

INDEPENDENT MONITORING BOARD OF THE GLOBAL POLIO ERADICATION INITIATIVE

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

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The IMB's reports are entirely independent. No drafts are shared with the Polio Programme prior to finalisation. Although many of the data are derived from the GPEI, the IMB develops its own analyses and presentations.





INTRODUCTION

This is the 16th report produced by the Independent Monitoring Board (IMB) of the Global Polio Eradication Initiative (GPEI).

The report is different to its predecessors. It follows on from the work of an independent Review Team commissioned by the IMB, at the request of the Polio Oversight Board. The Review Team travelled to each of the three remaining polio endemic countries and conducted extensive visits to the frontline of the Polio Programme in Pakistan, Afghanistan and Nigeria. The Review Team produced its own report that has now been released, available to read here.

This 16th IMB report follows meetings that discussed the Review Team's findings held in London between 12-14 September 2018 with GPEI staff, donors and extended partners. It also takes account of discussions of the Review Team's final report at the Polio Oversight Board's meeting in New York City on 28 September 2018.

The IMB's judgements focus on objective one of the GPEI's Polio Eradication and End-game Strategic Plan 2013-2018: "Stop all wild polio virus transmission by the end of 2014 and new vaccine-derived polio virus outbreaks within 120 days of confirmation of the index case". The 2014 date for interrupting wild poliovirus transmission was (by implication) modified when the Polio Oversight Board meeting endorsed an "intermediate" scenario whereby global transmission would be interrupted by the end of 2016.

The Polio Eradication and End-game Strategic Plan was updated after a mid-term review in 2015, and extended to 2019 by the Polio Oversight Board in September 2017. The GPEI is currently working to review this strategy and prepare a new document for the January 2019 WHO Executive Board meeting. The review will assess whether the current strategies, functions and activities in the existing strategy continue to be valid and sufficient to achieve the eradication goal and if new approaches are required.

Based on the Polio Programme's epidemiological data, the IMB concludes that progress towards interrupting polio transmission globally has stalled and may well have reversed. The total number of wild poliovirus cases globally has increased: 25 compared to 13 for the same period (30 October) in 2017. The case count so far this year exceeds the total for the whole of 2017. The number of cases in Afghanistan has more than doubled: 19 in 2018 so far compared to 8 for the same period (30 October) in 2017. On average, a million children have been missed each round since May 2018 in Afghanistan. The number of wild poliovirus cases in Pakistan has increased since the same time in 2017: 6 compared to 5. In Pakistan, the percentage of positive poliovirus isolates drawn from environmental sampling is exactly the same as it was in 2017. More sites are detecting the poliovirus than in 2017. The number of vaccine-derived poliovirus cases has increased from 63 on 30 October 2017 to 75 in the same period of 2018.

The conclusion of the independent Review Team is: "Access limitations due to insecurity continue to represent the biggest threat to polio eradication and progress towards interrupting transmission has stalled. Afghanistan's security situation is deteriorating and the number of cases has more than doubled compared to this time last year. Pakistan has widespread circulation of wild poliovirus documented by positive environmental specimens but isn't acting decisively on these findings. Whether or not poliovirus transmission continues in Boko Haram controlled areas of Nigeria is unknown".

Given the current state of progress, the IMB considers it implausible that wild poliovirus transmission will be eliminated globally by the end of 2018, thus requiring a fully committed and resourced Polio Programme going into 2019.



THE INDEPENDENT REVIEW TEAM'S FINDINGS

The Review Team's approach involved 10-day visits to Afghanistan, Pakistan and Nigeria. They went deep into the field to some of the most challenging areas where the poliovirus has thrived. Full details of Review Team membership and the exact locations of visits are contained in the Review Team's final report.

The Review Team conducted interviews with frontline workers as well as mothers and fathers. The women members of the Team were provided with female translators, gaining unrivalled access and interaction inside homes and with large cadres of female workers.

