



Report on the

**Meeting of the Technical Advisory Group on  
Poliomyelitis Eradication in Pakistan**

Islamabad, Pakistan  
21–22 March 2012



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## **1. INTRODUCTION**

The Pakistan Technical Advisory Group (TAG) on Poliomyelitis Eradication met in Islamabad on 21–22 March at a time when polio eradication has been declared a “programmatically emergency for global public health” and 3 countries, Afghanistan, Nigeria and Pakistan, are driving global transmission of polioviruses. The objectives of the meeting were to review progress towards poliomyelitis eradication in the first quarter after the launch of the augmented national emergency action plan. This was the first meeting of the Pakistan-specific TAG, as previously it was combined for Afghanistan and Pakistan. The objective of separate TAGs is to provide more focus and in-depth review of the country programmes.

Pakistan is the only one of the three remaining endemic countries that has reported an increased incidence of poliomyelitis in the past three consecutive years. In addition, Pakistan has reported 50% of global cases to date in 2012. The main reason for that is a deterioration of immunization status in key high-risk areas in this country.

The meeting was opened by Professor David M. Salisbury, Chairman of the TAG, who highlighted with concern the critical situation of Pakistan for polio eradication and the threat posed by the country for global polio eradication efforts. Dr Guido Sabatinelli, WHO Representative in Pakistan, welcomed the participants and acknowledged the continued support of polio partners, namely Rotary International, United States Agency for International Development (USAID), UNICEF, Centers for Disease Control and Prevention (CDC), Bill and Melinda Gates Foundation, Japan International Cooperation Agency (JICA) and World Bank. He delivered a message from Dr Ala Alwan, WHO Regional Director for the Eastern Mediterranean, who acknowledged the efforts made by the Government of Pakistan to achieve the target of polio eradication and referred, specifically, to the augmentation of the national emergency action plan for polio eradication and the efforts being made to ensure its implementation at all levels. He expressed hope for the urgent and effective implementation of the plan.

The meeting was then addressed by the Federal Secretary Ministry for Inter-provincial Coordination (Cabinet Division), who welcomed the participants and acknowledged the timeliness of the TAG meeting. He reiterated the strong commitment of the Government of Pakistan to succeed in achieving the goal of polio eradication.

The programme and list of participants are attached as Annexes 1 and 2.

## **2. TECHNICAL PRESENTATIONS**

### **2.1 Global developments in polio eradication**

The elimination of India from the list of the polio endemic countries marks a major step towards global polio eradication. The profound drop in wild poliovirus type 3 (WPV3) shows that it may be on its way to being eradicated. Pakistan is one of only two countries globally which reported type 3 polio cases during the past 6 months. The exportation of WPV1 from Pakistan to China reinforces the fact that no part of the globe is free from risk until global eradication is achieved. Upcoming important timelines include finalizing the national emergency plan by end of March 2012, review of the consolidated plan by the Strategic

Advisory Group of Experts in April and the World Health Assembly in May 2012. Two points for consideration of the TAG in the current meeting were whether the augmented national emergency action plan addressed all issues required to reach the coverage levels for oral poliovaccine (OPV) needed to stop transmission in Pakistan, and what changes were needed to optimize implementation of the plan in each province.

## **2.2 Augmented national emergency action plan**

In Pakistan, Balochistan, Sindh and Federally Administered Tribal Areas (FATA) contributed a substantial proportion of upsurge of polio cases reported during 2011. The augmented national emergency action plan (A-NEAP) was endorsed by the National Task Force on Polio Eradication, and the Assistant to the Prime Minister on the Social Sector has been appointed as the national focal person for polio eradication. The A-NEAP authorizes the government district managers to lead supplementary immunization activities and holds them accountable for their quality. It also focuses involving the public representatives and stresses adequate preparations for supplementary immunization activities at the union council (UC) level. Key recent steps in the light of the A-NEAP include abolishment of the zonal supervisors, nomination of the UC medical officers, strict actions against the suboptimal performers at all levels and deferment of supplementary immunization activities in case of inadequate preparations. Moreover well-known religious leaders, political figures and social workers have also been taken onboard. The A-NEAP has provided momentum to the programme which needs to be carried forward and the government is fully committed to this

## **2.3 Implementation status of the recommendations of the last TAG meeting**

All supplementary immunization activities were conducted as per the advice of the TAG using the appropriate type of OPV. Case response activities using bivalent OPV were carried out in response to detection of all WPV1 cases outside the known persistent transmission zones in 2011. In addition, large scale, intensive mop-ups were carried out in central southern Sindh, North Sindh, southern Punjab and southern Khyber Pakhtunkhwa. Khyber agency reported two P3 cases; short interval additional dose campaigns were conducted in Khyber agency using bivalent OPV only in the accessible areas; inaccessible areas could not be reached.

## **2.4 Epidemiological situation**

In 2011, Pakistan reported 198 cases (196 WPV1 and 2 WPV3) from 60 infected districts, which was the largest number of cases reported since 2000. The majority of cases during the past 3 years were reported from the known transmission zones of FATA and associated areas of the central Khyber Pakhtunkhwa (KP) province, Quetta block (Quetta, Pishin and Killa Abdullah) in Baluchistan province and Karachi. Following the explosive outbreak in 2011, the 15 cases in 2012 may represent the tail end of this outbreak except in FATA, which continues reporting polio cases of both serotypes.

