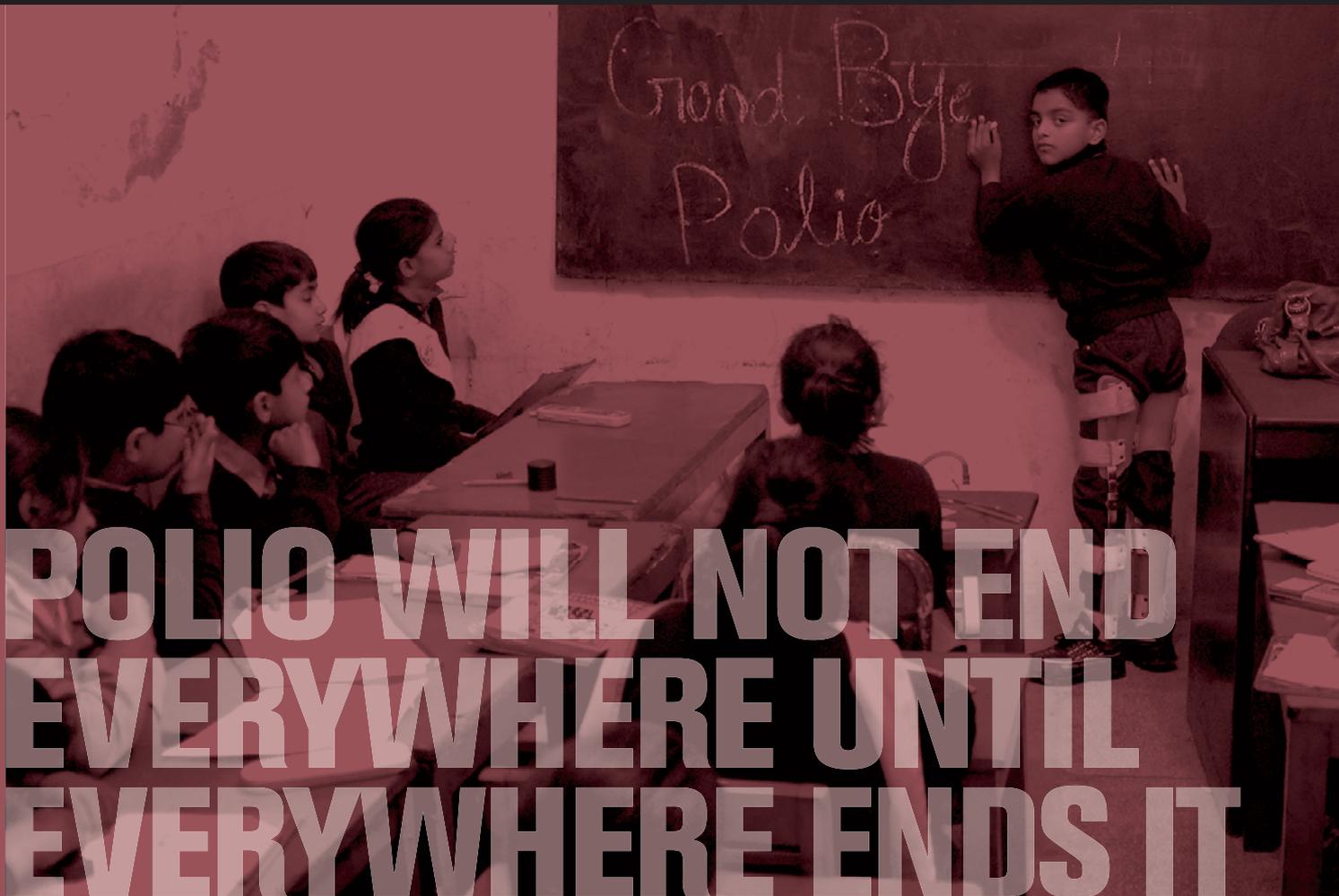


INDEPENDENT  
MONITORING  
BOARD OF THE

# GLOBAL POLIO ERADICATION INITIATIVE



**POLIO WILL NOT END  
EVERYWHERE UNTIL  
EVERYWHERE ENDS IT**

# 13

THIRTEENTH REPORT: AUGUST 2016



INDEPENDENT  
MONITORING  
BOARD OF THE

# GLOBAL POLIO ERADICATION INITIATIVE

## THE 13TH REPORT OF THE INDEPENDENT MONITORING BOARD (IMB) OF THE GLOBAL POLIO ERADICATION INITIATIVE (GPEI).

This report follows the 14th meeting of the Independent Monitoring Board (IMB) of the Global Polio Eradication Initiative (GPEI). The Report comes at a critical time. It is making an assessment of the progress of the Polio Programme with six months to go before the declared GPEI deadline. By the end of December 2016, transmission of the poliovirus should be interrupted everywhere in the world.

**Special note:** since the IMB meeting, two cases involving wild poliovirus have been discovered in Borno, Nigeria. Investigations and response are on-going.

### Sir Liam Donaldson (Chair)

Former Chief Medical Officer, England

### Dr Nasr El Sayed

Assistant Minister of Health, Egypt

### Dr Susan Goldstein

Programme Director, Soul City: Institute for Health & Development Communication, NPO, South Africa

### Dr Jeffrey Koplan

Vice President for Global Health, Emory University

### Dr Sigrun Mogedal

Special Advisor, Norwegian Knowledge Centre for the Health Services

### Professor Ruth Nduati

Chairperson, Department of Paediatrics and Child Health, University of Nairobi

### Dr Arvind Singhal

Marston Endowed Professor of Communication, University of Texas at El Paso

### Professor Michael Toole, AM

Deputy Director, Burnet Institute, Melbourne

### Secretariat:

Dr Felix Greaves

Ms Alison Scott



## THE IMB CALL FOR PEAK PERFORMANCE

When the IMB issued its previous report, it did so against a background that the Polio Programme in the two remaining endemic countries (Pakistan and Afghanistan) had the advantage of facing the last Low Season (before the GPEI deadline) with the smallest burden of poliovirus in human history. The IMB entitled its last report: *Now is the Time for Peak Performance*. This title reflected the IMB's analysis that, despite a rising tide of improving performance, the Polio Programme still had many islands of mediocrity (within countries and systemically across the programme) where sub-optimal delivery meant that the goal of stopping polio transmission in the near future remained improbable.

## PROGRESS ACHIEVED BUT NOT YET PEAK PERFORMANCE

Since the last IMB report, there have been further, very substantial, improvements:

- the global footprint of the poliovirus is the smallest in human history
- the continent of Africa still has no polio endemic countries within it
- the Polio Programme in Pakistan is achieving a high level of performance overall and in this respect is transformed from its position three years ago
- the establishment of an Emergency Operations Centre and changes of GPEI personnel in Afghanistan have led to a jump up in the level of performance
- more female health workers are making a difference, meeting mothers on doorsteps that have not been reached before
- within the GPEI, the quality of working relationships, the effectiveness of governance structures, and the management of big strategic changes is much better than previously

However, the IMB is quite clear that the Polio Programme has not yet reached peak performance, and this is disappointing. With six months to go, it must do so if the goal of ending polio transmission by the end of 2016 is to be realized. This challenge has become more complex since the last IMB report. It is no longer the polio Low Season in Pakistan and Afghanistan: the High Season is upon those countries' programmes. There has been a planned global strategic switch in the type of oral polio vaccine used in immunization campaigns, with a resulting heightened risk of outbreaks of vaccine-derived viruses (these are also capable of causing paralysis). There is a world shortage of the inactivated polio vaccine (administered by injection). This vaccine should be acting as vital adjunct to boosting children's immunity, particularly in communities where access is only being achieved intermittently but there is not enough of it to go round.