The Review Team met with a wide range of other stakeholders including: religious, traditional and community leaders; military leadership; non-governmental organisations (including those implementing health services in Afghanistan and other civil society humanitarian bodies); programme managers and their staff from implementing agencies and government; WHO and UNICEF Country Representatives; senior politicians and governmental officials in the jurisdictions below national level; and Ministers of Health.

The Review Team's goal was to identify actions to accelerate progress towards the eradication of wild poliovirus.

"The Review Team went deep into the field where the poliovirus has thrived"

The scope of the work was: to assess the Polio Programme's management; to scrutinise functioning and structure; to review advisory mechanisms; to look at financial and human resource matters; to explore existing (and potentially new) collaborations with other programmes; and to identify any other roadblocks or opportunities deemed relevant.

The Review Team found the operating environment in each of the three countries was dominated by limitations to access and by insecurity. All the remaining critical geographical areas for polio eradication are highly insecure. Conflict, insurgency, civil unrest, humanitarian crises and crime are in full flow. Frontline workers, especially females, are often harassed and abused within communities in Pakistan and Afghanistan.

Increasing fragmentation of antigovernment forces, together with the emergence of new elements in Afghanistan, have introduced grave challenges. Many workers operate within an environment of fear, especially in the east of the country. The Review Team judged the 95% or higher reported polio vaccine coverage rates as too good to be true. Suspicions of links between polio and military operations were found in Afghanistan. Around one million children were missed in the three vaccination campaign rounds between May 2018 and September 2018. This was because of a ban by the Taliban on house-to-house campaigns, affecting the southern region most acutely. The Review Team pointed to the Programme's reluctance to negotiate or consider creative ways to gain access to the unvaccinated children. In contrast, in northern Nigeria, there was more willingness to question the validity of data, encourage innovation, consider flexibility in strategy and delegate authority from national to sub-national levels.





Large populations, roughly 200 million, live in Pakistan and Nigeria. The number is smaller in Afghanistan, yet there are severe cultural constraints working against the Programme. Very conservative societies restrict the role of women in decision-making and even in working as vaccinators.

The geographical areas are huge, and infrastructure is limited. In Balochistan, the sheer distances covered by vaccination teams and their supervisors struck the Review Team very forcibly. The same was true in parts of Afghanistan and Nigeria. Difficult terrains in Borno were a major limitation in enabling the military to access and vaccinate children.

The Review Team found a strong link between abysmal development indicators and the persistence of the poliovirus. In such communities, very poor health services frequently co-exist with no access to water, nutrition and sanitation or other basic public services. Neither are there real opportunities for work or education, such is the profound impact of multiple deprivation. The Team saw a major opportunity for governments and partner organisations to target funding to the most deprived and at-risk communities.

The Review Team found, in local communities, widespread evidence of frustration, resistance and anger directed at the Polio Programme. They concluded that this is fuelling refusals and seemingly absent children when vaccinators call at houses in key populations. Parental frustration is heightened when their only contact with government is a visit to push polio vaccine. Polio vaccination campaign schedules involve many knocks on the door.

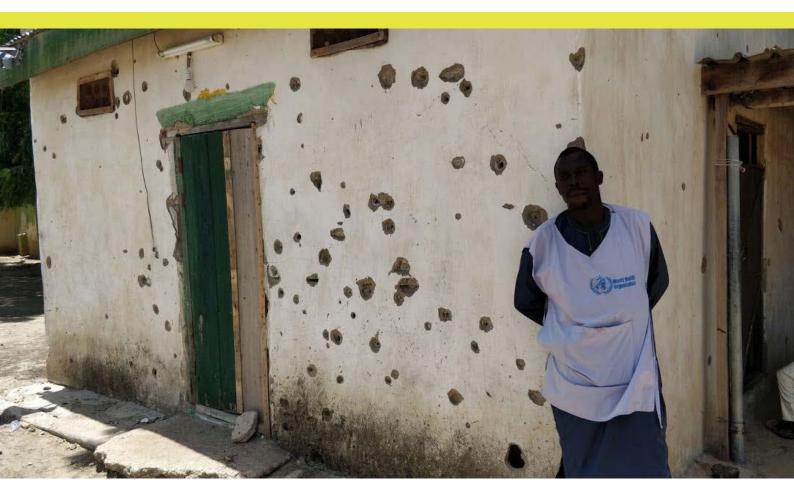
Rumours and anti-polio sentiments posted on social media have infiltrated communities in Pakistan and Afghanistan, and turned some people against the polio vaccine. The Review Team heard propaganda in all three countries that the vaccine is harmful to children. Many