The key epidemiological characteristics of polio cases are that the majority are among children under 2 years of age with predominance in males, 77% are from Pashto-speaking

families, 23% belong to refusal families and 88% live in multiple family dwellings. More than half the cases are inadequately immunized, with some having not received any doses of OPV. Among the polio cases, Pashto-speaking children accounted for a larger proportion of un-immunized and under-immunized children in 2010 and 2011 as compared to other ethnicities, and 63% of the polio cases reported from FATA belonged to areas which could not be visited by the vaccination teams for a long time due to insecurity. Nearly 30% of the non-polio AFP cases reported from both FATA and Balochistan were reportedly either un-immunized or under-immunized against polio. This calls for urgent attention to address these children. In fact, more than 70% of polio cases were either reported from or genetically linked to the three transmission zones.

It is important to highlight that the results of lot quality assurance sampling (LQAS) indicate marginally better performance at this point in time as compared to last year, which may be the result of the recent thrust provided by the A-NEAP. The TAG was asked for guidance on the scale of the subnational immunization day campaigns (sub-NIDs).

## **2.5 Balochistan**

Districts with persistent transmission include Kila Abdullah, Pishin and Quetta with 22, 16 and 15 cases respectively, while Nasirabad/Jaffarbad block escaped infection due to satisfactory vaccination coverage. Most of the cases are in localized *tehsils*; all the 15 cases in Quetta are in Quetta city. Out of the 22 confirmed cases in Kila Abdulah district, 13 are in Chamman, and out of the 16 confirmed polio cases in Pishin 15 are from Pishin *tehsil*.

AFP surveillance in Balochistan showed that 30% of the confirmed P1 cases had zero OPV doses and 48% had 7+ doses. LQAs in Pishin was rejected at 80% in the last 2 supplementary immunization activities and according to the January supplementary market survey, only Quetta reached 90%.

Reasons for failure include inadequate preparations for quality campaigns, deficient micro-plans, inappropriate area-in-charge and team selection and training, lack of accountability, misuse of resources, political interference, and pockets of refusals.

The Government of Balochistan has shown a high level of commitment. Four meetings are conducted in the Chief Minister's office, out of which 2 are chaired by the Minister. At the level of management, a highly committed additional secretary for health has been assigned as the provincial polio focal persons, four non performing district health officers have been replaced, and the old tier of zonal supervisors replaced by medical officers as UC in charge.

The province has restructured the programme and is implementing a new strategy of conducting supplementary immunization activities in two phases to ensure quality in Quetta block. At the UC level in high-risk districts, WHO has deployed 57 UC polio workers providing technical support for supplementary immunization activities. UNICEF has established ComNet and 8 DHSOs, 31 UCOs and 192 social mobilizers have been deployed in field to support social mobilization and media activities. All mobile (nomadic and seasonal) and cross-border populations have been considered in micro-planning. A media orientation

workshop was arranged for the prominent health journalists in the last quarter of 2011. Meetings were held with parliamentarians from high-risk districts who exhibited active support in the form of district and union council level inaugurations

Seminars involving religious leaders and conferences for the leadership of all prominent political parties were held in Pishin and Killa Abdullah. In the January–February campaigns 344 community meetings, 127 madrassa/school sessions, 435 mosque announcements and 53 UC level inaugurations were held by communications staff in the UCs of high-risk districts. Two high-risk UCs in Quetta block are being outsourced to a nongovernmental organization from the next round.

A plan has been developed to increase the number of technical support staff in high-risk districts to improve the campaign preparations, pilot outsourcing of immunization campaigns to local nongovernmental organizations in 4 UCs in high-risk districts, complete the establishment of polio control rooms at provincial and district level, enhance media engagement and involve more parliamentarians and religious and political leaders.

## **2.6 Federally Administrative Tribal Areas**

FATA has reported 59 polio cases with a large number from Khyber Agency, followed by North Waziristan, frontier region Kohat and Lakkimarwat. Major challenges are insecurity and management in the accessible areas. The state of inaccessibility at the end of December 2011 reached 8%, with major inaccessibility in Khyber Agency followed by Orakzai Agency. Management issues and lack of accountability persist in the areas such as Landikotal and Jamrud Tehsil of Khyber Agency and Miranshah of North Waziristan. Lack of ownership by the agency health team is quite evident. None of the Agencies achieved the target level of 95% coverage; coverage ranges from 82% in Kurram Agency to 54% in frontier region Bannu. All these factors contributed to the polio outbreak in 2011.

NEAP indicators in 2012 as compared to 2011 are improving. Civil Military Coordination Committee meetings are held in each Agency 12 days before campaign. Activities in the field are monitored. Accountability started with transfer of Agency Surgeons in Mohmand Agency and Kurram Agency due to poor performance. As well, parliamentarians were involved and a wide range of social mobilization activities were conducted including school and college health sessions, local *jirga* of the tribal elders and community representatives, games and local polio walks.

To strengthen implementation of the A-NEAP in FATA, particularly to improve the access and quality of campaigns, the Health Directorate is considering actions that include deployment of “transit teams” (Bara, Bajour, Mohmand) for mobile and internally displaced populations of Orakzai and South Waziristan, involvement of religious organizations, addressing refusals, enhancement of routine vaccination by conducting child health days, holding medical camps, further strengthening cross-border vaccination points, engaging polio ambassadors, further involvement of teachers in union council polio eradication committees (UPECs) and in teams during campaigns – especially female teachers, and transparency in making payments to field staff.