## THE PAKISTAN-AFGHANISTAN RESERVOIRS

Six months ahead of interrupting polio transmission, India and Nigeria (at the time, endemic countries) each had two remaining Core Reservoirs. In July 2016, the two current remaining endemic countries are also six months from the GPEI deadline to interrupt polio transmission. In contrast to their counterparts in India and Nigeria, Pakistan still has four core reservoirs (KP, FATA, Sindh, Balochistan) and Afghanistan also has four such reservoirs (Nangarhar, Kunar, Kandahar, Helmand). It is not a good sign, so close to the deadline, that the Polio Programmes in these two countries have not yet been able to reduce the number of reservoirs. The hour is getting late.

In fact, the poliovirus reservoirs in the two countries are very closely intertwined. Three such "mega-reservoirs" are recognizable: Khyber-Peshawar corridor and Greater Nangarhar; Quetta Block and Greater Kandahar; and, Karachi. The poliovirus has traditionally been a passenger within population flows back and forward across the borders between Pakistan and Afghanistan, and it has moved freely in and out of these big reservoirs of infection. This continues

to be the case. Some of this population movement is long established and predictable. Some is in response to conflict and changing political allegiances. Some is hidden from view. Poliovirus survives because children within these populations are not properly immunized.

It is not just important to immunize children at border crossings, it is essential also to get to them in their communities, whether their residence is temporary or semi-permanent. It is most of all vital to understand why children are being missed and to close the gap decisively.

The Pakistan and Afghanistan governments, and their technical teams, are working together, particularly in the approach to the border areas and hinterlands between their countries. However, whilst the GPEI and the IMB regard Pakistan and Afghanistan as one "epidemiological block," and see how the reservoirs in the two countries join together, the two countries are still falling well short of a seamless "one programme" approach in planning immunization campaigns, surveillance, and social mobilization. They are in need of politically neutral help in moving to a higher level of joint working.





There are very positive features of the work that the two governments and the GPEI in-country staff have done since the last IMB Report. For example, there has been further major improvement in the performance of the Pakistan programme, with impressive movements in key performance indicators:

- the 13 wild polioviruses detected in 2016 up until July represent a 59% reduction on the same period in 2015
- the proportion of polio positive environmental samples was 10% for the first part of 2016 compared to 20% for the same period last year
- the genetic diversity of viruses has narrowed
- the quality of campaigns measured by independent monitoring has remained above the target level of 90%
- the number of zero dose Acute Flaccid Paralysis (AFP) children (a key surveillance indicator) has continued to fall (2% in 2016 compared to 24% in 2014)
- the proportion of missed children has fallen from consistently above 10% in 2014 to less than 4% in 2016
- the work of the Pakistan military and more community focused campaigns have improved the security surrounding programme delivery

Since the last IMB Report, the Afghanistan Polio Programme has also shown improved performance, in particular:

- the establishment of an Emergency Operations Centre has produced much better management and coordination; the strength of the partnership between WHO and UNICEF has increased and they are in turn working closely with the Afghanistan government team
- the circulation of poliovirus is limited to a very small geographical area
- no wild poliovirus has been detected in an environmental sample since January 2016
- the quality of immunization campaigns in some of the very high risk districts has increased
- a review of the Acute Flaccid Paralysis (AFP) reporting arrangements led the Technical Advisory Group (TAG) in July 2016 to conclude that: "circulation of wild and vaccine-derived viruses is unlikely to be missed."

Against this backdrop of strengthening of both countries' Polio Programmes, there are very serious weaknesses that are placing the entire endeavour in jeopardy. They are crying out for definitive solutions and incisive action, implemented with speed and dynamism.





In Pakistan, the political leadership in the North Sindh area of Pakistan is not fully engaged and aligned with the urgency of the situation; as a result, many observers believe that this could be the last place in the world where the poliovirus exists.

The Polio Programme in the city and districts of Karachi in Pakistan is continuing to let the poliovirus slip out of its grasp; it made a slow start to the Low Season and there is a core group of families persistently refusing the vaccine. The Polio Programme in Karachi needs to embrace the practices of programmatic excellence that have eliminated the poliovirus elsewhere. Abrupt changes to crucial senior personnel have imposed unnecessary further difficulties leaving a vacuum in vital leadership roles, and making an inexplicably friendly gesture to the poliovirus.

The security situation in Afghanistan has got no better – and in some areas is worse. The number of inaccessible children in the Eastern region of Afghanistan has increased from 26,000 in March 2016 to 130,000 in May 2016. In this region, there are substantial issues of trust.

Vaccination teams record the greatest proportion of missed children as being due to “unknown reasons.” This feature of the Polio Programme in Afghanistan has been long-standing. To record this explanation for failing to immunize children would not be acceptable in other countries’ programmes since they are markers of poor management and bad team supervision and leadership.



In the southern region of Afghanistan, the proportion of missed children has hardly changed in two years. The proportion of refusals continues to be the highest of all polio affected countries and this situation has persisted for four years. To make matters worse, levels of children being missed simply because teams did not visit them has remained too high – particularly in Kandahar Province – and much higher than surrounding areas.

The level of missed children across Afghanistan as a whole is just not what would be expected of a polio-endemic country. It is a huge problem that is not being properly confronted by the GPEI.

Refusals of the oral polio vaccine by parents in southern Afghanistan are predominantly due to children said to be newborn, sick and sleeping when vaccinators arrive. Whilst this is classified as “refusal” for data monitoring purposes in all polio affected countries, it is the main reason for refusal in this part of Afghanistan. This indicator of poor performance has been obvious within the Polio Programme in Afghanistan for years and it is disappointing that it has not stimulated action planning to transform the situation. Similarly “Children not available” is the most substantial reason recorded by vaccination teams for missing children. Reaching more of the missing children needs a separate strategy in markets, schools, and areas where children are on the move.

Successful programmes elsewhere have used modern social mobilization tools. They have fundamentally addressed the profile of social mobilizers and vaccinators to bring about change and reduce the level of refusals and missed children. The idea that the Polio Programme in Afghanistan is continuing to rely on male vaccinators from outside local communities to deliver polio immunization suggests a failure to understand why performance is weak. At the very least, the process of selecting male vaccinators needs to match them in fine granularity with the cultural and religious composition of the communities that they are operating within. The real need, though, is to rapidly expand the use of female health workers. The proportion of female vaccinators and social mobilizers in Afghanistan is a lamentable 12%. The potential benefits of women’s participation are



very clear from the improved programme performance in Pakistan. It is a core function of senior GPEI leadership to resolve intractable performance problems, especially when solutions have been found elsewhere within the Polio Programme. The IMB calls on the GPEI to get a grip of this situation urgently.

Much of the actual delivery of the Polio Programme in Afghanistan is on a contractual basis through a basic primary healthcare package in which groupings of Non-Governmental Organizations (NGOs) provide health services. Polio vaccination has not been a core element of the contract and has been dealt with as a supplementary strand.

The overriding objective is to maintain the political neutrality of the Programme and seek agreement for the free movement of vaccination teams on humanitarian grounds.

In reality, the NGOs are not able to penetrate much beyond the catchment areas of the existing healthcare facilities. Performance in routine immunization has for some time been sub-optimal, even in some of the areas that are not security compromised. These shortcomings also permeate polio-related activities.

There is an urgent need for strengthening of the contract with the accountability and performance management arrangements for the NGO package of services (particularly the planning, delivery, and supervision of immunization campaigns). Also, transparency needs to be increased. The Common Humanitarian Fund spent \$37.9 million in Afghanistan in 2015 on a wide range of projects, including health. It places great emphasis on value for money and rigorous monitoring of performance and is very open in this regard. In contrast, the Polio Programme does not achieve the same standards. For example, there is a lack of transparency about accessibility in parts of Afghanistan. The provinces of Paktika, Khost, Ghazni (in the south and eastern part of the country) and Farah (in the west) are said to be accessible. However, our understanding of the position from IMB sources on the ground is that there may be populations with low immunity that are not being detected.

