

INDEPENDENT
MONITORING
BOARD OF THE

GLOBAL POLIO ERADICATION INITIATIVE

10

Tenth Report: October 2014

Independent Monitoring Board of the

GLOBAL POLIO ERADICATION INITIATIVE

October 2014

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The Independent Monitoring Board provides an independent assessment of the progress being made by the Global Polio Eradication Initiative in the detection and interruption of polio transmission globally.

This tenth report follows our eleventh meeting, held in London from 30 September to 2 October 2014.

At our meetings, we benefit from the time and energy of many partners of the Global Polio Eradication Initiative. We value our open discussions with these people, but the views presented here are our own. Independence remains at the heart of our role. Each of us sits on the board in a personal capacity. As always, this report presents our findings frankly, objectively, and without fear or favour.

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The Global Polio Eradication Initiative's 2013-18 Strategic Plan set a clear first objective: to stop wild polio virus transmission globally by the end of 2014. To deliver this formidable goal, the polio-infected countries and their partners made huge financial and operational pledges to complete the job they had started 25 years previously.

With just weeks to go until the end of 2014, this global target will not be achieved. The virus continues to thrive in two parts of the world that it has never been dislodged from.

Pakistan and its neighbours

Pakistan's polio programme is a disaster. It continues to flounder hopelessly, as its virus flourishes. Home to 80% of the world's polio cases in 2014, Pakistan is now *the* major stumbling block to global polio eradication. The principal victims are the children of Pakistan, who are left vulnerable and unprotected by their government.

Pakistan is a real and present danger to people in neighbouring countries and further afield. Death and paralysis from the Pakistan polio virus has struck in the Middle East. Afghanistan has repeatedly been infected with polio from Pakistan but can do more to prevent it. At least two of its children paralysed this year had not been vaccinated at all, there are surveillance gaps, and Afghanistan's own polio virus continues to circulate. Pakistan polio virus has paralysed 38 children in Syria and Iraq during the last year. This Middle East outbreak has been decisively managed, but ongoing regional conflict with population displacement enhances the risk of re-infection from Pakistan. Other countries in the Middle East need to be deeply concerned about the threat to them from the Pakistan polio virus that, with the right conditions, can be running amok in their territories within days.

An important dimension in reversing this sorry situation is the potential to make better use of the strong relationships that Pakistan has with key influential states within the region. These include the United Arab Emirates, China, and Saudi Arabia. Pakistan, backed by the leaders of the global

programme, should make direct appeals for help to these powerful allies. In addition, an extensive Pakistani diaspora exists in many countries and has not been sufficiently mobilized by the programme so far – either to introduce health education messages or to raise the profile of polio eradication within Pakistani civil society. The IMB believes that UNICEF and Rotary International would be well placed to take a major initiative to transform this.

Over the last two years, one intractable element in Pakistan has been polio circulation in North Waziristan, where a Taliban ban left a quarter of a million children unvaccinated. On 19 June 2014, a window of opportunity opened. The Pakistan Army launched a major operation and took control of North Waziristan. Warned in advance, almost all families and children fled, enabling the programme to vaccinate previously inaccessible children at temporary transit posts. Inaccessibility in this area is no longer a valid excuse. Insecurity also cannot explain the polio cases that have occurred in Punjab, or excuse those that have occurred in numerous districts of Karachi, the country's largest city and main port. The potential for the virus to be exported from Karachi poses a real threat to surrounding countries and the wider world.

The government of Pakistan can reach its children, if it wants to. The clear-out of North Waziristan is a double-edged sword, though, because it has potentially dispersed the virus over a wide area. The programme has struck an important blow, but so might the virus.

The May 2014 IMB report recommended that Pakistan establish an Emergency Operations Center (EOC). This innovation has been highly successful in Nigeria. It speaks volumes about the inertia of the programme in Pakistan that this did not happen by the July 2014 deadline, and that the plan eventually

put forward was a pale imitation of its vibrant Nigerian counterpart.

No one whom the IMB spoke to had anything but gloomy predictions about polio eradication in Pakistan. It is clear that the level of political commitment, the extent of engagement of regional and local leaders, the quality of public health leadership and management, and the involvement of civil society are totally inadequate. Pakistan puts the entire global goal in jeopardy.

Something big has to change in Pakistan. Otherwise, hundreds of millions of dollars will be wasted in the years ahead solely to try to keep the Pakistan polio virus out of other countries. Doing a little bit better each year is not a strategy – it is muddling through. The children of Pakistan deserve better. The courageous front-line polio workers of Pakistan have to know that their hard work and the loss of their colleagues' lives have not been in vain.

Nothing short of bold, transformative action will bring this Marie Celeste of a programme to life. After the most careful consideration, the IMB is recommending in this report that the polio programme in Pakistan should be put in the hands of the National Disaster Management Authority, with immediate effect. A well-designed Emergency Operations Centre should be part of the Authority's infrastructure providing technical expertise and support. The National Disaster Management Authority is well-placed also to draw in the vitally important cadre of provincial and local political leaders and officials to achieve the level of engagement and commitment from them that is currently lacking in the Pakistan programme.

The government of Pakistan has a choice to make. Be bold and decisive now and put the National Disaster Management Authority in charge, to stop

polio in Pakistan and so in the region. Or become forever known as the polio virus' last home on earth, with the entire global community resenting the prolonged need for expensive, distracting vaccination campaigns to protect its children against the Pakistan virus.

The IMB proposes to hold a special meeting with federal and provincial leaders of Pakistan, to listen to their views and concerns, and to assess their plans. It is to be hoped that the government of the United Arab Emirates might play an important part in such a meeting.

Nigeria and the continent of Africa

Nigeria – the African continent's last polio reservoir – has greatly strengthened its programme over the last two years. There is a possibility of a polio-free Africa in the near future, but only if there is a relentless drive to close the yawning immunity and surveillance gaps. Africa can get there but it is not simply a case of "going with the flow". That mentality has been too prevalent in the past and led to 2013 being a year of outbreaks for the programme.

For the last decade, Nigeria has been the only African country with endemic polio infection, responsible for infecting 26 other countries – many of them repeatedly. Through successive innovations, Nigeria has substantially reduced the number of children missed by vaccinators, and so increased population immunity to polio. The country may now be on the brink of expelling the virus, but looming elections pose great risk of programme disruption, and doubts remain about surveillance in the northeast of the country. Nigeria must also cleanse itself of circulating vaccine-derived poliovirus (cVDPV), now more common than wild virus. The end of 2014 is not the end of polio in Nigeria – the

program cannot slow down until it achieves full certification.

To deliver a polio-free Africa, a strong Nigerian programme is necessary but not sufficient. In 2013, Nigeria polio virus caused large outbreaks in both the Horn of Africa and Central Africa. In Central Africa, two countries remain infected – Cameroon (since October 2013) and Equatorial Guinea (since February 2014). The response to this outbreak has been weak. Neither country's government is paying enough attention. In Cameroon, virus transmission was missed for two years. The country has received 200,000 refugees from Nigeria, Central African Republic, Chad and Mali. Insecurity is plaguing border areas, while Ebola and cholera are waiting in the wings. Equatorial Guinea is a rich country with big problems. Everything is centralized and is directed from the top. This extends to the difficulty of external advisers getting travel visas – delays in this are thwarting action terribly. Polio surveillance needs to be built from scratch.

The World Health Organization's African Regional Office has failed to mount a Central Africa-wide response of the appropriate strength. Nearby countries are at risk – particularly Gabon and Central African Republic. The subsequent emergence of Ebola nearby now makes the job harder. Nobody knew that the Ebola crisis was coming, but a strong early outbreak response could have stopped polio eradication becoming entangled with a new global public health emergency.

In the Horn of Africa, three countries (Somalia, Kenya and Ethiopia) have been infected by the Nigeria polio virus. Here, the response has been stronger than in Central Africa, though weaker than in the Middle East. It got underway quickly and has delivered many rounds of vaccine. But some countries were slow to take the outbreak seriously, and remain

under-vigilant. Among the programme partners, poor coordination and inadequate staffing were present from the start and still linger. No polio has been detected since August 2014 (in Mudug, Somalia), but few of sound mind would declare that polio has certainly gone. The surveillance system has too many holes, that need to be closed.

If the programme is serious about being able to claim the prize of a polio-free Africa early in 2015, in addition to stopping transmission in Nigeria it must: conclusively end the Horn of Africa and Central Africa outbreaks; prevent spread elsewhere; and close the holes in polio surveillance and vaccination coverage. If this is done, Africa can indeed be on the cusp of eradicating polio.

The next outbreak of polio

The IMB has consistently encouraged the programme to improve its expertise in outbreak prevention. The programme now has a 'Red List' of countries judged at greatest risk, but more is needed.

The risk in Ukraine is of deep concern. The last thing the global polio eradication programme now needs is the re-emergence of polio in a place distant from its two epicentres and threatening to reverse the certified polio-free status of a whole region (in this case Europe). Ukraine represents the perfect storm – extreme vaccine shortages, a growing pool of susceptible children, already-weak surveillance disintegrating, armed conflict in the eastern region, and a government seemingly deaf to warnings. The situation in Ukraine, as in the Red List countries, is immensely difficult to deal with but the programme needs to find a way.

The Ebola crisis

The latest IMB meeting took place against the backdrop of the Ebola outbreak in West Africa and the subject frequently entered the discussions. The continuing escalation in cases of Ebola is rightly causing huge public concern. It is a great tragedy for the countries so far affected. Thousands have died and many more seem set to be casualties before the disease is controlled. The IMB recognizes this as an unprecedented global public health crisis that is demanding near-complete attention of the leaders of many of the same organisations that are part of the polio partnership. Members of the IMB feel great solidarity with those leaders and their teams who are dealing with Ebola at global level. Our thoughts are also particularly with the courageous front-line doctors, nurses and public health workers who are putting their patients' needs ahead of consideration of their own lives.

It is the job of the IMB to consider any changing context in its implications for polio eradication - but we are mindful of the bigger picture as we do so. The prospects for interrupting polio transmission have become entangled with Ebola in a number of ways that are very adverse. Firstly, many staff working in the polio programme have been transferred to Ebola duties (so-called 're-purposing') Secondly, supplementary rounds of polio vaccination in the Ebola-infected countries have been abandoned for the foreseeable future. Thirdly, in many Ebola-affected areas, polio surveillance has become impossible. Fourthly, Ebola has killed around 400 doctors and nurses in the countries worst affected by the infection and an already poor health infrastructure has been further savagely degraded. Finally, Ebola-ravaged populations were already living in conditions of extreme poverty and the situation has become much worse, with attendant impact on sanitation. All of


these factors increase the likelihood of polio resurging and transmitting (probably undetected). Given the current distribution of Ebola, a substantial part of the African continent is at heightened risk of polio. If Ebola spreads to other countries in the world with low levels of childhood immunisation they too will be the source of potential polio outbreaks.