## **2.7 Khyber Pakhtunkhwa**

At the advocacy level, new steps include the decision of the Standing Committee on Health of Provincial Assembly to have polio eradication and immunization programme on its permanent agenda and inclusion of the Chairman of Committee in the Task Force at the provincial level and Chairman of the District Development Advisory Committee (DDAC) as member of the district polio eradication committees. The mechanism of establishing a polio control room at the provincial level with close coordination with the district health teams has been in place since May 2011 and a deferment mechanism since June last year. In June 2011, seven districts had their supplementary immunization activities delayed due to insufficient number of quality teams.

As a result of these steps, there has been a remarkable change in the indicators for process and outcome. The proportion of union councils having meetings within the time-line has increased from 61% in March 2011 to 100% in January 2012 (both months had NIDs); and percentage of union councils failing to achieve target (95%+ children vaccinated among those checked by independent monitors with proof of finger-mark) dropped from 51% to 17% in the same period in the persistent transmission districts. Partner support at the UC level in the highest risk UCs was acknowledged.

The province and FATA have close collaborative mechanisms for coordinated operations. For instance, in response to the first type 3 wild poliovirus in 2011, short interval additional dose campaigns were conducted in 4 districts. Ahead of the recent crisis of exodus from Bara, district commissioners alerted local teams to intensify transit point team strategies and district teams to focus on the areas having internally displaced populations. A WHO consultant found 11 missed children in a sample of 104 children checked at household level, all of them were new arrivals (not missed by teams) but reflecting high volume of population movement. There has been no isolation of wild poliovirus type 3 from AFP cases or sewage sampling in 2011 and 2012 so far.

Security factors are an important consideration for the province. In 2011, the highest number of casualties due to terrorist activities was in Khyber Pakhtunkhwa: 820 deaths and 1684 injuries in 512 different terrorist attacks.

Key strategic focuses in the near future include: building capacity of the UPEC to perform their functions; enhancing speed and quality of the UC level data flow to the district, especially the monitoring data in the pre-campaign implementation phase; and strengthening DCO training to clarify the areas of focus and sustain their engagement and enthusiasm until completion of polio eradication.

The Secretary requested partners to intensify support in all infected districts and urgently to inform the provincial government their intended support by end March 2012 so that the provincial government's mechanism for local resource generation may be invoked. Communications strategies were requested to address clustering of refusals and modified to create demand for vaccination.

## 2.8 Sindh

The province reported 2 WPV1 cases from 2 districts in 2012 (as of 21 March) compared to 6 WPV1 cases from 5 districts in the same period of 2011. There were improvements in vaccination coverage in supplementary immunization activities (assessed by independent monitoring, market survey, LQAS) in December 2011 and January 2012 campaigns compared to previous rounds but inconsistent at UC level.

The province is maintaining the implementation of the strategies of A-NEAP: governmental oversight and leadership improved since January 2012 but gaps in ownership and accountability persist. NEAP indicators showed improvement in campaign preparation and implementation but were inconsistent. A strategy to vaccinate migrant, nomads and children on the move was prepared and approved; all milestones by January 2012 were achieved and the milestones by March 2012 are on track. The main significant innovative intervention is the partnership with Edhi Foundation. A pilot of the partnership implementation is in process in UC4 of Gadap.

The major challenges are: suboptimal coverage of children on the move and inefficient implementation of the strategy to vaccinate children of migrant and nomads. Poor campaign preparation and implementation in Gadap town of Karachi is a significant risk to any achievement in Sindh. Other challenges include lack of meaningful accountability at all levels, disconnect between the deputy commissioners and health departments and clustering of vaccinators in city areas, and frequent strike of contract base vaccinators and lady health workers.

## 2.9 Punjab

In 2011, Punjab province reported 9 polio cases in 8 districts in addition to detecting wild virus through environmental sampling. So far in 2012 one polio case has been detected in district Jhang, and positive environmental samples have been found in 3 main urban centres of Punjab. The province participated in a rigorous international surveillance review in 2011 and the main conclusion was that “the AFP surveillance system in Punjab is sensitive enough to detect any poliovirus circulation ...and there is minimal chance of missing transmission”. The province has shown improvement in campaign quality over the past year. This has been demonstrated by a shrinking proportion of monitored UC evaluated at less than 95% coverage by independent monitoring and more UCs “not rejected at 95%” for LQAS. All scheduled supplementary immunization campaigns and timely case response campaigns were implemented following the detection of wild poliovirus.

At the provincial level there is a functional provincial steering committee led by the Chief Secretary that has held regular meetings during the past year. There is an operational provincial polio control room in the Expanded Programme on Immunization (EPI) cell and in the district EDO (H) offices. There has also been increased involvement of parliamentarians as demonstrated by their participation in inaugurations and meetings. At district level DCOs are deeply involved in supplementary immunization activities. They are chairing district polio eradication committee meetings. The committee meeting is conducted 10 days prior to every

campaign. During the meeting the DCO delegates duties to the line departments. He also makes a careful review of the previous campaign and holds the district workers accountable for their work. The Chief Secretary has instructed all DCO to establish a polio control room in their offices.