The IMB is concerned that the GPEI does not have a clear policy on the level of performance it is trying to achieve in Afghanistan. There still seems to be a tendency to cling to the dispersed population within the country and climatic conditions as a "comfort" when awkward questions are raised about areas of persistently poor performance in the Afghanistan Polio Programme. The IMB's view is clear: a "good enough" approach in Afghanistan is unacceptable.





## THE RESILIENCE OF THE NIGERIA POLIO PROGRAMME

Nigeria has remained polio free. This is a tremendous achievement. However, the Nigeria Programme is showing worrying signs of flagging and has not fully adopted the approach of resilience. Vaccine derived poliovirus was found in Borno, in the north of the country. It had been circulating undiscovered for almost two years. Of caregivers in Borno, less than half see the need to give polio drops to their child “every time.” In Borno alone, half a million children are still being missed due to insecurity. All this should send a shiver down the spine of anyone in Nigeria who has been thinking: “almost there.”

Political engagement is dropping off. Performance on Abuja Commitment indicators has fallen across the board in high-risk states. The funding situation is worsening, particularly at the local level. Even though the President is personally committed, this must continue to be realized in practical terms. For example, the quarterly Presidential Task Force – as of July 2016 – had not met this year.

While programmatic performance looks reasonable from a country level view, this aggregation allows some poor and mediocre local performance to be masked. The percentage of cases of Acute Flaccid Paralysis (AFP) verified is too low in Gombe, Jigawa and Zamfara states. Campaign quality scores in some areas of Katsina and Kaduna are less than 80%. This is another indication that the philosophy of resilience (“strengthening the defences”) has not yet infused the Nigeria Polio Programme.

A true resilience mindset sustains high performance – relentless, systematic surveillance, tireless pursuit of missed children, and continued strong leadership – from the time of the last presumed case until the certification of eradication. Indeed, with such shortfalls in the level of resilience, there can be no certainty that the excellent achievement of the Nigeria Polio Programme in interrupting polio transmission will hold until certification is assured.





## THE NEED TO STRENGTHEN SURVEILLANCE

As the number of wild poliovirus cases falls, the need for strong surveillance has never been greater.

The Polio Programme has historically had two core components – surveillance and immunization campaigns. Both are vital. However, surveillance is too often the poor relation – taken for granted and with not enough resources. Both in endemic and high risk areas, it is too often an afterthought compared to immunization campaign activity on the ground.

Careful thought needs to be given to appropriate resource levels and incentives for surveillance in endemic areas. In Pakistan there are few full-time staff focused on surveillance in most provinces – and the activity receives a fraction of the money that is spent on immunization activities. In addition, there are basic training needs in hospitals in core reservoirs areas that need to be addressed if people are

going to report possible polio cases. Many doctors, nurses and other health workers have long forgotten that they have an important role in identifying and notifying cases of Acute Flaccid Paralysis (AFP).

Environmental surveillance is also an essential component. As the virus is pushed into inaccessible corners, the programme will also need to think about how it can creatively take samples for the environment – where cases may be in areas without sewage systems. Is it right that FATA (a core reservoir area), has no environmental surveillance?

At a wider programmatic level, there is also a risk that surveillance performance that looks good at national level is masking bad performance at the subnational level. This is not good enough. At present, there are significant gaps in high-risk countries that need to be filled – including South Sudan, Mali, Niger, and Democratic Republic of the Congo.





## THE POWER OF SOCIAL DATA

From the time of its establishment, the IMB has emphasized the importance of social data in driving improved performance of the Polio Programme. In the early days of our work, some within the GPEI were dismissive of this point of view. The Polio Programme has its origins as a communicable disease control programme and this remains an essential part of its functioning. It has been slow to fully appreciate that to be successful it must also be a programme of change.

The GPEI has built, over time, the most detailed and extensive range of data of any public health programme in history. Within the rich tapestry of information that is now held are epidemiological, scientific, technical, biological, behavioural, and attitudinal elements.

Many of the decisions made by the Polio Programme whether at global, national, or local level depend on selection of the right information to make that decision a sound one.

Data can also be thought of in three main categories: the *what?* data; the *how?* data; and, the *why?* data. For

example, in an area where polio immunity levels are low, it would be important to know the number of refusals (the *What*), the reasons recorded by the vaccination team for the refusal e.g. child sleeping (the *How*), but also to identify the root cause of the rejected opportunity e.g. trust in the vaccinators is low (the *Why*). These need qualitative and ethnographic data to be understood. It is by acting on the insights provided by the *Why?* data that transformation in performance is often achieved.

The IMB continues to be disappointed that the Polio Programme too often regards the social data as the business of UNICEF and social mobilizers and not as *everybody's* business.

The evidence is strong that where social data findings have been acted upon, polio is gone. Where social indicators are weak polio thrives.

In the polio reservoirs, the general stagnation of missed children and reasons for them being missed shows how important it is that data are used and operationalized at local levels. A sophisticated new data platform has been created for Emergency Operations Centres and this needs to be fully utilized by all partners.





## THE IMPLICATIONS OF VACCINE DERIVED POLIOVIRUS

During the majority of the time that the IMB has monitored the Polio Programme, the GPEI leadership has asserted that the main effort should be concentrated on the endemic countries and that other smaller pools of poliovirus transmission would be eradicated in their wake. The IMB has not shared this philosophy and warned about the dangers. Time-consuming and expensive remedial action was necessary to deal with the large outbreaks in the Middle East and Africa in 2013 and 2014.

Today, as the Polio Programme seeks to end poliovirus transmission in the two remaining endemic countries, it cannot be certain that the end of transmission across the whole world will rapidly follow. One of the reasons for this is the emergence of vaccine-derived poliovirus in many places. These viruses are making multiple, rapier-like thrusts through the world's polio defenses. This is most serious when such viruses begin their own chains of transmission. Any use of the oral polio vaccine leads to the vaccine form of the virus being transmitted to close contacts. If these contacts are immune, then there is very limited further circulation of the virus. However, with more susceptible contacts, the virus can replicate and cause circulating vaccine-derived poliovirus capable of causing paralysis. Even the simple discovery of such a poliovirus (without evidence of transmission) must be taken very seriously.

A major planned worldwide switch of oral polio vaccine took place from April 2016 onwards. This global switch entailed moving from the trivalent vaccine (that protects against wild poliovirus Types 1, 2, and 3) to the bivalent vaccine (that protects against poliovirus Types 1 and 3). It has now been fully implemented.

Since the aim of the switch was to sustain the elimination of wild poliovirus Type 2, the re-emergence of this Type of virus anywhere would be a global public health emergency. During 2015 and 2016, there were 18 "discoveries" of Type 2 vaccine-derived poliovirus. Excluding the two current

endemic countries and the recently endemic Nigeria, these viruses were found in India (six times), China, Niger, Egypt, Senegal, Syria, Kenya and the Democratic Republic of the Congo. They were mainly found in environmental samples but in the Democratic Republic of the Congo and Syria they were associated with Acute Flaccid Paralysis (AFP) cases. However, these viruses did not appear to circulate.