parents in Pakistan and Afghanistan still refer to the Abbottabad incident, believe that the vaccine is haram and have been persuaded that polio eradication is a western or international agenda that will not benefit local people.

The Review Team called in its report for more intensive communication efforts and community engagement approaches to counter these problems. The Review Team particularly welcomed the recent communications review in Pakistan, but was disappointed nothing similar had happened in Afghanistan.

The Review Team was adamant that managers must spend more time on the ground to understand field realities. Efforts to analyse and triangulate data at the lowest administrative level, and an effective strategy for vaccinating children on the move seemed to be weak in Pakistan. It shocked the Review Team that delays and rejections of travel authorisations and visas in Pakistan have been a great hindrance to Polio Programme monitoring and quality improvement activities. Identifying and removing obvious barriers to progress is vital work.

Polio was declared a Public Health Emergency of International Concern back in 2014. In its report, the Review Team has set out the expected characteristics of an emergency. They include speed of response, flexibility in setting strategy, getting the best people in the right places, and appropriate delegation of authority. In the Review Team's experience of other emergencies, these elements are essential to an effective response. They found that the Polio Programme has multiple lines for reporting, insatiable demands for data, several layers for approvals, and generally a too top-down culture.



The current Polio Programme does not have the characteristics of a public health emergency.

The Review Team questioned the need for a global polio management structure of such scale, size and complexity. This is extensive and bearing down on national district and local teams in only three polio endemic countries.

The Review Team was in no doubt that the **Emergency Operation Centre structures** have helped improve Programme coordination. This being said, the Review Team expressed concern that the style of leadership in Afghanistan and Pakistan, meant that the national structures were not always listening to those people on the ground who are best informed by local realities. The overly complex governance structure in Afghanistan, with competing poles of authority, was cause for alarm. The Review Team was concerned that the elections in Pakistan, Afghanistan and Nigeria, as well as the recent waning political commitment in Nigeria, could severely jeopardise the eradication effort.

The essential structures necessary to hold leaders and their staff accountable for the quality of their Programmes varies greatly across the three countries. So does their effectiveness. The quality of managers, team leaders and technical staff is also patchy in affected polio areas. There is a great need for the supervisory layers at global and regional levels to be much more alert to poor performance and to deal with it quickly.

The Review Team was concerned that such inconsistencies had been allowed to develop over time with no corrective intervention from regional or global polio leadership.

In its report, the Review Team has addressed many facets of human resources policy and management, emphasising, for example, the need to refocus on the duty of care to staff. Many people are working in highly insecure, dangerous, threatening places. Importantly, terms and conditions of employment do not encourage some of the best people to go and work in some of the most difficult places.



The Review Team was troubled by the serious weakness in the use of data to improve Programme quality and performance. Vast quantities of data are being gathered but used to a comparatively limited extent. The extremely tight campaign schedules in Afghanistan, and to some extent Pakistan, meant frontline workers felt overwhelmed and unable to focus on improving their reach and relationship with communities. The Review Team noted some of the measures put in place to improve data integrity, especially in Nigeria, but given past difficulties with data falsification, the jury remains out on whether all performance data can be trusted.

In some border areas of Pakistan, the Review Team heard of coercive efforts to force vaccination. The Polio Programme was encouraged by the Review Team to explore the possibility of resolving refusals through educative or compassionate means.