At the union council level meetings are conducted 15 days prior to the campaign. There is increasing leadership from medical officers. The UC Secretary also participates in the committee meetings; 82% co-chaired the meeting for the March sub-NID. Team composition is meeting A-NEAP recommendations in that 95% or more of all UC teams have the recommended age, female composition, government accountable worker and local member. Training is also conducted for vaccination teams one week prior to start of campaign.

Punjab has ensured that nomadic settlements are identified and mapped on microplans for supplementary immunization activities and these are updated prior to every campaign. In the January 2012 NID, over 223 000 nomadic children were vaccinated. The short interval additional dose strategy was implemented in nomadic populations throughout Punjab in the latter half of 2011 after scheduled campaigns. There are over 2000 transit teams posted at transportation hubs throughout Punjab to vaccinate children during supplementary campaigns. In addition there have been strengthened social mobilization activities for nomadic populations.

The main challenges that Punjab faces are: sustaining a motivated workforce; ensuring uniform coverage of +95% in every union council in every supplementary activity; achieving and maintaining above 80% routine EPI coverage in every UC of all districts; and sustaining the highly sensitive AFP surveillance system to ensure no AFP case is missed, especially in urban areas that have isolated wild virus from environmental sources.

The goal of Punjab is to interrupt poliovirus circulation in 2012 through involving parliamentarians, ensuring strong intersectoral collaboration, and strengthening ownership of the programme at the UC level in order to sustain high quality polio campaigns and improve routine EPI coverage. Punjab will also maintain the sensitive AFP surveillance system in order to guide vaccination activities. Lastly, the hard work and dedication of the vaccination teams who vaccinate millions of children during campaign days will continue to be firmly acknowledged.

## **2.10 Azad Jammu and Kashmir**

Department of Health has introduced certain measures for the implementation of A-NEAP at different levels. At the provincial level, an officer of the status of additional secretary has been nominated as focal point at the Prime Minister's Secretariat. A provincial steering committee has been nominated and a polio control room has been established in office of the provincial programme manager in Muzaffarabad.

At the district level, in all districts a focal point (Deputy Commissioner) has been nominated and operationalized since January/February 2012. A DPEC has been constituted and functioning, a polio control room has been established in DC office as well as in the office

of the District Health Offices. At the UC level, members of UPEC have been nominated and are working in all UC. Communities have been mobilized through mosques, schools and campaign inauguration. UC micro-plans were reviewed and revised where needed, 80% to 95% of mobile teams have local females and accountable workers, and 95%–100% of team members and supervisors were trained according to a standardized module. The way forward includes continuous monitoring and improving performance of NEAP indicators.

### **2.11 Gilgit Baltistan**

Gilgit Baltistan had been polio-free since 1998, but in 2011 the province was infected by importation from Swat. The Department of Health in collaboration with partners responded timely and conducted 4–5 immunization campaigns in the infected district (Diamer) and adjacent areas of the bordering district of Gilgit as well. Further spread of virus was contained and no further polio case has been reported since then.

The main issue in immunization is that of routine EPI in the province, and the department is trying to improve that with the assistance of its partners because this is the most important strategy in eradicating polio and the key to maintaining polio-free status in the future. Another important strategy is that of AFP surveillance; due to human resource constraints the same task is being looked after by the DHO. There is need to strengthen the surveillance system as well so that early detection of AFP cases can be ensured in the field

The UPEC meetings were held in all the districts, 96% of meetings were chaired by UCMO/Senior health official, 26% were co-chaired by UC Secretary, 97% of microplans were reviewed while 96% of teams had one local member and 86% of teams had at least one female mobile team member in the province. The DCOs and EDO H attended these meetings. The campaign was conducted in all the UCs except few because of inaccessibility due to snow. The province achieved 96% coverage based on finger marking.

### **2.12 Polio eradication initiative: communication strategies**

The presentation revisited last year's TAG recommendations and progress made against them, followed by communication objectives and milestones of the augmented NEAP. Considerable efforts have been undertaken by UNICEF in conjunction with the National Communication Technical Committee including increased ownership and accountability through advocacy; social mobilization and community engagement through COMNet and local partnerships; more data-driven communication supported by data reporting/monitoring and evaluation system and social research such as the recent knowledge, attitudes and practices survey. A mass media campaign has been launched to redefine polio in the eyes of the public through introduction of a new concept, engagement of celebrities to act as polio spokespersons and public–private partnerships for polio eradication.

### **2.13 Short interval additional dose strategy in Pakistan 2012**

A short interval additional dose round with trivalent OPV needs a 4–6 week interval to avoid interference between the 3 different serotypes. With monovalent OPV there is no

interference between successive doses, which implies there is no need to wait for 4 weeks between doses. Moreover there is evidence of higher seroconversion with monovalent OPV (the first dose of which provides 67% seroconversion versus 35% with trivalent OPV).

The following conditions provide the rationale for use of the short interval additional dose strategy in Pakistan;

- Response to WPV in an area that has previously been polio-free;
- Targeting an identified area with persistent circulation despite traditional approach;
- Insecure areas where a negotiated window of opportunity allows teams to go in and out in a short time.

In 2011 and 2012, various rounds of short interval additional dose campaigns have been conducted in the high-risk UCs of all the provinces including Punjab, Sindh, KP, FATA, Balochistan, Gilgit Baltistan and Islamabad. In many districts the rounds are conducted more than once as well. In some cases the whole district is also covered in both passages whereas in others only UCs requiring special focus are targeted. A total of 7 244 192 children were vaccinated in Pass 1 and 7 085 291 children were vaccinated in Pass 2 of the rounds throughout the country. The average percentage coverage was reported at 107% in Pass 1 and 101% in Pass 2, whereas the evaluated coverage through post-campaign monitoring remained 90% in Pass 1 and 92% in Pass 2.