The continuing need for innovation

During the time that the IMB has been in existence, IMB members have been repeatedly struck by how slow the programme is to initiate and implement innovations that have potentially high impact. It has also been striking how resistant unsuccessful countries have been to emulate and adapt the best practices of their successful counterparts. A major part of Nigeria's recent success has been the introduction of health camps. Popular with communities, they attract big crowds, offer a wide range of health measures, and polio vaccine is readily accepted. Yet Pakistan is still only dabbling with the concept. The UNICEF-supported social mobilization teams have achieved major breakthroughs, chipping away at refusal rates one street at a time. Yet their presence in Pakistan remains tiny in comparison to those in Afghanistan and Nigeria. The IMB cannot know which innovations, as yet undiscovered, will get the world from here to the eradication finishing line - but we know that there will be some. The programme needs to be hungry to discover, test and apply them – and in a hurry.

Routine immunisation

The IMB is very pleased to see its long-advocated measure of adding inactivated polio vaccine (IPV) given by injection into OPV campaigns to boost immunity being implemented in the three endemic



countries. The programme needs to use every measure possible to tip the balance against the virus. The IMB urges the programme to move quickly with this new initiative and to collect the necessary scientific data to evaluate it.

There is a much wider strategic issue. Many public health leaders have long championed the value of strengthening routine immunisation programmes as the most desirable way of achieving sustained reductions in polio transmission. Indeed, this is the way in which polio has been eradicated in many parts of the world, particularly in high- and middle-income countries. Some feel that the polio programme has a blind-spot towards routine immunisation. Whilst the programme leadership espouses the importance of routine immunisation, in reality polio eradication remains at heart a vertical programme. Many would acknowledge that there are important positive lessons that can be learned from the polio programme's experience of being vertical and focused. For example, its ability to reach inaccessible children is impressive. But there are other ways in which the programme is limited by its vertical approach.

The differences in philosophy between the polio campaign and the routine immunisation programme have simmered for 30 years, and are coming to a head. For two practical reasons, the polio programme needs to change its ways. Firstly, some major donor countries are no longer prepared to give money for polio without knowing how it fits with routine immunisation strengthening. This is partly because of perceptions that so many deadlines for polio eradication have been missed, that so much money has been thrown at polio, and that the burden of illness from other vaccine-preventable diseases of childhood is higher than polio. Secondly, the global polio eradication programme has taken a policy decision that all countries should introduce IPV as

part of the polio end-game strategy. This only works if there are robust systems in place to actually deliver the vaccine. The endemic countries are introducing IPV into campaigns in some places, but to see this as any kind of permanent solution is anathema to vaccine programme managers and to the IMB.

Although it appears prominently in the strategic plan, routine immunisation is treated by the main body of the polio programme as if it is some side issue - a 'nice-to-do' not a 'need-to-do'. This is short-sighted. It may, in Pakistan, be key to reaching those children whose parents are fed-up of repeated polio-only campaigns but would willingly accept a package of vaccinations for their children. Also, with another deadline missed, the polio programme will need to go cap-in-hand to donors again. At that point, those donors might well ask what the polio programme has done for routine immunisation, and expect better answers than they got last time round. Many programme staff are already contributing to non-polio vaccine delivery, but this is far less organized, and less integrated with related efforts, than it could be.

To accelerate the required improvement in integration, the IMB is recommending in this report that Gavi be invited to become a sixth core partner of the polio programme, making the Chief Executive of Gavi a full member of the Polio Oversight Board.

Governance and management

This report makes no direct reference to management and governance issues within the programme, because these are being examined by an ongoing review, recommended by the IMB and commissioned by the Polio Oversight Board. Except, that is, to say that many of the dysfunctions that led the IMB to express concern in the first place are still strikingly evident.

Implications

The programme will not achieve its end-2014 target of stopping global polio transmission. Faced with a missed target, not for the first time, there are signs that the programme's leaders have shifted their sights to the ambition of seeing a polio-free Africa by the end of the year, or soon after. Some imply that other activity should be of secondary importance. The IMB profoundly disagrees with any sequential strategy, and believes that setting polio cases in Pakistan on a sharp downward trajectory should be pursued with equal tenacity to the laudable goal of seeing an end to polio in the entire continent of Africa. The IMB also believes that interruption of transmission in Africa cannot be claimed until both the vaccine-derived polio cases and those due to the wild virus are both completely gone.

The polio programme operates in a complex, ever-changing world. The virus' distribution changes, as does the political and security context. Sometimes progress is inevitably slow. At other times conditions are favourable. Windows of opportunity should be regarded like gold dust. Too often they are only apparent in retrospect. One closed when Pakistani vaccinators started to be attacked in December 2012, for example. Before this, the programme was close to stopping polio transmission, but missed its chance. Similarly, it is highly regrettable that the Central Africa outbreak was not conclusively dealt with before the Ebola crisis spiraled.

The context of polio eradication has changed greatly since the IMB was established. Areas of conflict, violence and intimidation, population movement and inaccessibility have increased in scale and complexity. It is very difficult to predict when another area will be affected or what challenges will be thrown up. In the past, the polio programme has got by through concentrating on the endemic countries

and dealing with outbreaks as and when they cropped up. The traditionalists in the programme's leadership still think like this. The IMB has repeatedly warned of the dangers of this attitude. In 2013, all the progress of the previous year was wiped out by explosive outbreaks that took the global number of cases to double its previous level. The programme cannot afford to make this mistake again. The closer the world edges to eradication of polio, the more damaging – politically, financially and operationally – unforeseen cases of infection will be. From now on, risk mitigation of very high quality is as important as chasing down remaining endemic virus.

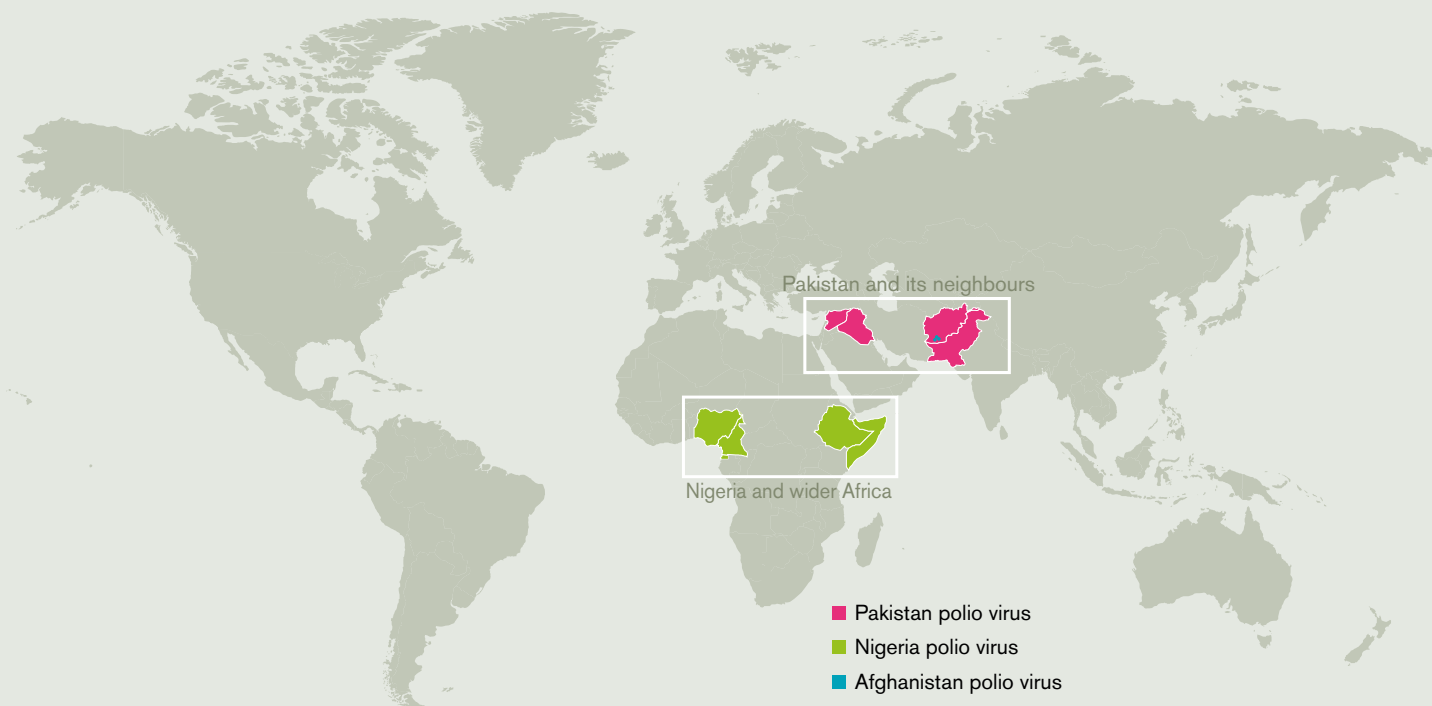
Both Africa and Pakistan now have a window of opportunity. In Pakistan, there is no longer a sizeable group of children in North Waziristan that the government cannot access. In Africa, there has never been less polio virus. In neither place is the situation easy, but it is probably as good as it is going to get, and may well get worse not better. It is absolutely vital that both opportunities are seized.

This is not the time for iterative, year-by-year improvement. It is the time for major action. The World Health Assembly has declared polio eradication a programmatic emergency for global public health. WHO has declared polio's spread a Public Health Emergency of International Concern.

For these reasons, each of this report's recommendations is a major and important one.

POLIO'S TWO BREEDING GROUNDS

Twenty-six years after the Global Polio Eradication Initiative was launched, many countries remain vulnerable to attack from polio virus spilling out from its two remaining homes.



Nigeria	Central Africa	Horn of Africa	Pakistan	Afghanistan	Middle East
6	10	6	174	10	3

1 Jan – 30 Sept 2014: **209 cases**

Pakistan and its neighbours

- Four fifths of all people in the world paralysed by polio in 2014 are in Pakistan.
- Five of six cases in Afghanistan were caused by Pakistan poliovirus, the other one by Afghanistan virus.
- Pakistan polio virus surged into Syria and Iraq, paralyzing 38 children. The most recent case was in April 2014, in Iraq.
- Pakistan is the major impediment to global polio eradication and an ongoing threat to public health in other countries.

Nigeria and wider Africa

- Just six children have been paralysed in Nigeria in 2014, down from 49 at this time in 2013.
- Nigeria poliovirus caused two major outbreaks – in Central Africa and the Horn of Africa.
- Nigeria's progress raises the possibility of Africa stopping polio transmission soon, but only if the outbreaks and other programme weaknesses are dealt with.