The Pakistan Programme's search for alternative explanations to the widespread occurrence of positive environmental samples across the country deeply concerned the Review Team. A blame-game exists between some of the highest level officials in both Afghanistan and Pakistan about the risk of importation. The Review Team has asserted the need to keep the focus on maintaining high levels of domestic immunity.

The Review Team concluded that no one can be sure that the virus has been eradicated from inaccessible parts of northern Nigeria. They found that more could be done to improve surveillance in these areas, where stool adequacy is 49%. Improved data disaggregation and use of novel means to increase surveillance will help to understand where improvement is most needed.



The Review Team met non-governmental organisations operating in accessible and inaccessible areas in the south of Afghanistan. The Review Team did not see how they could take on any more activities. However, if the Polio Programme is able to find non-governmental organisations capable of expanding reach, then the Review Team would like to see this happen.

The very poor status and inequity of routine immunisation coverage in all three countries shocked the Review Team. The widespread circulation of vaccine-derived poliovirus in Nigeria was of great concern to them. Despite efforts by some polio teams to contribute to routine immunisation strengthening, and slight improvements in recent indicators, the Review Team emphasised that more political will and concrete action is required.

The Review Team was concerned about pressures from the GPEI to reduce budgets, which were forecasted to range from 12.5% in Afghanistan and Pakistan to as much 15% to 20% in Nigeria. The Review Team commented that the Programme should drive the budget rather than the other way around.

In its report, the Review Team has made a series of recommendations based on its extensive findings.

IMB OVERVIEW OF THE INDEPENDENT REVIEW: KEY THEMES AND IMPLICATIONS

The IMB strongly endorses the findings, conclusions and recommendations in the Review Team's report. In this section, we take an overview of where the Polio Programme stands in light of the Review and the priorities for action.

PAKISTAN AND AFGHANISTAN: THE POLIOVIRUS RESERVOIRS

For some years, the Polio Programme has viewed the situation in Pakistan and Afghanistan as one epidemiological block, even though the management of polio-related activities is based on cooperation between the countries rather than a unified governance structure. The southern and northern corridors continue to show virus on both sides of the border.

The northern corridor runs from Nangarhar, Kunar, and Nuristan provinces in Afghanistan to Khyber Pakhtunkhwa in Pakistan, extending across to Islamabad, Rawalpindi and Lahore. The southern corridor covers Helmand, Urozgan and Kandahar in the south of Afghanistan and extends through to the Quetta Block in Balochistan. Pakistan.

Key populated districts of the southern corridor in Afghanistan have not had a proper polio vaccine campaign since May 2018. This is due restrictions imposed by anti-government elements. This has greatly increased the risk of continuing outbreaks in this part of Afghanistan with a potential to extend to the entire corridor. The ever-deteriorating security situation in the northern corridor in eastern Afghanistan is severely restricting the Programme's reach and its ability to implement quality campaigns with any degree of confidence.



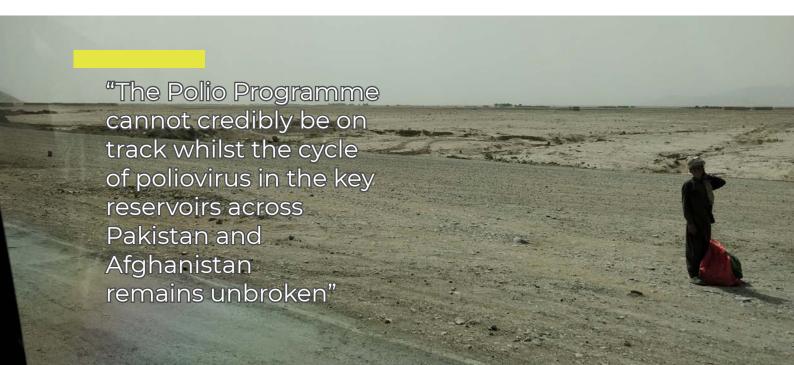
Outside the corridors, the poliovirus continues to circulate in central Pakistan (eastern Balochistan, northern Sindh and southern Punjab). There is also intense circulation of the poliovirus within and surrounding the core reservoir of Karachi, demonstrated by recurrent positive environmental samples. There are substantial population movements to and from Karachi connecting to every province in Pakistan, and parts of Afghanistan, making persistent transmission there a show stopper for polio eradication.