Out of 2014 UCs where the short interval additional dose rounds were conducted, 18 UCs reported cases after the rounds (0.89%). From July 2010 to March 2012 there were 239 infected UCs out of which short interval additional dose (SIAD) rounds were conducted in 130. From these infected UCs, no case was reported from 112 UCs (86%) and 18 UCs reported at least one case (14%). The total number of cases post-SIAD rounds in such UCs is 20. From among the 18 UCs, 7 UCs (7 cases) were from FATA, 2 UCs (2 cases) from Sindh, and 9 UCs (11 cases) were from KP province. Analysis of the data showed that the proportion of cases in infected UCs goes on to decrease after successive short interval additional dose rounds throughout the targeted areas. For example 60% of cases were reported after one short interval additional dose round (1 round= 2 passages), 35% of cases after two rounds , 5% of cases after three rounds and 0% cases after four rounds.

The lesson learnt is that the short interval additional dose strategy is doable and it works as per experience in Bajour agency (FATA) and North Sindh, where massive outbreaks have been controlled. It requires only require close supervision. The second passage should be started after quality completion of the first passage. Refusal is a challenge but not a major problem; it requires enhanced communication strategies.

In conclusion, in addition to improving quality of supplementary immunization activities, the time-line for interruption of the virus must be expedited with a short interval additional dose round, and two passages within 2 weeks may give better result than the usual 4 weeks campaign.

## **2.14 Islamabad Capital Territory**

Islamabad is at high risk of receiving wild poliovirus due to a number of factors. Around 300 000 people commute daily to Islamabad from Rawalpindi and adjoining areas and Rawalpindi has ongoing wild poliovirus circulation indicated by the persistent isolation of wild poliovirus in environmental samples. Moreover there is large-scale population movement with areas having persistent WPV circulation in FATA/KP. All five polio cases (three type 1 and two type 3) reported from Islamabad in 2008 were genetically linked to viruses circulating in FATA/KP.

The A-NEAP is being vigorously followed in Islamabad during all phases of supplementary immunization activities. UC medical officers are deputed in all the 36 UCs; 72% of vaccination teams had at least one government accountable worker; 85% had at least one female; and all had one local member during the last supplementary immunization activities. UC and district level polio eradication committees are regularly meeting on time. Though improved, in rural areas there is need for further efforts to reach the coverage levels mentioned in the A-NEAP. Both Islamabad rural and urban areas have clear action plans for ensuring implementation of the A-NEAP over the coming rounds and improving team composition, overcoming some pockets of refusals, improving preparations with special focus on micro-planning and making sure all high-risk populations in rural areas and urban slums are part of the area and UC level micro-plans.

## **2.15 Quality of post-campaign assessment in Pakistan**

LQAS was piloted in Pakistan in December 2010 and is carried out by WHO staff in districts other than their assigned ones. Random sampling in infected/high risk districts, and in each selected UC (lot), 5 clusters are randomly selected and 10 children are checked for finger marking one child randomly selected from each house. The lots are tested for three levels i.e. likely to have achieved 95%, 90%, or 80%. LQAS is difficult to implement with quality if done on a very wide scale

Considerable gaps have been identified in coverage in some key infected / high risk areas through differences between LQAS and independent monitoring coverage estimates. Improvement has been shown in LQAS lot results with time. From January 2011 to January 2012, the proportion of lots not rejected at 90% has increased from 37% to 80%. Lots not rejected at 95% increased from 18% to 60%. LQAS has been used as an effective tool to advocate for actions on improvement in campaign quality.

Post-campaign independent monitoring is useful for broad scale assessment of quality of supplementary immunization activities in all districts conducting the activities, information for action to reach more children and improve quality, and in identification of high-risk areas

High-risk areas and populations are targeted using non-random sampling. 100% of UCs in the high risk districts and 25%–50% UCs in non-high-risk districts are assessed. Four clusters (each of 7 houses) are assessed in each UC. All eligible children are assessed in each house for finger marking. Reasons for missing children are also assessed. 218 580 (0.6%) of

the target population was assessed in January 2012. Monitors are independent, i.e. not involved in campaign implementation and are from different sources (nongovernmental organizations, teachers, university students, etc).

Considerable differences have been found between LQAS and independent monitoring coverage estimates in some key districts, therefore independent monitoring coverage data alone are not always useful to guide programme actions. The programme needs to search for other indicators that can provide a better reflection of quality of implementation (% of UCs with < 95% coverage provides a useful proxy indicator of quality in a district).

Market survey is used as a rapid assessment of quality of supplementary immunization activities in districts and acts as a quality check on independent monitoring. Spot surveys are done in markets, parks, and busy bus stations by WHO and UNICEF field staff in their respective districts. At least 100 eligible children commuting during the survey are assessed for finger marking. Addresses of missed children are recorded to assess the house to house coverage in that particular area. Reasons for not vaccinated children are recorded and unvaccinated children get the vaccine on the spot.