PAKISTAN

**AND ITS
NEIGHBOURS:
A DISASTER
UNFOLDING**

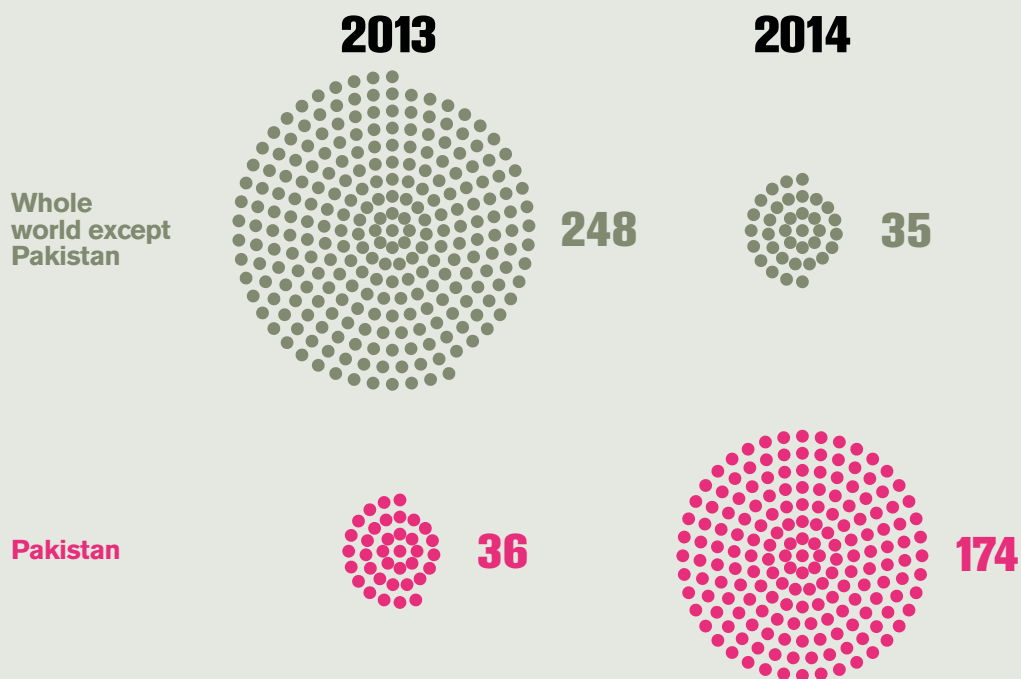
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Section 01



PAKISTAN: POLIO'S COMFORT ZONE

Over the last year, polio has been markedly reduced across most of the world. In sharp contrast, the virus in Pakistan is out of control.



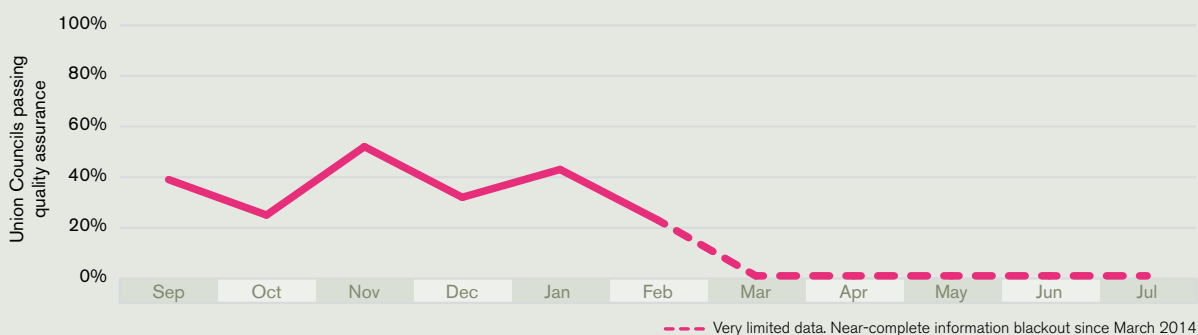
Wild polio cases : 1 Jan – 30 Sept

- Compared to the same period a year ago, the amount of polio paralysis has increased five-fold in Pakistan, while across the rest of the world it has been reduced seven-fold.
- Even in its 'low season', Pakistan had more cases than the entire rest of the world.
- Between July and September 2014, eight times as many children were paralysed in Pakistan than everywhere else put together.
- If Pakistan had matched India's performance of ridding its country of polio, only 35 people would have been paralysed by polio in the world this year.
- Already standing out for all the wrong reasons, Pakistan's unwanted status as the world's major polio reservoir is now stark and deeply embarrassing for such a proud country.

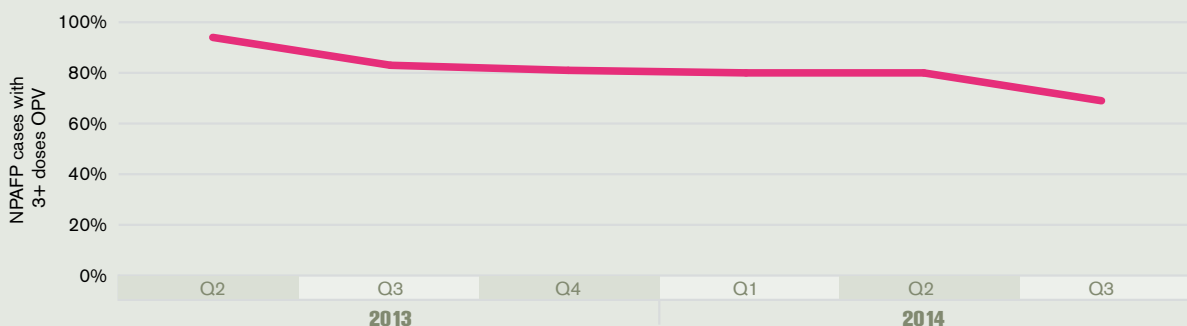
DOWN AND DOWN: SIMPLE STATISTICS THAT DON'T LIE

Pakistan's worsening vaccination coverage has led to decreasing immunity, and so an explosion in cases.

VACCINATION CAMPAIGN QUALITY IN KEY POLIO SANCTUARIES



POLIO IMMUNITY IN THE SANCTUARIES

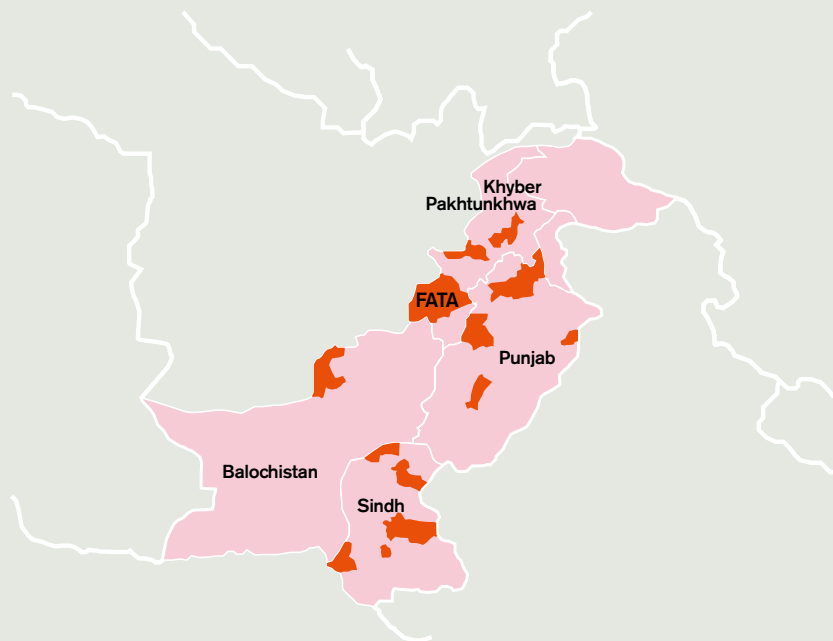


- There is no mystery about why polio is out of control in Pakistan – in the key areas, fewer children are being vaccinated than two years ago and immunity has plummeted.
- In Pakistan, less than a quarter of vaccination campaigns assessed in the last twelve months have met the required standard of 80% coverage.
- It is a mystery why Pakistan cannot do what Nigeria is doing – if it truly focuses on improving vaccination coverage to make its population immune to polio, Pakistan too can see the graphs rising, and case numbers falling.

ALL PAKISTAN'S PROVINCES INFECTED: POLIO STRIKING AT WILL

In a successful polio eradication programme, a country should see the virus' presence in a dwindling number of sanctuaries. This is not happening in Pakistan. Every province is infected.

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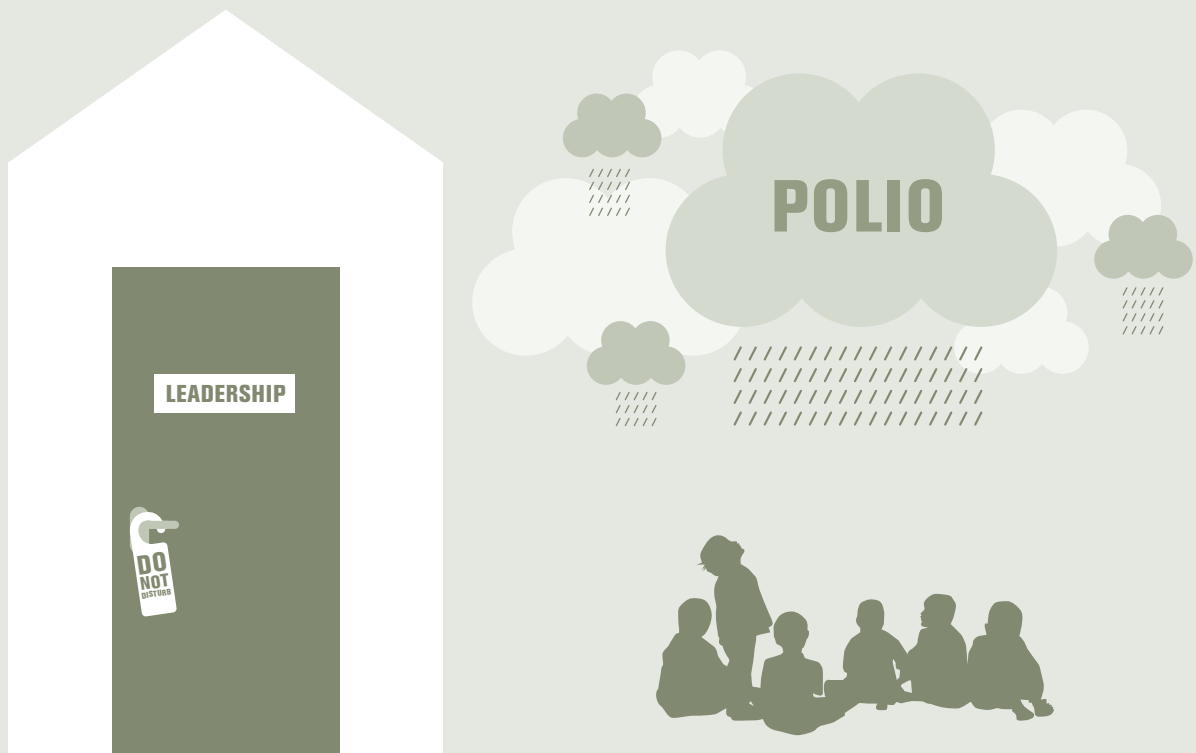


- In **Punjab**, polio virus has been circulating in Lahore for six months. This should not happen in a metro like Lahore, and clearly demonstrates deteriorating accountability and oversight. Hundreds of kilometres away, the virus is also paralysing children in Bahkhar and Chakwal.
- There have been 121 cases in **FATA** this year - four times more than in every country outside Pakistan - mainly in Khyber, North Waziristan and South Waziristan.
- **Khyber Pakhtunkhwa** has had 31 children paralysed by polio in 2014, mainly in Peshawar and Bannu, but also in Mardan, Lakimawar, Tank, Bunit and Torghar. Innovative one-day security-cordoned campaigns were a success in Peshawar, but have not been continued or properly scaled up throughout the province.
- Karachi, Pakistan's most populous city, is home to most of Sindh's 15 polio cases of 2014. Long a major polio reservoir and afflicted by several mini-conflict zones, it will need a decisive and different strategy. **Sindh's** second city Hyderabad has also been infected since April.
- In **Balochistan**, children have been paralysed in both Quetta and Qilla Abdullah. More than half of environmental samples since May 2014 are positive for polio. Quetta is home to the world's longest missed chain of polio transmission, showing up terrible surveillance.