In the last 14 months, there have been five countries with circulating vaccine-derived poliovirus: Ukraine, Madagascar, Lao PDR (all Type 1 poliovirus) and Myanmar, Guinea, and Nigeria (all Type 2 poliovirus). In the case of the Nigeria outbreak in Borno State (previously mentioned) the precise pathway of transmission is not clear and there is concern about the Lake Chad region. At the time of the IMB meeting, the outbreaks in Guinea, Madagascar, Lao PDR, Myanmar were still not closed. Each of the outbreaks should be seen as emergency on a par with a wild poliovirus outbreak and, following an earlier IMB recommendation, the committee that rules on the application of the International Health Regulations has now adopted this approach.

Outbreaks of vaccine-derived poliovirus are most likely to occur where populations are underserved and marginalized, where routine immunization is weak, and where healthcare systems are lacking. Added to these factors are the special circumstances of countries affected by the recent Ebola Fever epidemic. Guinea is such a country. Outbreaks in fractured health systems such as Guinea, only just starting to recover post-Ebola, demonstrate the complexity of the task. It is as much a responsibility of the partnership to understand and support these needs, as it is for a country to mobilize itself to rise to the challenge. A weak response is a failure of both the country and the GPEI partners.

The Polio Programme has a strong protocol and procedures, as well as clear timelines and standards, for responding in emergency mode to such outbreaks. The IMB found the slow response, notably in Guinea and Madagascar, alarming. If this is typical of what can be expected as further outbreaks occur, then the poliovirus will be on the march again.



It is a chilling thought that many countries have lost the institutional memory of how to handle polio. They may be too “old school” and not make use of modern techniques such as micro-planning, social data, and independent monitoring, tools that have become “bread and butter” for the GPEI. Many countries also lack the infrastructure to respond. Many may not have trained personnel or even a basic cold chain for vaccine supply.

The GPEI needs to make an honest assessment of its own, and countries, state of readiness. It needs to streamline vital aspects of process such as issuing visas for external expert teams and reaching agreement between Partners’ headquarters and their regional offices.

The IMB is particularly concerned that communication about the rationale for the oral polio vaccine switch may not have been adequate to reach all relevant personnel in countries. In particular, the IMB wonders whether the GPEI Partners can be sure that in-country staff, concerned about wastage of their stockpiles of trivalent oral polio vaccine, would not deploy it until supplies are depleted.

A key new element of outbreak management is the decision to deploy monovalent Type 2 oral polio vaccine. Special stocks of this vaccine are being held and the decision to release supplies is taken by the Director General of the World Health Organization on expert advice.

The GPEI has undertaken a strategic analysis following the oral polio vaccine switch that occurred earlier this year. The Switch has been a substantial logistic achievement. The GPEI estimates that the risk of type 2 vaccine-derived polio discoveries and outbreaks is particularly high over the next year. In later years, there are likely to be fewer outbreaks but when they do occur they are more likely to be larger with extended spread and more complex to deal with. This strategic analysis and planning should continue to be developed by the GPEI leadership.

The worst scenario in the future would be an outbreak so large, widespread and complex that the oral polio vaccine switch had to be reversed.





## VULNERABLE AREAS: REINSTATEMENT OF THE RED LIST

The Polio Programme is entering uncharted waters. The GPEI promise to interrupt polio transmission everywhere in the world by the end of 2016 is only six months from its intended delivery. No one can be sure what it will take to remove every last vestige of the disease from the planet. This is in circumstances where there are many pockets of low immunity in some of the most marginalized populations of the world, and where ongoing use of the oral vaccine can release virus that causes paralytic polio. The only modern parallel is the smallpox eradication programme: a different disease, in a different time.

Taken together, a weakness in effective surveillance, a heightened risk of vaccine-derived poliovirus, and variable performance of routine immunization demonstrate a potentially hazardous combination for the programme. There are many parts of the world that are in just this situation. In an earlier report, the IMB urged the GPEI to establish a publicly prominent list of vulnerable countries and call it *The Red List*. This was accepted and ran for a short time but then sank from view, thereby losing the power and transparency of the concept.

The IMB believes that the concept of a *Red List* should be re-established. The Polio Programme should not be waiting for the predictable to happen, it should be advocating many more preventive immunization activities - both through routine immunization and IPV and OPV campaigns - and not mounting them only when the poliovirus appears.

## THE BUILDING OF AN EFFECTIVE POLIO ERADICATION MACHINE

In a series of reports stretching back five years, the IMB has repeatedly confronted the Polio Programme, sometimes painfully, with the things that it was not doing well and the things that it ought to be doing but was not. As a result, the Polio Programme looks very different to the one that the IMB faced when it started its work. There is much greater

country ownership of the challenge of ridding themselves of polio. There is much more emphasis on management and the quality of leadership, with a greater intolerance of poor performance. There is a stronger emphasis not only on political engagement but also on accountability and alignment of political will from national, to regional, to local levels. The IMB's championship of the people factors and the use of social data are bearing fruit, ranging from valuing and training vaccinators, to really understanding why parents are avoiding having their children immunized, to empowering women as health workers in their communities. As we have described, though, the Polio Programme is paying a heavy price for not listening properly to what the social data are telling it in some key areas.

The Polio Programme has been transformed from one that, despite its formidable achievement of reducing the burden of polio by 99%, had flat-lined for a decade on the remaining 1% when the IMB came into being. Now, with the footprint of polio at its smallest in history, the Polio Programme has a unique opportunity to make history.

One thing is inescapable: polio will not end everywhere until everywhere has ended it. The challenge for the Polio Programme now is to create an unrelenting focus on the smaller areas where the virus is still present, where children are being repeatedly missed where immunity levels are low, and where surveillance is weak.

---

*It is by connecting the fine granular knowledge of these small areas, their populations, and their environments to the strategic solutions that the Polio Programme will be triumphant.*

---

The overwhelming importance of aligning this local granularity to definitive strategic solutions could never be better illustrated than by focusing on one area in Afghanistan and one in Pakistan.



Afghanistan has had six wild polioviruses in 2016. Of these, four were from Shigal district in Kunar province, in an area with a population of 1000 people, within 1.5 km square. This area is at the border with Pakistan and genetic evidence does indeed suggest that this transmission came from Pakistan. The fact that the ongoing transmission was limited to this small area suggests reasonably high population immunity in surrounding areas.

The area has proved to be completely inaccessible for immunization campaigns, over the last four years, because of major hostility to the government.

This is a situation that can be viewed as follows. In 2016, the GPEI is promising to free the 7 billion people living in the 193 countries of the world from the scourge of paralytic polio; yet, in 2016, 20% of the world's entire polio cases have occurred in a population of 1000 people in Eastern Afghanistan. And, the \$1bn a year Polio Programme has been unable to reach the children in this population with vaccine for four years.

The second example relates to an outbreak in Bannu. This area is situated in the south of Khyber Pakhtunkhwa (KP) province in Pakistan. It reported three polio cases this year, one with date of onset of paralysis in March 2016 and two

in April 2016. The first polio case was genetically linked to wild poliovirus circulation in Gadap Town Karachi and the two later cases were linked to viral transmission in the Nangarhar-Greater Peshawar block. Three polio cases within a short span of time, representing multiple genetic lineages are indicative of significant immunity gap in the district. Moreover, two of the three polio cases from Bannu had only received one dose of oral polio vaccine.

Subsequent investigation pointed to multiple causal factors: fluctuating immunization activity performance in some sub-districts (union councils); clusters of families in some sub-districts refusing the vaccine, and suggestions that some families were refusing silently rather than openly (possibly due to fear of non-compliance); low routine immunization coverage due to management problems.

The outbreak in Bannu was not expected and was well dealt with when it did occur. However, it raises the serious question for the Programme: Why was the weakness not spotted? How many other Bannu-like situations are there? How many places are there where performance seems to be good but it isn't really? How many places are there where the data are "too good to be true"? Is the system of gathering, and really listening to, soft intelligence really in place?