In summary, LQAS is an important tool in assessing quality in high risk areas and advocating for improvement. Analysis of LQAS trend suggests recent overall improvement in coverage in high risk districts. UC coverage indicator is better than pure coverage as an independent monitoring measure of implementation quality. Independent monitoring data are an important source of social data on missed children – although they don't identify root causes. Market surveys are a useful supplement to independent monitoring and LQAS. Quetta block and FATA have been identified with poor coverage in 2011 all the three methodologies

Plans for improving monitoring of supplementary immunization activities includes limited expansion of the LQAS in high-risk districts with training and involvement of the DEWS SOs from April 2012, review of the independent monitoring process and methods, and analysis/use of independent data, by end April and revised guidelines prior to May round and outsourcing of independent monitoring in selected areas and its expansion if the experience is good.

## **2.16 Engaging high risk groups for polio eradication**

The main high-risk groups are Pashtuns; other groups include Afghan refugees, nomadic populations, seasonal migrants, brick kiln workers and internally displaced populations. Refusal of polio vaccination was identified as one of the major factors for being included as a high-risk group. The strategy to deal with the high-risk groups proposed in the A-NEAP includes mapping mobile populations and clusters of refusal families using social data, mobilizing families on the move for OPV, encouraging active participation of partners from the medical and religious community in social mobilization and mobilization of families in inaccessible areas. Progress so far was discussed and further steps to be taken were elaborated.

### **2.17 Polio eradication and the media**

A survey of print media coverage before and after the negative television coverage of OPV (5 February to 12 March) showed that the television programmes were isolated incidents and not a campaign. A plan of action was developed for media engagement and management, including capacity-building of journalists on polio eradication and the Expanded Programme on Immunization, lobbying the case of polio with editorial decision-makers, and most importantly creating demand for polio through enhanced social ownership. A multi-pronged, strategy for mass media and its professionals is being developed to shift the focus from awareness to ownership.

### **2.18 Cross-border coordination between Pakistan and Afghanistan for polio eradication**

Pakistan and Afghanistan together constitute one epidemiological block and polio eradication is unlikely to be achieved in any one of these countries independently, particularly in view of the large-scale ongoing population movement through a long porous border. Epidemiological data on the polio cases, complemented by genetic analysis of the isolated polioviruses, reinforce the sharing of wild poliovirus circulation between the two countries.

Both countries have been working in harmony since years. There are permanent border vaccination posts at the two distinct borders at Friendship Gate (between Chaman and Spin Boldak) and Torkham (between Khyber Agency and Nangarhar). These posts vaccinate around one million crossing children every year. There is close coordination between the two countries with regard to AFP surveillance. All the AFP cases are immediately cross notified to the parent country with necessary information and the line lists of AFP cases in border areas are shared on weekly basis. The polio eradication teams of the two countries regularly share their experiences through ongoing communication and also by participating in different activities across the border such as monitoring of supplementary immunization activities and AFP surveillance reviews. A yearly national-level coordination meeting has also been the hallmark of collaboration between the countries, having been regularly held for more than 5 years. The regional/provincial teams from the both sides of the border work together during these national meetings to put up a clear action plan with responsibility and timelines which are followed up at the provincial level. The dates of the supplementary immunization activities are also synchronized so that the children across the border are vaccinated at more or less the same time. The two countries are availing the services of the WHO accredited regional reference laboratory for polioviruses situated in Islamabad, which continues to maintain high performance standards despite the high workload.

The two countries need to carry on the current level of coordination and further enhance the teamwork at the district/block level, which is the key to interrupting wild poliovirus circulation in the border areas.

### **2.19 Issues discussed with the TAG**

The TAG was requested for guidance and advice on the following key areas of the programme.



- Why did Pakistan experience a significant upsurge of cases in 2011?
- Does the augmented national emergency action plan (A-NEAP) give Pakistan a firm platform to achieve interruption of poliovirus transmission?
- What additional steps could be taken to usefully review the implementation of the A-NEAP?
- What additional measures, including innovations, can be undertaken in the highest risk districts?
- How can synergies be developed between polio and routine EPI?

### 3. CONCLUSIONS

The TAG expressed alarm at the fact that Pakistan, along with Nigeria, continues to report high numbers of polio cases despite the fact that the rest of the world has reported the lowest number of polio cases ever over the past 4 months. The TAG also noted with concern that Pakistan is one of the countries driving global WPV transmission, as evidenced by the fact that about 50% of the global cases to date in 2012 were reported from Pakistan.

Transmission of WPV in Pakistan remains essentially linked to the transmission zones and the dramatic upsurge in 2011 is due to the fact that not enough children were immunized, especially in the high-risk areas. Transmission persists in these zones because of consistent failure to reach children with vaccine. This failure is attributable to two factors: 1) lack of access due to conflict; and 2) continued problems with the quality of supplementary immunization activities.

The average polio case in Pakistan is a child who is aged less than 2 years, under-immunized, from a Pashto-speaking family and lives in a high-risk district, an immediately neighbouring district, or a migrant/minority area.

It is obligatory to immunize more children more consistently with special focus on the high-risk districts in the transmission zones. There are some signs of early marginal progress including massively enhanced oversight at the national and provincial level, engagement of the district administration and spotting of clear indicators and milestones. Enhanced oversight has resulted in improved process indicators in some of the high-risk districts, marginal improvement in the coverage rates as measured by the LQAS, identification of the programme blocks and measures to overcome, placement of the communication network and gradual improvement of access in FATA over the past 6 months.