CHILDREN OF PAKISTAN: WAITING FOR LEADERSHIP TO EMERGE

Pakistan's government dismantled the programme's infrastructure a full 17 months ago. Effective leadership arrangements have been absent during this lengthy vital period. Meanwhile, the virus has made the children of Pakistan suffer.

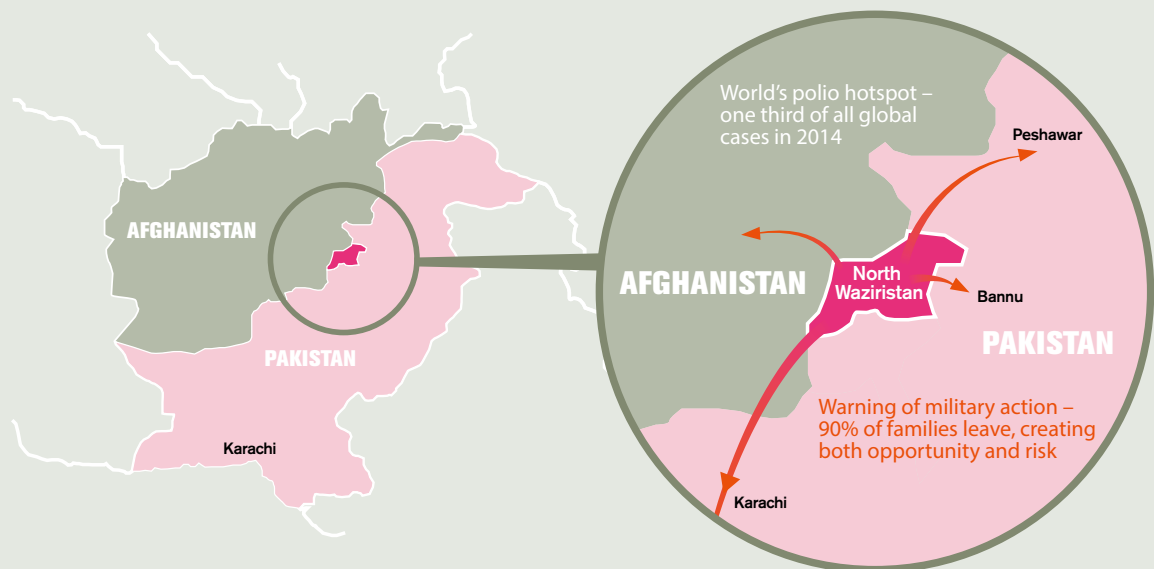
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- Pakistan's polio problem is often ascribed to those who have been violently attacking vaccinators. This is a very serious matter but the programme could do much more to help itself.
- Other countries have demonstrated that an effective programme to stop transmission of the polio virus requires a modern and effective leadership structure that galvanizes commitment, strategic focus and unity of purpose from national to regional to local level. This has been missing in Pakistan for nearly two years.
- During the 17 months of inaction in Pakistan, hundreds of millions of dollars have been spent on polio globally, more than should have been spent in countries trying to keep the Pakistan polio virus at bay. Pakistan now needs to make up for lost time.

WAZIRISTAN: THE INACCESSIBLE BECOME ACCESSIBLE

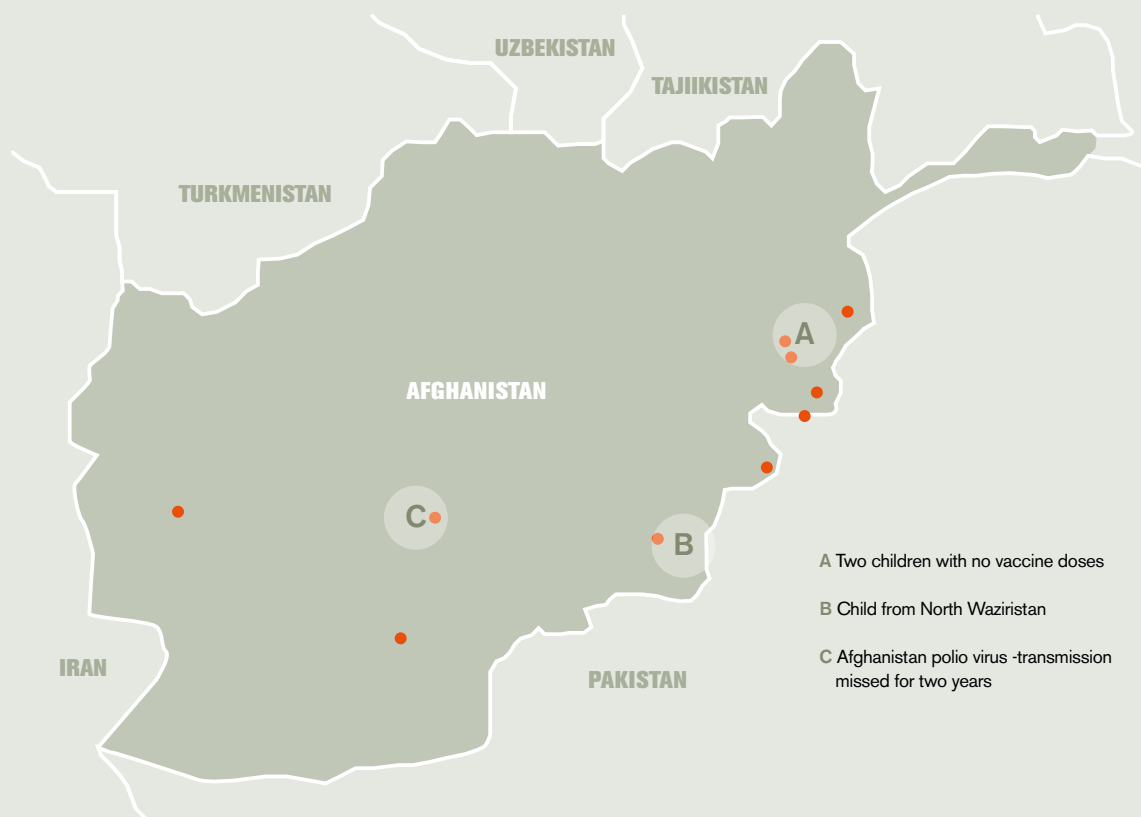
The Pakistan Taliban polio vaccination ban in North and, to a lesser extent South, Waziristan loomed large as a barrier to progress in the country and world. In June 2014, this situation changed entirely as 90% of the population, warned about military action, fled.



- The government's military action in Waziristan – Operation Zarb-e-Azb – opened up the possibility of reaching 300,000 children, who had previously been unvaccinated for two years.
- As the families left the area, the programme established transit vaccination points. These provided polio vaccine to many who had never received it before.
- The good news: The unvaccinated children are now in areas of Pakistan where access is not a major problem. There is no reason why their government should not be able to reach them now.
- The bad news: There is early evidence that outbreaks are occurring across Pakistan and in Afghanistan because the families leaving Waziristan took polio virus with them.
- This is game-changing – but will the programme take advantage before the virus does?

AFGHANISTAN: EVERY CASE TELLS A STORY

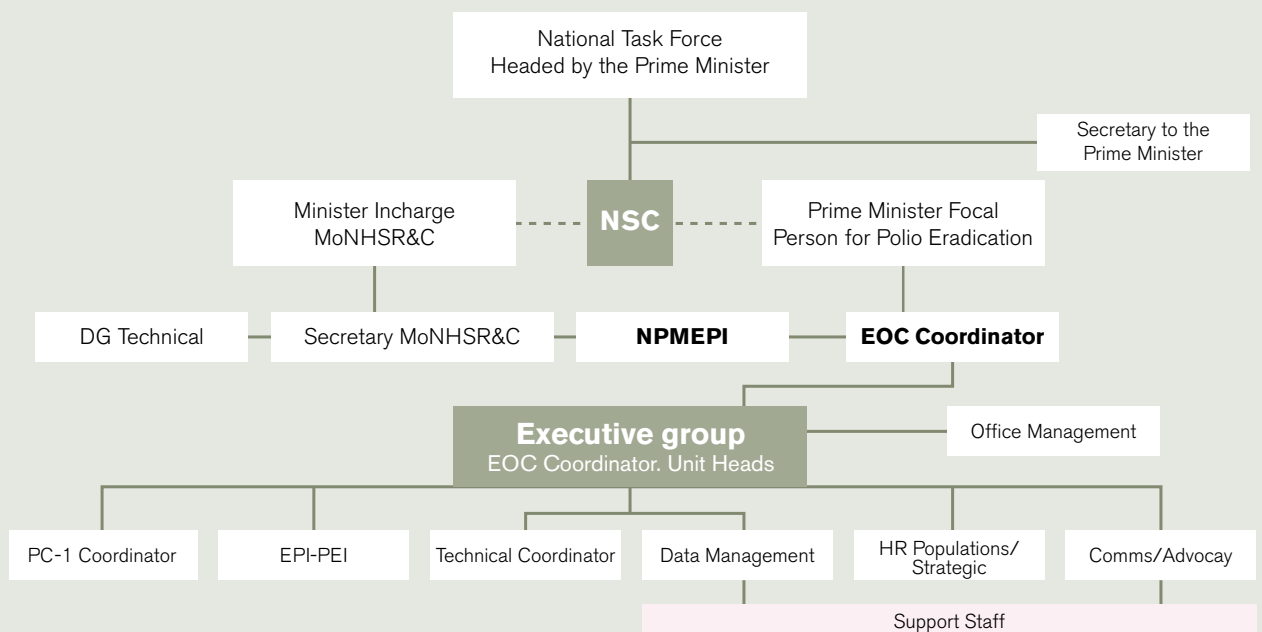
Most of the polio in Afghanistan is from Pakistan. Afghanistan's programme is generally robust, but inappropriate gaps remain.



- Afghanistan has a strong polio programme overall. In difficult conditions, it has remained politically neutral, innovated well, and successfully reduced polio's spread. In 2013 and 2014, Afghanistan has had only a small number of cases, but is yet to reach zero.
- All but one of the children paralysed by polio this year were afflicted by Pakistan polio virus. One child was Pakistani, having crossed the border from North Waziristan.
- Being Pakistan's close neighbour does not make polio inevitable. The virus would not take hold if vaccination coverage was strong everywhere. In the main polio-infected regions, just 62% of vaccination campaigns are meeting coverage standards.
- It was previously thought that Afghanistan had stopped its own endemic transmission, but cases caused by Afghanistan polio virus were then detected, most recently in May 2014. This virus had not been seen for two years, highlighting a serious gap in polio surveillance.
- Afghanistan is entering a time of change, politically and militarily. The new government has a crucial role to play in finishing polio eradication, although it must recognize the importance of the programme remaining politically neutral. With uncertainty ahead, the best time to end polio in Afghanistan is now.