Out of a total of 511 samples collected so far in 2018 (22 October), 17% of them tested positive for the wild poliovirus. This percentage has not changed since this time last year. The places collecting the most positive samples (by 22 October) are Karachi (21) and Peshawar (15). The numbers there are down from last year, indicating a reduction in intensity of transmission. Five additional collection sites, which had been clear of the virus by this point in 2017 (22 October), are now infected. This is increased geographical spread.

In other countries where poliovirus transmission has been interrupted, there has been a systematic cleansing of the polio reservoirs. No claim can credibly be made that the Polio Programme is firmly on track to interrupt transmission whilst the cycle of poliovirus in the key reservoirs across Pakistan and Afghanistan remains unbroken. This aberrant trajectory is a source of grave concern. The poliovirus is seen in the same reservoirs over and over again.

The contradiction between the geographically widespread isolation of the virus and the data being reported on campaign quality is linked to some alarming assertions made by polio leaders in Pakistan and Afghanistan, picked up by the Review Team during its field visits. Explanations which involved describing the far-reaching persistence of the virus in the Afghanistan-Pakistan reservoirs as a "mystery" or that the immune systems of children were somehow "abnormal" are unacceptable.

The strong message for the country Polio Programmes is that there is no mystery. The epidemiology speaks for itself: viruses are circulating because the immunisation programme is failing.





There are further misconceptions within the leadership of the Polio Programmes in both Afghanistan and Pakistan. One side seems to blame the other for their poliovirus. In Jalalabad, there have been comments that Pakistan sewage is depositing viruses in eastern Afghanistan. High-level people in the Pakistan government structure explain that all of their cases can be tracked back to Afghanistan. Dangerously, this view, which is not based on reality, seems to be becoming contagious.

Despite Pakistan's considerable progress since 2014, when the IMB declared its Polio Programme as a "disaster", it is now clear that there is something seriously wrong with the Programme in Pakistan. The virology data show continuing transmission in key reservoirs, including Karachi, Quetta Block and Peshawar. This has not been fixed. This cannot be dismissed as some sort of glitch. Some would say that the Pakistan Polio Programme is fooling itself into thinking that it has made any progress at all since 2017.

The Pakistan Polio Programme has thrown up another nasty surprise following the analysis in the IMB's 13th report of the unexpected outbreak of polio in Bannu, which led to reassurances to the IMB about: "never again". Then along came Dukki, one small isolated district in Balochistan, but not a Tier 1 high-risk district. The first three cases of paralytic polio identified in Pakistan in 2018 were all in Dukki. It is a new administrative district. It has no services. It remains very hard to reach. It is a difficult area where in retrospect all the warning signs were there: very low levels of routine immunisation and poor quality campaigns. Yet, the warning signs were not heeded. Attention is rightly focused on the Tier 1 (higher risk) districts. However, the situation of districts classified at lower risk (Dukki is a Tier 3 district) must be taken very seriously and action initiated when risk markers are sending warning signals.



With no valid data on actual vaccine coverage, and with widespread poliovirus in environmental samples, the question remains: how many more Dukkis are there waiting to happen in Pakistan?

The Review Team reported a lack of visibility of senior politicians or government staff in Karachi. The communities see mainly foreigners, not their own people. Most of the time, the Deputy Commissioners are not visible walking the streets. This has undoubtedly heightened the public perception that polio is a "foreign" Programme. There are even reports that, in one district in Balochistan, very senior people did not know by name the location of a high-risk neighbourhood. In a country in the forefront of the battle against polio, this is rather shocking. The presence of senior politicians and government officials alongside partner staff would both inspire the community and polio workers as well as allow leadership to understand the Polio Programme's weaknesses at first hand. Also, IMB sources report difficult relationships in Karachi. These issues have not been decisively resolved and will likely lead to further problems. It is not acceptable to have this in such a high priority area.