Despite the marginal improvements, there are some serious threats which put Pakistan in danger of being the last reservoir of wild poliovirus. These include:

- delays in implementing the augmented A-NEAP
- failure to further improve quality in high risk districts, especially failing districts like Pishin and Gadap
- failure to take opportunities to reach children in FATA and neighbouring KP
- failure to create demand and acceptance in highest risk areas/groups, especially Pashtuns.

The augmented national emergency action plan provides a platform from which Pakistan can achieve polio eradication; the challenge is to fully and consistently implement it.

#### **4. RECOMMENDATIONS**

The recommendations below should be taken in the context of the strategies and actions detailed in the augmented national emergency action plan.

##### **General recommendations**

###### *Commitment*

1. Encourage the contribution of financial resources by the national and provincial governments to enhance commitment to and ownership of the polio eradication initiative.
2. Plan to engage national and provincial parliamentarians, universities, professional bodies, community and religious organizations, and the private sector in a broad coalition of support for polio eradication.

###### *Maintaining focus*

3. Concentrate on the high risk districts and union councils in known transmission zones; without ignoring everywhere else.
4. Immediately scale up special operational and communication strategies for high-risk groups (Pashtun strategy, migrant and mobile populations strategy, transit strategy).
5. Continue close monitoring of implementation indicators of the A-NEAP in high-risk districts (by district and union council polio eradication committees and the provincial and national task forces).

###### *Quality at the ground level*

6. Closely monitor indicators on the appropriateness and quality of vaccinator teams at union council and district levels.
7. Ensure that the engagement, motivation, training and support of vaccinators remain priorities, especially in high-risk areas.
8. Institute a system of recognition of high performing vaccinators to recognize the contribution made by dedicated individuals

###### *Improving information for action*

9. Disaggregate indicator data to better define problems at different implementation levels.
10. Develop a simple template to enable oversight committees to easily follow indicators of A-NEAP implementation.
11. Institute a special investigation process to define the operational and social reasons for missing children and to inform corrective plans (by May).

*Innovation*

12. Use short interval additional dose rounds for outbreak response and in the newly accessed areas/populations.
13. Implement special tactics for newly accessed and special populations including expanded age groups (up to 15 years and higher) targeted with OPV and polio-plus delivery.
14. Make use of partnerships for service delivery (“in-sourcing”) in the areas of communications, immunization and monitoring.

*Improving communications*

15. Implement the media action plan on an urgent basis.
16. Ensure that communication strategies, including through ComNet, are explicitly and closely linked to social data from KAP studies, independent monitoring and other sources.
17. Ensure that communications and operations teams must operate in conjunction in planning, implementation and monitoring.
18. Use information from special investigations into the reasons for missing children to inform actions in response.

*Improving monitoring of supplementary immunization activities*

19. Expand LQAS in the high-risk districts.
20. Review the independent monitoring process by the end of April and if necessary revise the guidelines prior to the May round.
21. Review partnerships on independent monitoring (pilot with Health Services Academy in April) in selected areas and expand them if the experience is good.

*AFP surveillance*

22. Continue to enhance surveillance and ensure proper recording and validation of data and their timely utilization to direct programme activities.
23. Continue to carry out rapid assessment whenever any sign of gaps in surveillance are discovered and plan for full-scale national surveillance review.

*Synergies between the polio eradication initiative and EPI*

24. Explore potential synergies between the polio eradication initiative and EPI, including:
  - a) harmonization of polio and routine immunization microplans;
  - b) awareness and demand creation through interpersonal and other communication channels used for polio; and
  - c) monitoring of the routine immunization sessions and vaccine availability during the polio activities monitoring, including community surveys.

*Supplementary immunization strategy and schedule*

25. Maintain the basic strategy of conducting 4 NIDs and 4 sub-NIDs.
26. Plan the scale and size of the sub-NIDs to be between 30% and 50% of the target population (aged < 5 years), with special focus on the transmission zones.
27. Use trivalent OPV in 2 NIDs, and bivalent OPV in all other rounds.
28. Ensure that timings of supplementary immunization activities are flexible and take account of seasonality and epidemiological developments.
29. Conduct more vaccination rounds in the low transmission season.
30. Consider additional rounds in the key areas such as persistent transmission zones and newly accessible populations.
31. Continue case response and mop-up vaccination campaigns outside transmission zones.

*Research*

32. Focus research on:
  - Seroprevalence surveys in known transmission zones to assess immunity in high-risk populations;
  - Operational research, especially looking at the impact of innovations;
  - Social and communications research, especially in high-risk groups.

**Province-specific recommendations***Balochistan*

The geographical priority remains the Quetta Block, with particular focus on Pishin, which is failing despite repeated efforts, Quetta and Killa Abdullah.

33. Ensure that community- and age-appropriate vaccinators are included in teams.
34. Put in place permanent transit teams at key transit points to cover children on the move.
35. Remain vigilant against the re-establishment of failed systems.
36. Build the capacity of newly-appointed union council medical officers in the preparation, implementation and supervision of supplementary immunization activities.
37. Ensure adequate focus is given to minority, migrant and mobile communities during the vaccination and surveillance activities.

*Federally Administered Tribal Areas (FATA)*

Geographical priorities are Khyber Agency and North Waziristan tribal agencies.

