevention and safety from agro-chemicals as well as on gender aspects of complementary feeding; health nutrition and diet diversity have been developed for the education and awareness of communities.

3. Gender Mainstreaming to address inequalities and social determinants in Health

The integration of gender dimensions increases effectiveness, coverage and efficiency of the interventions across the social sectors. In this regard, WHO's technical support to Government of Pakistan particularly health sector in addressing gender issues across health policies, programs, research, and planning processes focused on developing policy documents and guidelines like National Protocols on Health Sector Response to Gender based Violence; Gender responsive



guidelines for nutritional support to People Living with HIV/AIDS with a focus on women and children as vulnerable groups; and a gender strategy for health systems, through multiple stakeholders consultations at district, provincial and national level with endorsement of pre-devolution Federal Ministry of Health. The GBV health protocol guidelines propose Standard Operating Procedures (SOPs) for the Health service providers to identify, screen, manage, and maintain confidentiality, referral, recording and provision of medico-legal support to GBV cases. Other achievements include Gender based assessment of HIV/AIDS control program as part of 'National Evaluation'; Gender mainstreaming in Health Cluster Humanitarian Response Plan 2010 and Strategy for Flood response as well as Disaster Risk Management.

RESOURCE MOBILIZATION

Resource mobilization encompasses strategic planning for program funding, efficient negotiation with donors, skillful management of resources, enhancing the credibility of the organization and demonstrating superior coordination ability amongst partners. The multilateral partners of WHO include Asian Development Bank (ADB), World Bank (WB), European Union (EU), and global health initiatives such as Global Alliance for Vaccines and Immunization (GAVI) and Global Fund to fight AIDS, TB and Malaria (GFATM). Among the bilateral donors who contributed to the Pakistan's health sector during 2012-13 include Central Emergency Response Fund (CERF), European Commission Office for Humanitarian aid (ECHO), Finland, Saudi Fund for Development (SFD), United States Agency for International Development (USAID) and Australian Agency for International Development (AusAID). WHO continued its support and technical assistance to the Government of Pakistan and health partners and mobilized resources to enhance the programmatic and operational support to meet the health challenges caused by the catastrophic crises.

Challenges

Based on the past experience, ever changing ground realities and projected health needs, there is a definite need to conceive and plan projects well in advance so that the issues are addressed amicably in an ideal timeframe. This requires a futuristic vision and alertness by health partners at all levels. The judicious distribution and utilization of donor funds to health partners in line with their capacity and operational efficiency is essential, underlining the need for a comprehensive system of monitoring and evaluation to assess the aid-effectiveness and cost-benefit ratio.

END NOTE

As a part of WHO Reform, a bottom up strategy has been adopted to identify the true needs and priority areas from all the provinces and areas of the country. These will then be consolidated and sent to the WHO Regional Office for the Operational Planning for the biennium 2016-2017. This will result in a more collaborated intervention with the federation as a whole.