PAKISTAN'S EMERGENCY OPERATIONS CENTRE: A MASTERPIECE OF OBSCURITY

An emergency response needs 'command and control' ability. Instead, Pakistan's planned Emergency Operations Centre is bureaucratic and confusing.



- In May 2014, the IMB recommended that Pakistan establish an Emergency Operations Centre (EOC) by 1 July 2014. With characteristically little urgency, it plans to do so in October.
- The IMB recommended that the EOC should build on the experiences of other polio-infected countries, particularly Nigeria, and on Pakistan's own successes in dealing with emergency situations such as floods.
- The plan that the programme has put forward is a pale imitation of its vibrant Nigerian counterpart. Nigeria's EOC has been characterized by clear and powerful leadership. It even helped the country deal with an Ebola outbreak. The leadership of Pakistan's EOC is neither clear nor powerful. If the Pakistan polio virus could read organograms, it would be reveling in its good fortune.

PAKISTAN'S NATIONAL DISASTER MANAGEMENT AUTHORITY: BRINGING CAN-DO TO CAN'T-DO

There is an answer to Pakistan's predicament. The National Disaster Management Agency has shown its clear capability in dealing with the country's natural disasters. The time has come to put it in charge of polio eradication and rescue Pakistan's vulnerable children.

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- A solution to Pakistan's polio problem is staring the country in the face. The National Disaster Management Authority can do 'command and control'. It can work with the military and with the provinces. This is exactly what the polio programme needs.
- The National Disaster Management Act 2010 gives the Authority a clear legislative base. It has the clear power that is needed to throw out polio from its last global stronghold.
- It is highly fortunate that this option exists. Pakistan can turn the polio situation around – to demonstrate its true capacity, and confound its critics
- The National Disaster Management Authority can play the crucial leadership role. But it cannot act alone. The top leaders of each province need to step forward as never before. Civil society needs to be mobilized. Pakistan's allies in the region, particularly the United Arab Emirates, China, and Saudi Arabia, need to bring their influence and abilities to bear.



**AFRICA:
POLIO-FREE
BY END-
2014?**

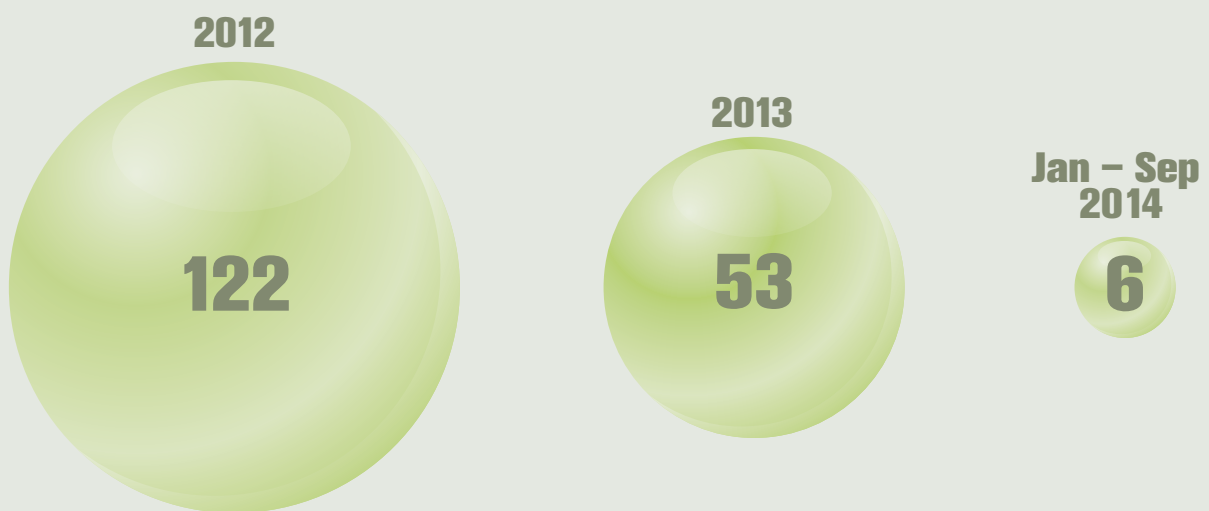
02

Section 02

NEARLY THERE IN NIGERIA?

NO

Nigeria has had just six cases of wild polio this year, and is within reach of stopping polio transmission. But case numbers can go up as well as down – as they have done before.

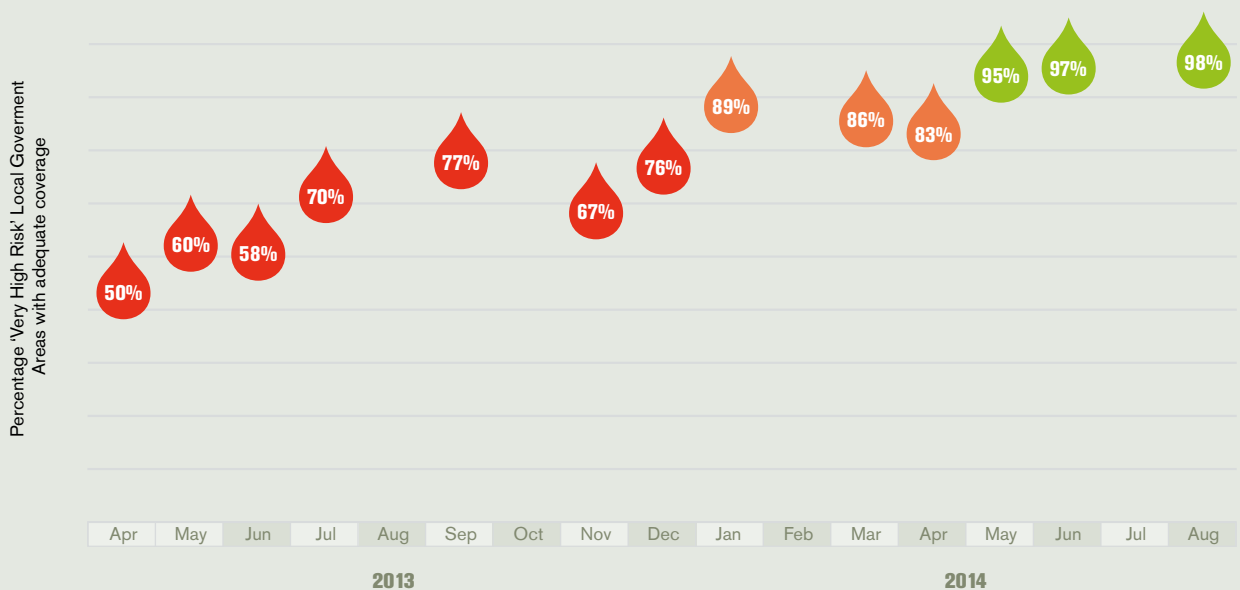


Cases of wild polio virus

- At this time in 2013, Nigeria had had 49 cases of polio. In 2014, it has had just six. Its geographic spread is also much reduced. Last year, nine states were infected. This year, it is only two: Kano and Yobe.
 - The Nigeria programme has made commendable progress, but it is too early to declare victory. The 2015 elections risk distracting national, state and district leaders away from polio, in how they use both their own time and their money.
 - The programme is still far from perfect. Genetic analysis shows that there are surveillance gaps.
- Social mobilisers and health camps have reached scale but not uniform quality. Rumours suggest that some are afraid to report cases of paralysis. The programme needs to tie up every loose end.
- Nigeria is not 'nearly there'. It is far from the end of the journey, and the road ahead is as tough as the road already travelled. Stopping wild virus transmission would be an important milestone – but Nigeria has not stopped polio transmission until it has dealt with the vaccine-derived virus too, and it has not eradicated polio until it has kept the virus out for at least three years.

TURNING IT AROUND: MAKING THE WORST THE BEST

Nigeria has focused on improving coverage in the worst performing areas, with great results.



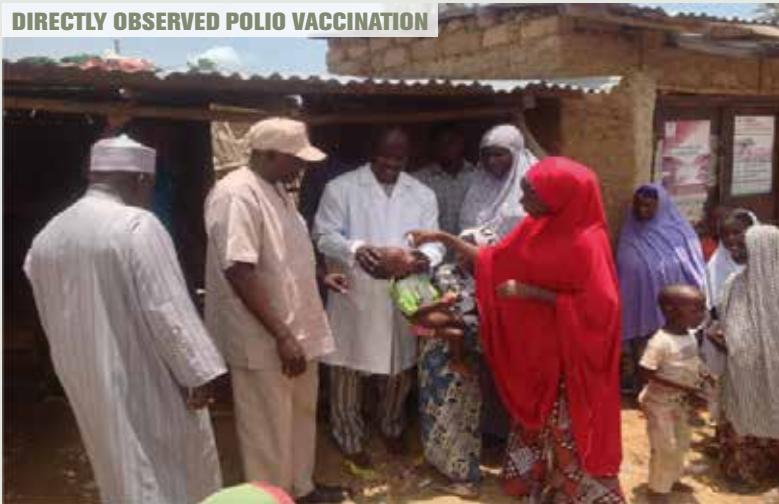
- Nigeria has analysed campaign coverage at the Local Government Area level, to understand where and why it is not up to scratch. The list of the poorest-performing, classified as 'very high risk' and 'very very high risk', has been frequently updated.
- Having identified the problems, the Emergency Operations Centers have implemented appropriate solutions – such as Management Support Teams if the problem is management, or more social mobilization if the problem is refusals. The 'best hands' have been deployed to the areas where they are needed the most.
- The approach of focusing energetically on the worst performers has been an important plank in Nigeria's strategy, and is paying dividends.

THE POWER OF INNOVATION: NIGERIA GAINING GROUND

Nigeria has achieved its progress through a continual process of examining the problems and innovating to develop solutions.