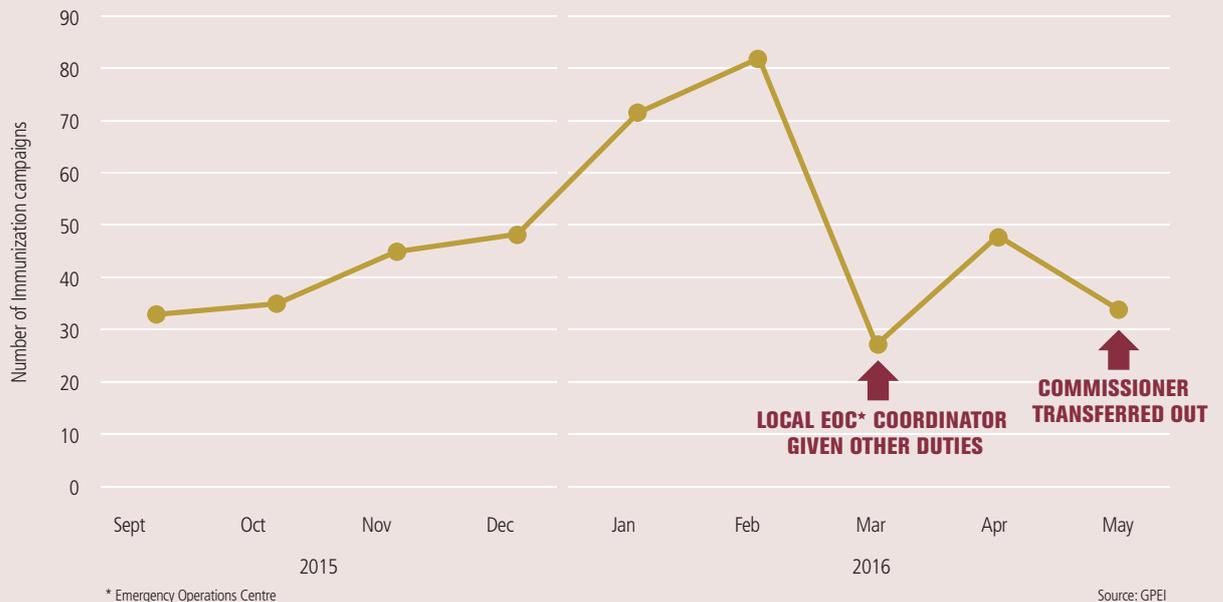




### NORTHERN SINDH – IMMUNIZATION CAMPAIGN QUALITY NOT AS GOOD AS ITS NEIGHBOURS



### KARACHI: IMPACT OF DISRUPTION IN LEADERSHIP



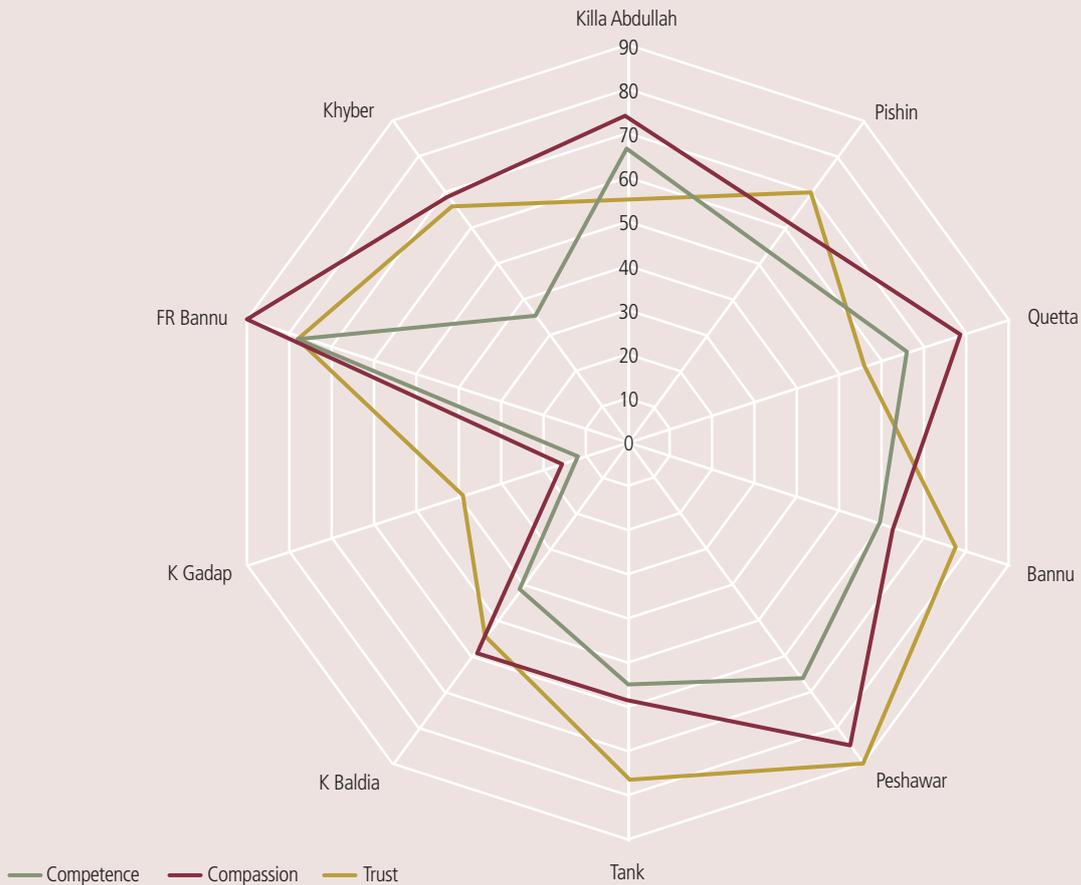


### 10 WORST PERFORMING DISTRICTS IN KARACHI

District	Campaigns failed	Total campaigns	% campaigns failed
1 <b>SADDAR</b>	6	12	50
2 <b>SHAH FAISAL</b>	2	4	50
3 <b>NORTH NAZIMABAD</b>	7	15	47
4 <b>NORTH</b>	10	22	45
5 <b>KAMSHEED</b>	3	7	43
6 <b>GIQBAL</b>	10	24	42
7 <b>GULBERG</b>	6	15	40
8 <b>MALIR</b>	7	20	35
9 <b>BIN QASIM</b>	6	19	32
10 <b>LIAQAT</b>	5	16	31

Source: GPEI

### PAKISTAN: SOME COMMUNITIES DO NOT BELIEVE THAT THE PROGRAMME IS ON THEIR SIDE



Source: UNICEF/Harvard



## TRIPLING OF MISSED CHILDREN IN INACCESSIBLE AREAS OF AFGHANISTAN IN FIVE MONTHS



Source: UNICEF/WHO

## INACCESSIBLE CHILDREN CONCENTRATED IN EASTERN AFGHANISTAN



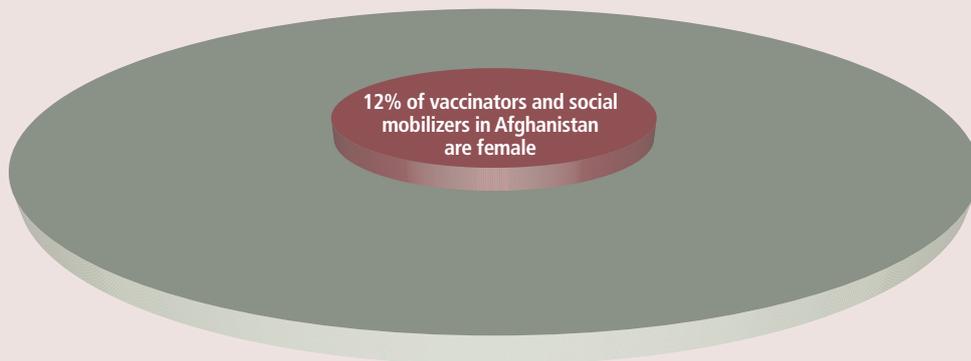
Source: WHO/UNICEF



### POOR PERFORMANCE IN GENERALLY ACCESSIBLE AREAS OF AFGHANISTAN



### THE OPPORTUNITY TO HARNESS THE EFFECTIVENESS OF FEMALE WORKERS: AFGHANISTAN FAILS TO MAKE THE MOST OF THE OPPORTUNITY