38. Put in place permanent teams at key transit points, especially to and from Khyber and North Waziristan tribal agencies and Afghanistan.
39. Remain vigilant and ready to make use of any opportunity to vaccinate inaccessible populations, e.g. large population displacements and newly-accessible areas.

40. Target mass and house-to-house vaccination at expanded age groups in all newly accessed areas and populations (can go to < 15 years or whole population).
41. Continue short interval additional dose rounds for the newly accessed areas and populations and among displaced populations (living in camps) coming from the areas that were inaccessible to vaccination teams for a long time.
42. Combine OPV campaigns with other interventions to enhance coverage and acceptance among communities.
43. Ensure high vaccination coverage in all the accessible areas in FATA and frontier region areas.

#### *Khyber Pakhtunkhwa (KP)*

Peshawar and Nowshera districts in the central part of the province are the current geographical priority.

44. Ensure appropriate and motivated vaccinators in the teams during supplementary immunization activities.
45. Use partnerships with the private sector and nongovernmental and community-based organizations to support implementation of supplementary immunization activities.
46. Put in place permanent teams at key transit points, especially those having large population movements to and from FATA.
47. Ensure adequate focus is given to migrant and mobile populations, including displaced persons and refugees, during supplementary immunization and surveillance activities. Any opportunities to vaccinate these populations (even outside supplementary immunization activities) should be used efficiently.

#### *Sindh*

All the high-risk towns (of Karachi) and the districts remain the geographical priority, particularly Gadap town Karachi which has been persistently failing despite repeated efforts.

48. Ensure community appropriate vaccinators (particularly among the high-risk ethnic and religious group) across the province with special focus on the high-risk towns and districts, especially Gadap town.
49. Use partnerships with the private sector and nongovernmental and community-based organizations to support implementation of supplementary immunization activities.
50. Put in place permanent teams at key transit points, especially those having large population movements to and from FATA, Balochistan and KP.
51. Ensure adequate focus is given to migrant and mobile populations, particularly the Pashto-speaking populations and nomadic groups, during the supplementary immunization and surveillance activities.

#### *Punjab*

High-risk districts in the southern Punjab and urban slums in Lahore, Faisalabad and Rawalpindi are the current geographical priorities.

52. Put in place permanent teams at key transit points, especially those having large population movements to and from FATA, Balochistan and KP.
53. Ensure adequate focus is given to migrant and mobile populations, particularly the Pashto-speaking populations and nomadic groups, during supplementary immunization and surveillance activities.

*Islamabad*

54. Revise urgently union council and area-level micro-plans and establish a mechanism for regular updating of these plans before every supplementary immunization campaign to ensure all settlements are properly covered during each round.
55. Put in place permanent transit posts to cover the children on the move especially those from KP and FATA.
56. Ensure adequate focus is given to migrant and mobile populations, especially the Pashto-speaking communities, to achieve high vaccination coverage during supplementary immunization activities.
57. Include the slums in the peripheries of Islamabad in micro-plans to ensure coverage during supplementary immunization activities.

*Azad Jammu Kashmir and Gilgit Baltistan*

58. Give priority to maintaining a high level of population immunity through high quality supplementary immunization activities and a strong routine immunization programme
59. Ensure adequate focus is given to migrant and mobile populations, particularly the Pashto-speaking populations and nomadic groups, during supplementary immunization activities.
60. Ensure the sensitivity of AFP surveillance through regular review of the network and revision/updating as needed to guard against undetected introduction of wild poliovirus.

**Annex 1****PROGRAMME****Wednesday, 21 March 2012**

- 08:00–08:30 Registration
- 08:30–08:40 Opening and introduction of participants
- 08:40–08:50 Welcome remarks
- 08:50–09:05 Address by the WHO Representative
- 09:05–09:20 Global Polio Emergency Action Plan and Independent Monitoring Board report on Pakistan
- 09:20–09:45 Augmenting national management and oversight of the NEAP  
Discussion
- 09:45–10:00 Implementation status of the recommendations of the last TAG meeting
- 10:00–10:50 Epidemiological situation in Pakistan  
Discussion
- Implementation status of the NEAP by province*
- 11:10–12:20 Baluchistan  
Discussion
- 12:20–13:30 FATA  
Discussion
- 14:30–15:40 Khyber Pakhtunkhwa  
Discussion
- 15:40–16:50 Sindh  
Discussion
- 16:50–18:00 Punjab  
Discussion
- 18:00–19:00 Internal TAG Meeting

**Thursday, 22 March 2012***Implementation status of the NEAP in non infected regions*

- 08:30–09:00 Azad Jammu Kashmir
- 09:00–09:30 Gilgit Baltistan
- 09:30–10:30 Progress in implementing communications strategies  
Discussion
- 10:45–11:20 Short Interval additional dose – Impact and lessons learnt  
Discussion
- 11:20–12:00 Islamabad (ICT and CDA)  
Discussion
- 12:00–12:40 Independent monitoring and lot quality assurance sampling – connect with the epidemiological situation, identification of gaps and improving the data credibility  
Discussion

- 12:40–13:20 Progress in implementing the high risk strategy  
Discussion
- 14:20–15:00 Creating an engaged media  
Discussion
- 15:00–15:30 Cross-border coordination  
Discussion
- 15:30–16:30 Internal TAG meeting
- 16:30–18:00 Concluding session:  
Conclusions and recommendations  
Concluding remarks by Madam Shahnaz Wazir Ali



**Annex 2**

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