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DIRECTLY OBSERVED POLIO VACCINATION



EMERGENCY OPERATIONS CENTER



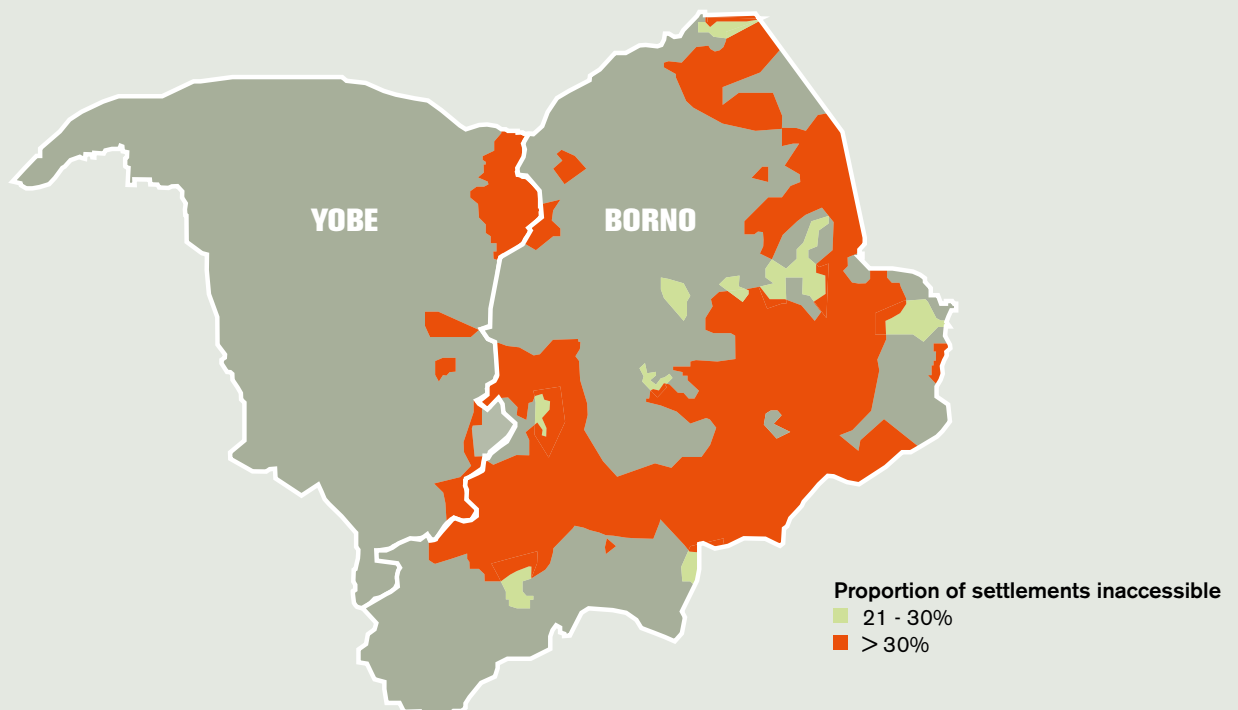
HEALTH CAMPS



- In some areas, **health camps** are now run on vaccination days. They provide more than just polio drops to populations who previously refused polio vaccination because they wanted other services as well. This is a key “pull” strategy.
- An **accountability framework** sets clear standards for individuals’ performance. Its application has made a big difference, particularly in Kano. Both the government and its partners have sacked many under-performers.
- **The Emergency Operations Center (EOC)** model has been a great success. As well as a national EOC in Abuja, each key state has its own EOC. Partners work together under one roof, with the government in the lead. There is good data analysis capability. The EOCs are action-oriented, making changes at speed.
- **Directly observed polio vaccination (DOPV)** is a recent innovation. The programme discovered that some parents and vaccinators were colluding to mark children’s fingers as ‘vaccinated’, without actually giving the vaccine. In areas where this is known to happen, supervisors now directly observe vaccination in special sessions before the main campaign starts.

UNCERTAINTY AND RISK: NORTH EASTERN NIGERIA

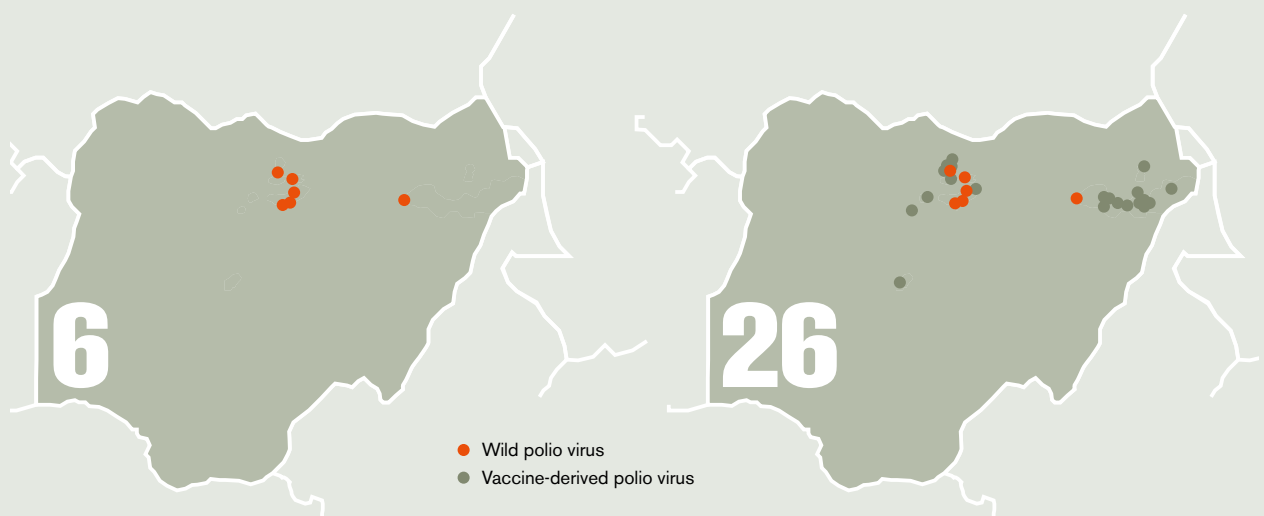
Operating in Borno and, to a lesser extent, Yobe is made difficult by the violence of Boko Haram. Questions remain about whether polio has truly gone from here, and whether it would be detected if it came back.



- The programme has done a commendable job in Borno and Yobe, operating in the face of great complexity and challenge.
- The standard indicators suggest that surveillance here is strong, but the programme acknowledges that there are gaps where the virus could go undetected. The programme is only able to access some areas in a 'hit and run' fashion, which must impede its view. There are nine Local Government Areas that UN staff are entirely unable to enter.
- Vaccination has also been generally strong, but the programme is still vying with accessibility issues, as the map above shows.
- The north east must be high on the risk list as Nigeria attempts to shut out polio for good.

STOPPING POLIO IN NIGERIA: LOOK AT THE WHOLE PICTURE

Transmission of wild polio virus is at an all-time low, but circulating vaccine-derived polio virus (cVDPV) is more widespread.



- The Nigerian programme set the target of stopping wild polio virus transmission in Nigeria by the end of 2014. Wild virus transmission has reduced dramatically – in number of cases, genetic variation, and geographic spread.
- The programme has used mainly the bivalent oral polio vaccine (bOPV), as this is more effective than the alternative trivalent vaccine (tOPV) against the wild virus. The downside is that bOPV is ineffective against the vaccine derived strain of polio virus (cVDPV2) that also causes paralysis. The circulation of cVDPV has therefore increased.
- It was a difficult, controversial decision to prioritise elimination of the wild polio virus by using only the bivalent vaccine. Some experts supported it and some were against. Nigeria stuck by the decision.
- The programme now plans tOPV vaccination rounds to address cVDPV circulation. The addition of inactivated polio vaccine (IPV) - the injectable form- into campaigns – and into the country's routine immunisation schedule – should also help to stop vaccine-derived polio cases.
- Nigeria's programme must maintain its momentum. If it succeeds in stopping wild virus transmission, this is not the end of the story.

A POLIO-FREE AFRICA? NOT UNLESS...

Although in better shape than Pakistan, achieving a polio-free Africa is very far from certain.

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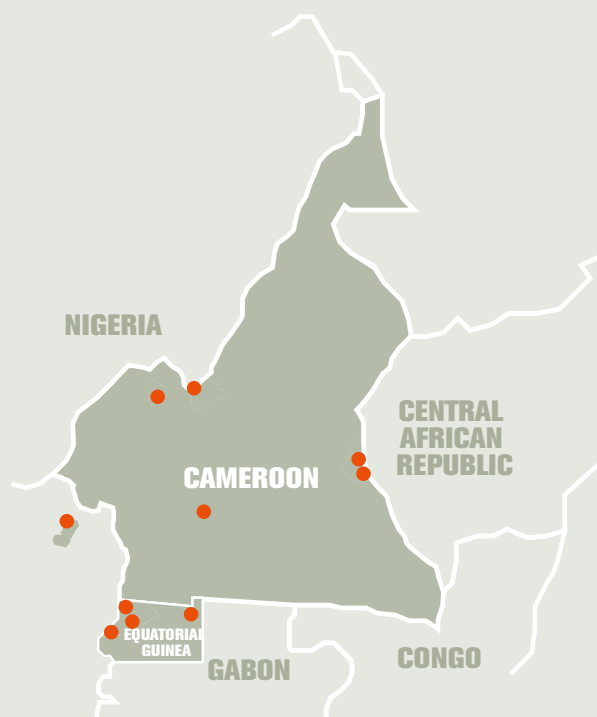


- As it became crystal clear that global polio transmission would not be stopped this year, the programme reset its goal – to making Africa polio-free. The great strides of progress made in Nigeria – long the continent’s polio reservoir – open the door to this possibility. But stopping polio in Africa is not just about stopping it in Nigeria.
- In Somalia, the virus had shifted to nomadic villages in hard-to-reach areas – is it really gone from here? The country has frequent visitors from Pakistan. There have been big gaps between virus detections. In some areas, there has been no vaccination programme for years. No one can sit back with a sense of satisfaction about their work in the Horn of Africa.
- In Cameroon, the polio virus was missed for two years. Parents barely know about polio campaigns. Poor quality microplans have finally been improved, but major gaps remain. The country has received 200,000 refugees from Nigeria, Central African Republic, Chad and Mali, whilst insecurity is plaguing border areas. In neighbouring Equatorial Guinea, programme staff are not even able to get travel visas without extreme delay, thwarting timely action. Unsurprisingly, both vaccination coverage and surveillance inspire no confidence whatsoever. Does it sound like a polio-free Africa is near?

CENTRAL AFRICA: THE POLIO VIRUS LOVES BORDERS

Nigeria polio virus has crossed through Cameroon to the border with Central African Republic; and through Equatorial Guinea, to the border with Gabon.

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- Country borders are important to governments and administrators, but mean little to the polio virus. People living in the area pay these borders little heed too. They cross frequently, potentially taking the virus with them. More than 500,000 people travel in and out of Cameroon annually.
- Infection in Central African Republic would put the 'polio-free Africa' plans on hold. Ravaged by civil war, the country's healthcare system has gone from bad to worse. Surveillance is sub-standard in both Central African Republic and Gabon – polio may already be there.
- This demonstrates how vital it is to have a whole-region approach. It has taken an unacceptably long time to even start getting vaccination and surveillance quality up to scratch, and there is a long way to go yet.
- The challenge for Nigeria is not just to get polio out – but also to keep it out. Ironically, Nigeria risks being reinfected by its own virus, coming home from neighbouring Central Africa.