Source: WHO/UNICEF

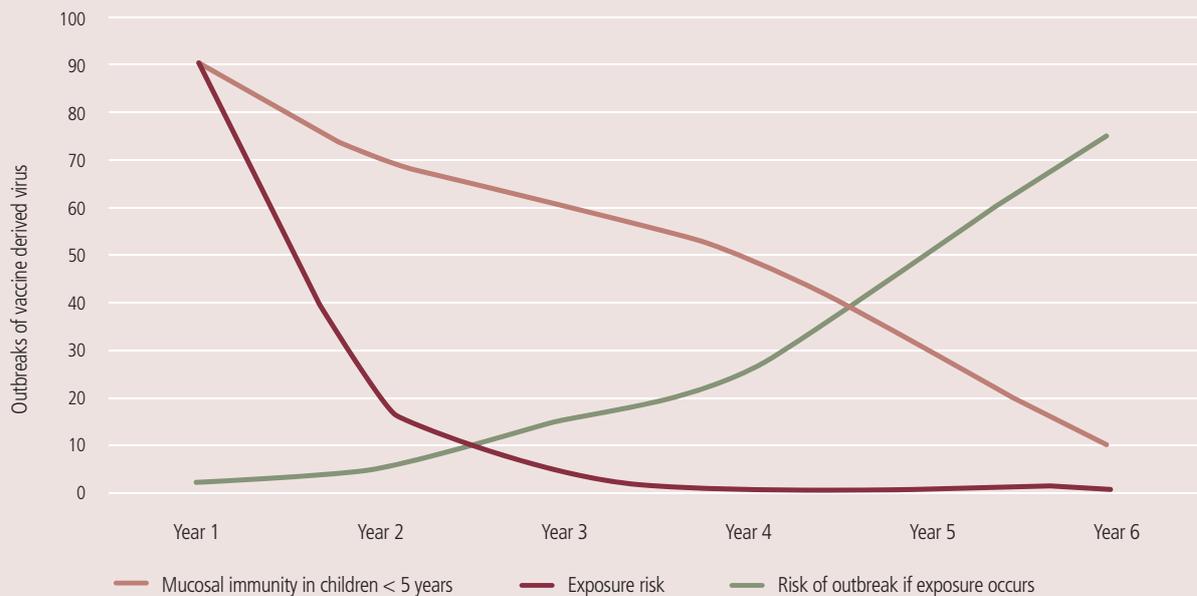


**UNDER THE RADAR:  
UNDETECTED POLIOVIRUS  
IN AND AROUND BORNO  
FOR NEARLY TWO YEARS**



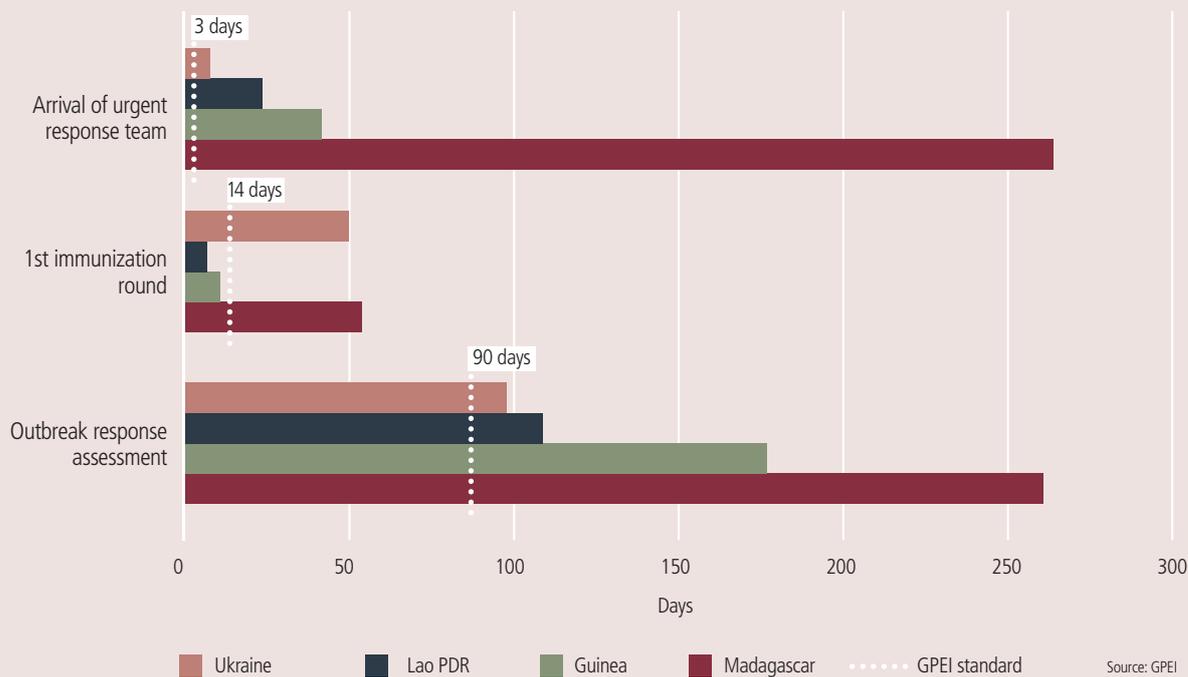


### AS TIME PASSES AFTER TRIVALENT OPV WITHDRAWAL - OUTBREAKS OF VACCINE DERIVED VIRUS BECOME LESS LIKELY BUT MORE SERIOUS



Source: Bill and Melinda Gates Foundation

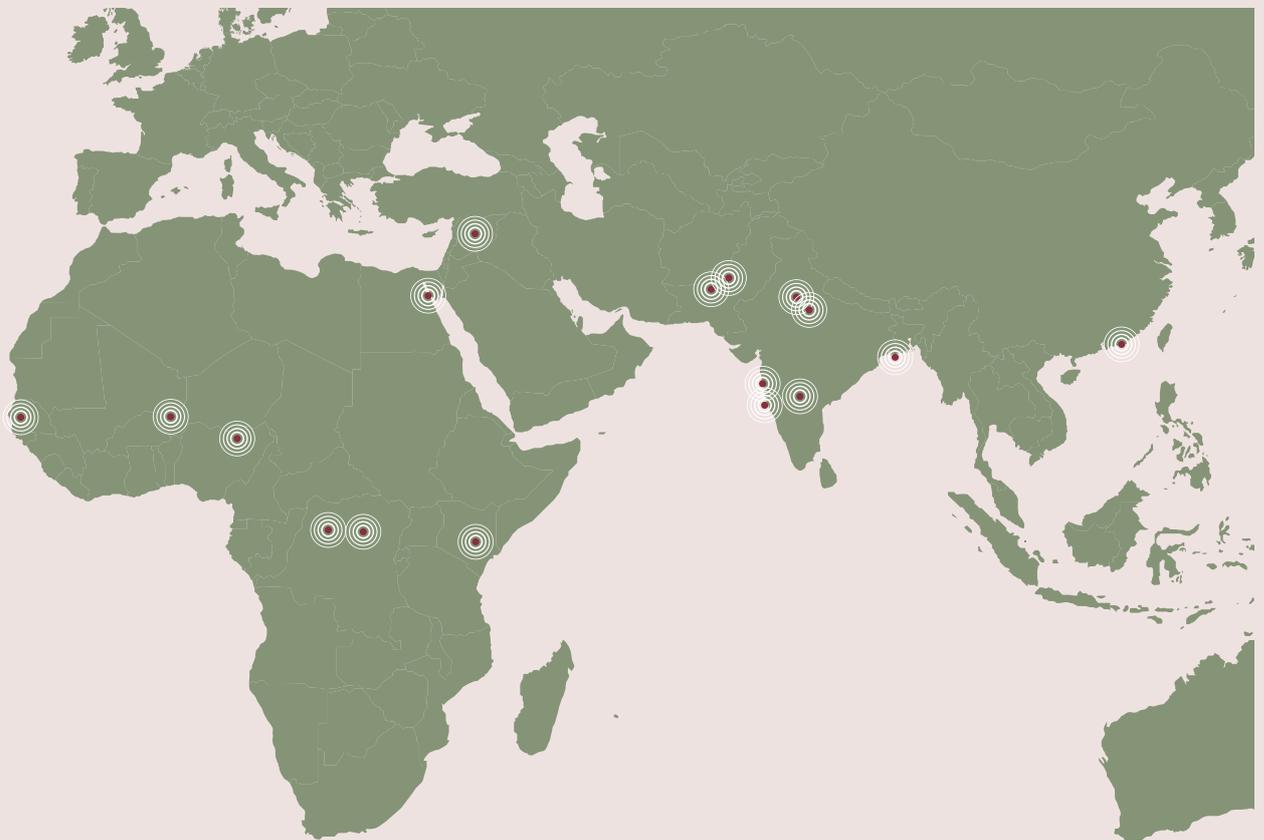
### TRANSMISSIONS OF VACCINE DERIVED POLIOVIRUS – SLOW RESPONSE TO GLOBAL PUBLIC HEALTH EMERGENCY OF INTERNATIONAL CONCERN



Source: GPEI



**EMERGENCE OF VACCINE DERIVED POLIO VIRUSES SINCE SEPTEMBER 2015 –  
THE CHALLENGE OF ENDING POLIO EVERYWHERE**



Source: GPEI



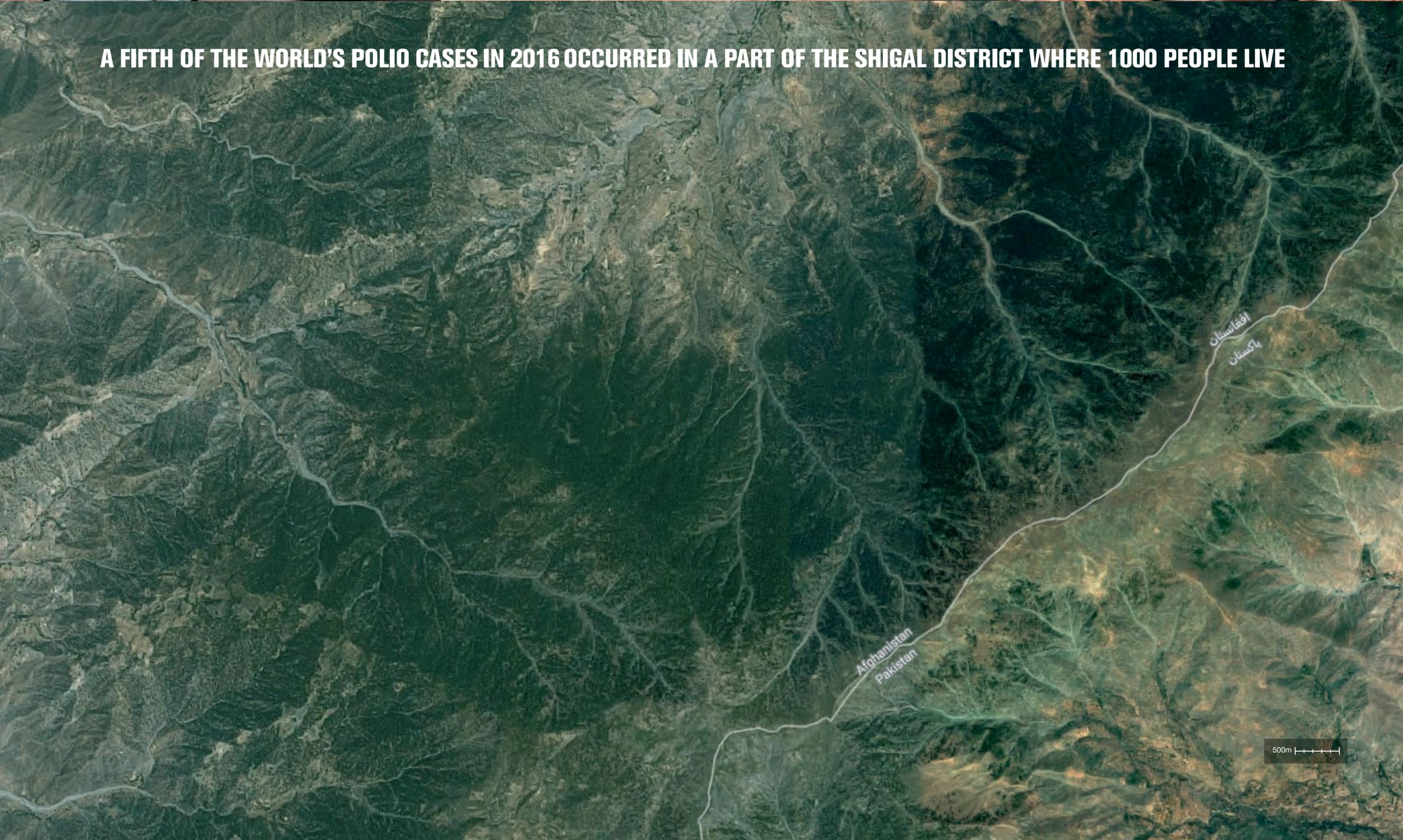
## REINSTATING THE IMB'S RED LIST

Countries vulnerable to polio outbreaks because of low immunity, weak surveillance or poor infrastructure – a starting point for discussion

<b>EQUATORIAL GUINEA</b>	<b>DJIBOUTI</b>	<b>HAITI</b>
<b>PAPUA NEW GUINEA</b>	<b>CÔTE D'IVOIRE</b>	<b>GUINEA</b>
<b>SYRIA</b>	<b>MOZAMBIQUE</b>	<b>SOUTH SUDAN</b>
<b>SOMALIA</b>	<b>VANUATU</b>	<b>TIMOR-LESTE</b>
<b>NIGERIA</b>	<b>GABON</b>	<b>KIRIBATI</b>
<b>NIGER</b>	<b>CENTRAL AFRICAN REPUBLIC</b>	<b>IRAQ</b>
<b>CHAD</b>	<b>LIBERIA</b>	<b>COMOROS</b>
<b>MYANMAR</b>	<b>DEMOCRATIC REPUBLIC OF THE CONGO</b>	<b>INDONESIA</b>
<b>ETHIOPIA</b>	<b>GUINEA-BISSAU</b>	<b>UKRAINE</b>
<b>MADAGASCAR</b>	<b>CAMEROON</b>	<b>ALGERIA</b>
<b>BURUNDI</b>	<b>KENYA</b>	