OUTBREAK CONTROL: A STARK COMPARISON

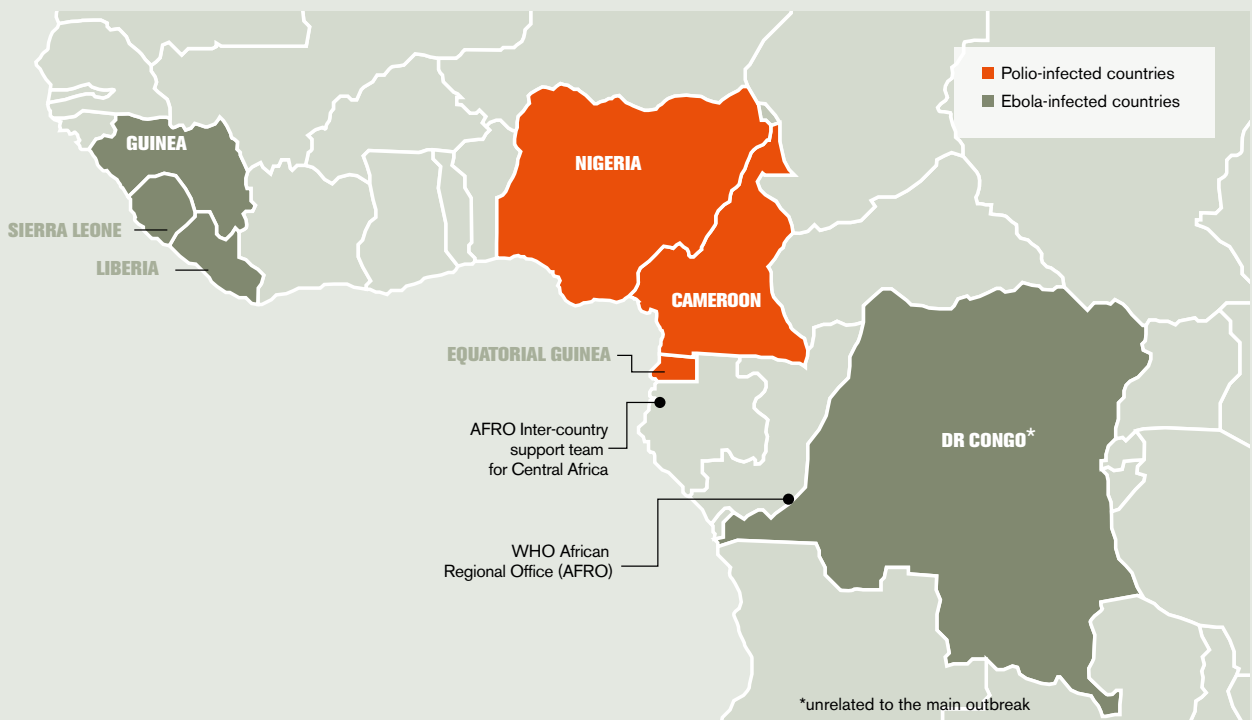
The Middle East outbreak response has been excellent, the Horn of Africa response weaker, and the Central Africa response poor.



- In both Cameroon and Equatorial Guinea, the government is not yet giving its polio outbreak the priority that will stop it decisively.
- The three current outbreak responses vary embarrassingly in the global programme partners' performance. In the Middle East, a regional outbreak coordinator was in place within days. In the Horn of Africa, it took a blatantly unacceptable 10 months.
- The World Health Organization's Africa Regional Office (AFRO) did not take control in the same determined way that the Eastern Mediterranean Regional Office (EMRO) did. This explains a considerable part of the variation.
- The IMB has repeatedly warned about outbreaks. The Central Africa outbreak is now of grave concern, and stands out pointedly at time when the programme aspires to stop polio in Africa as a whole.

SIDE BY SIDE: POLIO AND EBOLA

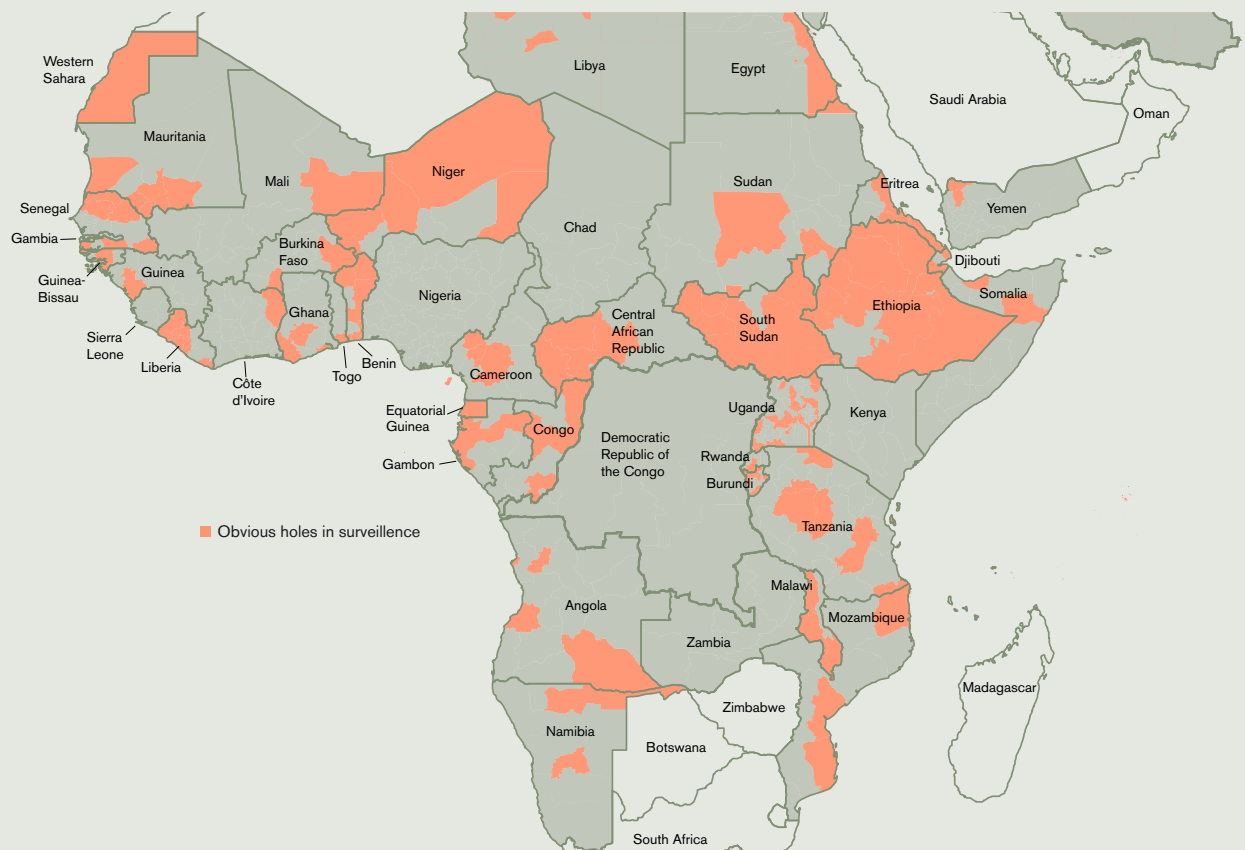
The Ebola crisis – and response – has emerged close to Africa's remaining polio virus, at a critical time.



- Ebola virus is causing a crisis in West Africa. At the time of this report, 4000 people are thought to have died – most of them in Liberia, Sierra Leone, and Guinea.
- This is clearly a major public health emergency, from which nothing – including polio eradication efforts – should detract.
- The polio programme is doing a great deal in support. Nigeria successfully used the polio EOC model to coordinate its response, and seems to be no longer infected with Ebola. Elsewhere too, many polio staff are helping with the Ebola response.
- This is a critical time for polio eradication in Africa. Ebola and polio are in the same region but, now that Nigeria no longer has Ebola, are in different countries. There is one major point of overlap, where an enhanced polio response could impede the Ebola response and vice versa. This is the WHO Africa Regional Office. The IMB makes a recommendation to address this.

POLIO'S HIDING PLACES IN AFRICA: HOLES IN SURVEILLANCE

There are far too many parts of Africa in which one or both aspects of polio surveillance are weak. The virus has a network of hiding places as a result.



- There are two main indicators of an area's polio surveillance capability – the acute flaccid paralysis (AFP) detection rate, and the percentage of detected AFP cases for which adequate stool samples are received in the lab.
- Achieving the standards in each of these indicators is a minimum. It is quite possible for polio virus circulation to be missed even where the standards are achieved. Falling below these standards is really unacceptable – this certainly allows polio virus circulation to go undetected. The map highlights where one or both standards are not being achieved.
- Surveillance is crucial to making sure that Africa truly becomes free of polio. There are simply too many holes in Africa's polio surveillance – they need to be filled in, so that the virus has nowhere to hide.



GLOBAL ERADICATION STRATEGY: KEY CONSID- ERATIONS

Section 03

03

OUTBREAKS WAITING TO HAPPEN: WHERE IS POLIO'S NEXT DESTINATION?

Weak polio vaccination leaves many countries vulnerable to an outbreak if the virus reaches their border. The countries on the programme's Red List are not the only ones at risk.

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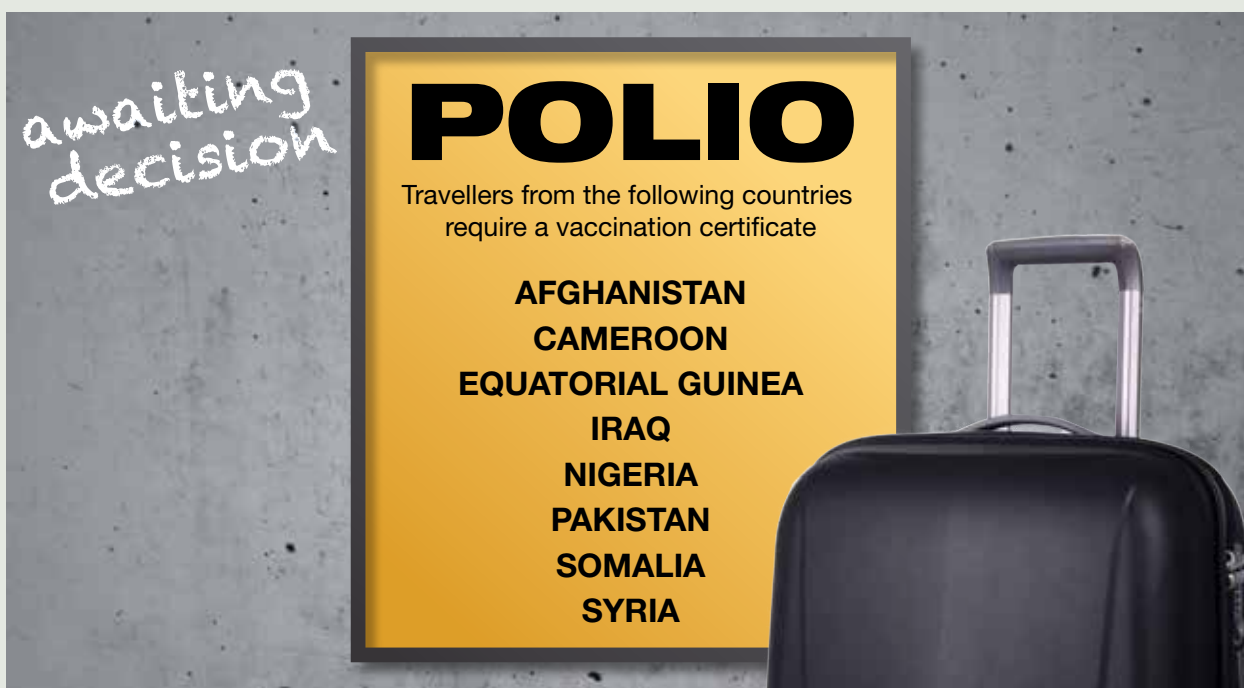
✈️ Polio Destination		
Time	Destination	Gate
12:0	PHILIPPINES	06
12:1	UKRAINE	18
12:2	CENTRAL AFRICAN REPUBLIC	32
12:3	CONGO	14
12:5	GABON	09
12:5	NIGER	27
13:2	BENIN	20
13:4	CHAD	31
13:5	DR CONGO	04
14:0	MALI	12

- Outbreak prevention has been a programmatic blindspot. Countries at risk of polio infection have received vaccine and some funding, but there has been too little strategic focus on the most effective, cost-efficient ways to prevent new outbreaks. The creation of a 'Red List' is creating some improvement, but it remains too slow.
- In 2013, the programme's longstanding neglect of this came home to roost, as outbreaks took hold in the Middle East, Horn of Africa, and Central Africa.
- Risk is not confined to those countries on the Red List. The situation in Ukraine is particularly dire. The IMB received good information that there are essentially no vaccines at all (for anything, not just polio) in the entire country. There is a strong anti-vaccination sentiment in the population that is not being countered by effective health education. The number of children susceptible to polio is therefore growing day by day. The agency for surveillance was on the brink of being disbanded. There are even rumours that cases of acute flaccid paralysis are being covered up. This creates the perfect storm – unprotected children, no vaccine to protect them, and little hope of finding out quickly if polio infection takes hold.
- Such situations are immensely difficult to deal with, but the programme cannot wash its hands of this inconvenient truth.. The polio virus makes no concessions for difficulty. However challenging, such cavernous immunity gaps simply must be addressed somehow.

LEARNING FROM SMALLPOX: STOPPING INTERNATIONAL SPREAD

More needs to be done to make sure that people are vaccinated before they travel from an infected country, potentially bringing the polio virus with them.

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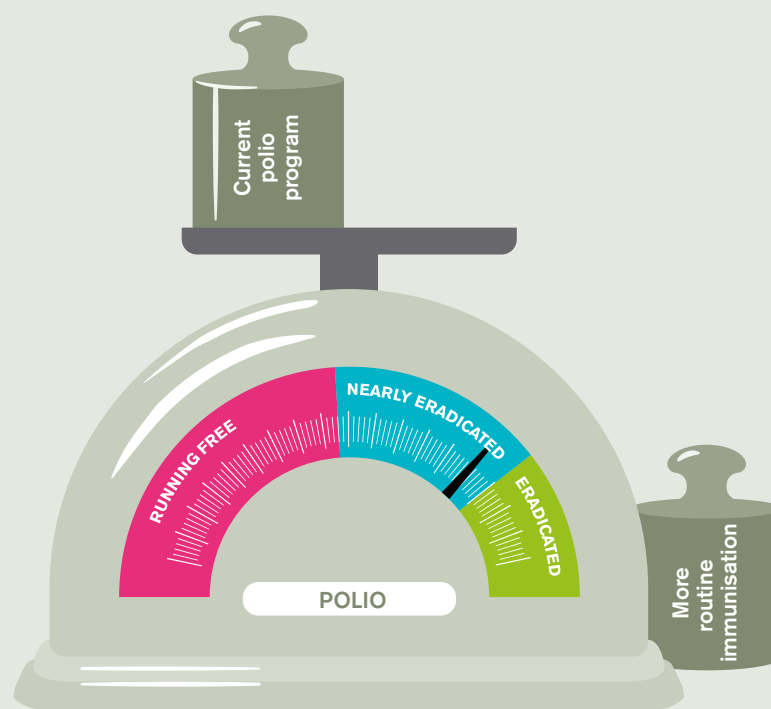


- On 5 May 2014, WHO declared international spread of wild poliovirus a 'Public Health Emergency of International Concern' under the International Health Regulations. This followed a spate of outbreaks in 2013 and 2014 – in the Middle East (caused by Pakistan virus), and the Horn of Africa and Central Africa (both caused by Nigeria virus).
- WHO's current recommendations apply to a subset of the countries infected with polio – those judged at greatest risk of spreading the virus internationally in 2014. The central recommendation is that these countries ensure that residents and long-term visitors are vaccinated against polio before they leave the country, and are given an international certificate of vaccination as proof of this.
- No recommendation is currently made to countries that are receiving these travellers. In most places, nobody is checking if travellers actually have a vaccination certificate.
- This is weaker than the measures that were applied to control the spread of smallpox. When smallpox was being eradicated, countries receiving travellers from infected countries checked that they had a valid vaccination certificate.
- If measures to control the international spread of polio are worth doing, they are worth doing properly. And there can be little doubt that they are indeed worthwhile – spread within Africa would be disastrous at this stage, and the virus is burning so brightly in Pakistan that there is grave risk of international spread from there.

TIPPING THE BALANCE

Polio is not eradicated by a single 'magic bullet', but through the combined weight of different and complementary interventions and tactics.

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- The programme's main tool is vaccination campaigns that provide oral polio vaccine house-to-house. Globally, the programme has fine-tuned the delivery of these campaigns considerably, and become more adept at tackling weaknesses in them.
- Social mobilization has long been vital. It has been strengthened in many places – most notably Nigeria – to positive effect.
- Of the major tools, routine immunisation remains the least emphasized. There is major unrealized potential. Some argue that the programme has succeeded in stopping polio in many places without strengthening routine immunisation, and that doing so is very tough. But in Pakistan particularly, routine immunisation may have an important role to play in stacking the odds against the virus in a way that the population welcomes more than repeated polio-only campaigns.
- Adding IPV into vaccination campaigns should also help to tip the balance, providing an additional boost to immunity. It is particularly of value in areas that are only intermittently accessible, but is not a sustainable alternative to strengthening routine immunisation.
- Strengthening routine immunisation is already part of the programme's 2013-18 plan. Polio-funded staff are certainly doing some helpful work. But the major part of the programme is focused on stopping polio transmission, and treats the routine immunisation objective as a poor cousin.

CONCLUSIONS AND RECOMMEN- DATIONS

04

Section 04



CONCLUSIONS AND RECOMMENDATIONS

The programme will certainly not achieve its end-2014 target of stopping global polio transmission. This is not the first time that a major target has been missed, and this failure will not be welcome news.

The IMB is adamant that the programme should not be stung by this failure into looking to the comfort zone of a single short-term priority – reaching for a polio-free Africa. Global polio incidence cannot be allowed to move further out of control because Pakistan and the many countries with low levels of immunity are put on the programme's back burner. Three priorities must be pursued with equal tenacity. The great prize of clearing polio out of Africa in the next six months is achievable but still is enormously challenging. The work to achieve this must go hand in hand with securing a sharp downturn in cases of polio in Pakistan over the same time period, as well as a surge in levels of immunity everywhere that the polio virus could seek a fresh mandate to kill and to paralyse.

Pakistan's polio programme is a disaster. It continues to flounder hopelessly, as its virus flourishes. Home to 80% of the world's polio cases in 2014, and with a programme that is incomparably weak, Pakistan is the major stumbling block to global polio eradication. To claim that this low-transmission season will be its last has no basis in reality. The country, supported by its neighbours, needs to change its polio eradication programme drastically, urgently, and transformatively.

The government of Pakistan has a decision to make. A determined effort now – led by the National Disaster Management Authority – could stop polio in Pakistan, and so in the region. If the programme simply continues as it is, Pakistan is very likely to be the polio virus' last home on earth, with the entire global community spending huge sums of money simply to keep Pakistan polio virus out of their countries.

Strong progress in **Nigeria** creates, for the first time, the possibility of a **polio-free Africa**. There is a mood of excitement within the programme that this is already a 'done deal'. This concerns the IMB. Nothing could be further from the truth. The achievement of this goal, both

in Nigeria and in wider Africa, is beset with complexity and risk. Nigeria must not celebrate victory before it is earned. It cannot claim that polio transmission is interrupted until vaccine-derived polio and wild polio virus are both gone from the whole country. The road to polio-free certification will be a rocky one. As India has found, keeping polio out requires a programme hitting sustained levels of excellence. This is what the Nigeria programme must strive for if the gains of the last year are not to be lost.

A polio-free Africa requires the programme to fire on all cylinders simultaneously. It requires every part of Africa – some with recent polio cases, some with low levels of immunity, some affected or threatened by Ebola – to be made and kept polio-free.

In Africa, our greatest concern lies with **Cameroon, Equatorial Guinea**, and the wider **Central Africa** sub-region. Neither government is giving polio the priority response that it deserves. Polio is just waiting to spill across the border into Central African Republic and Gabon, if it has not done so already. The WHO African Regional Office failed to mount a strong sub-regional outbreak response, and is now (understandably) impeded in doing so by its need to focus on Ebola.

Though it is about to miss another deadline, the global programme has made some progress. The job of eradicating polio must be seen through. The progress has particularly come from innovation. It is vital that the programme recognizes and embraces this fact. Too many times, the programme has achieved progress through innovation, only to then seemingly forget its importance and believe that it now has all of the answers. It does not. Open minds are needed to persuade those of a hardened vertical programme pedigree that routine immunisation must be allowed to sweep in and shape the polio programme in the time ahead.

CONCLUSIONS AND RECOMMENDATIONS

Windows of opportunity often become apparent only in retrospect. One closed when Pakistani vaccinators started to be attacked in December 2012, for example. The programme had got close to stopping polio transmission, but missed the chance to do so in time. Similarly, all are now wishing that Central Africa had properly dealt with polio before Ebola emerged and complicated matters substantially. Both examples illustrate that the programme must act when it has an opportunity to do so. The polio programme operates in a complex, ever-changing world. The virus' distribution changes, as do the political and security situations where it lives. Nobody knows what is round the corner.

Both Africa and Pakistan now have a window of opportunity. In Pakistan, there is no longer a group of children in North Waziristan that the government cannot access. In Africa, there has never been less polio virus. In neither place is the situation easy, but it is probably as good as it is going to get, and may well get worse not better. It is absolutely vital that both opportunities are seized.

This is the moment for transformative action, not iterative year-by-year improvement. The World Health Assembly has declared polio eradication a programmatic emergency for global public health. WHO has declared polio's spread a Public Health Emergency of International Concern. At the end of 2014, the programme will miss yet another target. It has to be the last time and the IMB's recommendations reflect this vital moment in history.

The IMB recommends:

- That the Prime Minister and Cabinet of Pakistan order the National Disaster Management Authority to take on the task of stopping polio in Pakistan, with immediate effect.
- That the plan for Pakistan's Emergency Operations Center be strengthened, to provide intelligence and coordination functions in support of the National Disaster Management Authority's work. If there is delay in adopting the National Disaster Management Authority recommendation, the EOC should be strengthened to have the capacity and power that they need to run a programme truly set on eradication.
- A special meeting of the Independent Monitoring Board in early 2015 with those who will lead the eradication of polio from Pakistan, at federal level, in each province and in FATA. It is to be hoped that the government of the United Arab Emirates might play an important part in such a meeting.
- That the World Health Organization headquarters take over the management of the Central Africa outbreak from the World Health Organization African Regional Office, freeing the latter to focus on the Ebola crisis and simultaneously enabling a decisive Central Africa polio outbreak response.
- That the International Health Regulations Expert Committee make a recommendation that all countries receiving travellers from polio-infected countries should ensure that they have a valid vaccination certificate, as a condition of entry. That this should be implemented urgently.
- That the programme better integrate its work to strengthen routine immunisation with work to stop polio transmission. That Gavi is invited to become the sixth core partner, and its Chief Executive to join the Polio Oversight Board.