**A FIFTH OF THE WORLD'S POLIO CASES IN 2016 OCCURRED IN A PART OF THE SHIGAL DISTRICT WHERE 1000 PEOPLE LIVE**



500m



## SUMMARY OF THE IMB'S MAJOR CONCERNS

- 1 The level of joint working between the governments of Pakistan and Afghanistan is still falling below that required to interrupt polio transmission in the border areas and from the large reservoirs of infection that span the two countries.
- 2 The low degree of political engagement in Northern Sindh is a major barrier to eliminating polio from that part of Pakistan.
- 3 The Polio Programme in many parts of Karachi has been chronically underperforming.
- 4 The number of missed children in the inaccessible eastern area of Afghanistan has gone up from 26,000 in March 2016 to 130,000 in May 2016.
- 5 In the southern region of Afghanistan, the proportion of missed children has hardly changed in two years and the proportion of refusals continues to be the highest of all polio-affected countries (and has been stagnant for four years).
- 6 The Afghanistan Polio Programme is continuing to use male vaccinators from outside despite it being well known that matching of a vaccinator's characteristics with the religious and cultural composition of the local population is vital to acceptance; the failure of the GPEI to scale up within Afghanistan the use of local female health workers is a serious failing.
- 7 The performance of the Non-Governmental Organizations (NGOs) that deliver basic health services through a contract with the Afghanistan Government is patchy and accountability and performance management arrangements are far too weak. The relationship between this model of service delivery and the requirements to deliver a high-performing Polio Programme are not at all clear.
- 8 There seems to be either a lack of openness or a lack of situational awareness in the Afghanistan Polio Programme that, taken together with the other concerns, suggests an inappropriate reliance on ending transmission in Pakistan and a "good enough" performance philosophy.
- 9 The surveillance functions of the Polio Programme have been given much less emphasis than the immunization activities; as a result, surveillance is not fit for the purpose of addressing the challenges that the Programme now faces.
- 10 A poliovirus was discovered in Borno that had been circulating undetected for nearly two years, whilst half a million children have been missed. This, and multiple IMB sources speaking of a waning commitment in Nigeria, means that the Polio Programme in this country is not yet fully resilient against a re-emergence of poliovirus.
- 11 It is alarming that the Polio Programme has failed to meet the standards for dealing with outbreaks of vaccine-derived polioviruses (particularly so in Guinea and Madagascar). Slow reactions and delayed decision-making when viruses are discovered could be the Polio Programme's downfall unless it learns quickly from these dysfunctions.
- 12 The apparent intractability of a situation, in a \$1 billion a year programme, in which an area of 1.5 Km in Eastern Afghanistan with a population of 1000 people has been responsible for 20% of the entire world's polio cases in 2016 is extraordinary; the area has been inaccessible to polio immunization teams for four years.
- 13 The list of countries with low levels of immunity to polio and inadequate surveillance is lengthy; the Polio Programme is not gaining from the beneficial pressures that flow from maintaining a publicly prominent *Red List* (as previously).



**14** The Polio Programme has a wide range of innovative quantitative social data but their use is not mainstreamed at all levels, it needs qualitative data; as a result striking findings on parental and community attitudes are not being used to generate definitive and transformational improvement in performance.

**15** The outbreak of wild poliovirus in Bannu, Pakistan in April and May was a surprise; it seemed to be well protected. The Polio Programmes in Pakistan, Afghanistan, and Nigeria need to have more structured systems of soft intelligence to identify places where official monitoring data shows a “too good to be true” situation; the Programme cannot afford “more Bannus.”

**16** The global oral polio vaccine switch will have left many countries with large supplies of redundant trivalent vaccine. There is a risk that an ill-informed local decision maker, mindful of waste and costs, might deploy the trivalent vaccine in immunization campaigns; it is not clear whether the GPEI has eliminated this source of risk.

**17** After polio eradication has been officially certified, the oral polio vaccine will still be in use. At this point the GPEI will have been disbanded. It is not clear that there is a plan for this eventuality.





## RECOMMENDATIONS

- 1** A very high-level GPEI leader should be appointed to strengthen the cohesiveness of the joint working of the Pakistan and Afghanistan governments. The person appointed should have the seniority and personal qualities to operate effectively in this role and should be perceived as politically neutral. The person should work out of Geneva, not the WHO Eastern Mediterranean Office (EMRO). **In post by mid-September 2016.**
- 2** The WHO Eastern Mediterranean Office (EMRO) should appoint a senior female official to its Polio Programme team. She should be charged with rapidly strengthening the role and capacity of female workers in the successful delivery of polio immunization (and in due course routine immunization). She should give immediate attention to removing the barriers to progress in Afghanistan. **In post by end September 2016.**
- 3** CDC Atlanta should facilitate the Polio Programmes in Pakistan and Afghanistan in undertaking a full process mapping of Acute Flaccid Paralysis (AFP) reporting and assessment. This should involve evaluating the shortfalls in quality in each step of the process and identify measures to strengthen them. It should be well informed with detailed local knowledge of the current situation and sufficiently granular to take account of context-specific aspects of the process that will vary from place to place. An action plan, informed by this work, should be immediately implemented in Karachi, as a pilot, and its impact monitored. **Completed by end-September 2016.**
- 4** The GPEI should introduce a system of financial incentives for reporting Acute Flaccid Paralysis (AFP) cases in Pakistan. To this end, any healthcare worker who reports a case should be paid, with a higher payment being given for confirmed cases. Safeguards should be built in for independent validation to prevent unfair manipulation of the system. The scheme should be piloted in Karachi where awareness of frontline healthcare staff is very low. The urgent advice of public health officials in the Egyptian government should be sought in designing the scheme. **Operational by end September 2016.**
- 5** UNICEF should specially commission rapid qualitative data gathering to provide an in-depth understanding of the reasons for poor performance on social indicators in communities within the Pakistan-Afghanistan Core Reservoirs. **Report of the findings to be with the IMB by end-September 2016.**
- 6** Each Emergency Operations Centre (EOC) – both national and regional – should designate one team member to regularly gather soft intelligence from the field to identify situations where monitoring data are providing a falsely positive picture. This person should be someone who is completely trusted by field workers, who can speak to him or her on condition of anonymity, and who can feed back synthesized information to the EOC team; the information should be used for learning and improvement and on no account for retribution against any fieldworker. **Arrangements in place by end-September 2016.**



- 7** The contractual arrangements governing the accountability and performance management of the Non-Governmental Organizations delivering basic health services in Afghanistan should be redrawn to address chronic underperformance and strengthen alignment with polio activities. **Redesigned accountability and performance management arrangements in place by end-October 2016.**
- 8** A publicly prominent Red List of countries and areas vulnerable to polio transmission should be re-established and more targeted, preventive immunization activities should be funded and implemented. **Red List to be posted by end-September 2016.**
- 9** The process of implementing the GPEI standards for responding to outbreaks should be urgently reviewed at high level. This should include an open and honest assessment of the poor response to recent outbreaks, notably in Guinea. It should involve a thorough examination of the working relationships and decision-making between the headquarters of the United Nations GPEI Partners and their Regional and Country Offices. A senior independent person would be best placed to do this. **Lessons learned report to be ready by end October 2016.**
- 10** The GPEI leadership should make an intervention to urgently engage with the political leadership in Northern Sindh to establish a clear commitment and ownership of the goals of the Polio Programme. This should be done in consultation with the Pakistan Government and the Polio Programme leadership in this part of Pakistan. **Political engagement secured by end-September 2016.**
- 11** The GPEI should urgently review options for innovative approaches to environmental sampling in areas without substantial sewage systems. **Environmental sampling programme commenced in FATA by early November 2016.**
- 12** Nigeria's Presidential Task Force should reconvene—and the Executive Governors of each of the states should publicly reconfirm their commitment to the actions agreed in the Abuja Commitment. **By end of September 2016.**