In Afghanistan, the security situation is deteriorating badly. There are large numbers of children being excluded from or missed in campaigns. There were 1.3 million children missed during the August 2018 round, which is a huge number of the target population. The figure missed in May 2018 was about a million. This was largely because of a ban in Helmand and Urozgan, and Shawalikot in Kandahar.

Around 60% of the population of Afghanistan currently lives in areas under the control of the Taliban. The government may control district centres or provincial centres, but it does not control the countryside. The Taliban is increasingly fragmented. It is now less certain that formally negotiated access agreements, forged at higher levels, will translate to compliance at the provincial or local level. This was manifest in May 2018 with the ban on campaigns in Helmand that was imposed by the local governor. In Urozgan, the Taliban opposed finger marking, door marking and the tracking of visiting children. A recent development on access in southern Afghanistan has caused consternation. Anti-government elements are only prepared to allow polio vaccination in mosque-tomosque or fixed-site campaigns. Suspicions that the Polio Programme has ulterior motives has been the main reason for banning vaccination campaigns.

There is increased influence of military Taliban commanders, whilst health commissioners have broadly lost power in comparison. There is widespread mistrust of the Polio Programme, and elections are coming.

The Review Team told the IMB that some members of the polio team in Afghanistan were very reluctant to be frank when asked about weaknesses in their Programme. They appeared very rigid and conservative in their thinking. A can-do attitude prevailed in the country's Polio Programme in the early years of the IMB's work. It has been replaced by too many closed minds.

There is intense anti-polio propaganda, particularly through the use of radio and social media in the east of Afghanistan. The Polio Programme's responses to rebut this stream of negativity are extraordinarily weak.

Both countries have inadequate leadership and governance arrangements for polio at national level.

At the November 2017 IMB meeting, that preceded its 15th report, the Health Minister for Pakistan emphasised that Senator Ayesha, the Prime Minister's Focal Person on Polio Eradication, would not be affected by the forthcoming national election. She advised the IMB that there would be continuity and stability for the Polio Programme and gave strong reassurance that all would be well under the formidable on-going leadership of Senator Ayesha.

The opposite happened. In the aftermath of the election, Senator Ayesha resigned and at the time of the IMB's meetings in September of 2018, the Pakistan government had made no announcement of new arrangements.

In Afghanistan, the Polio Programme coordination system at the top is utterly dysfunctional. The President chairs one body that is supposed to meet twice a year. The President has a technical secretariat that seems to second-quess the Emergency Operations Centre. The Health Minister has an adviser adding another layer of supervision to the structure. During the IMB meeting, the news came through that the Head of the Emergency Operations Centre had left his post and a new occupant has been installed. A donor body is supposed to provide support. Another technical body involves the polio leads of WHO and UNICEF. All seem to be working against each other. As one person who spoke to the IMB said: "The poliovirus must be loving it".



NIGERIA

In Nigeria, it is two years plus a few weeks, since the last detection of the wild poliovirus. This is encouraging. At the same time, there are multiple outbreaks of vaccine-derived poliovirus. They have not been not stopped. The quality of the Polio Programme is not sufficient to halt transmission of these vaccine-derived polioviruses, in spite of a huge amount of resources that have been pumped into it.

In Borno, two years ago, when there was a shocking discovery of poliovirus that had been circulating for five years undetected, an estimated 600,000 under-five children were trapped in this area, without access to vaccination. The Polio Programme in Nigeria has worked with all possible partners to access these children. Now, an estimated 100,000 remain trapped. Progress has been made but still too many children are not being vaccinated. They live in approximately 5,000 different settlements. So, 100,000 children in 5,000 settlements is easily enough to sustain circulation of the wild poliovirus. It is too many for anyone to feel comfortable that the poliovirus has disappeared from this part of Nigeria.

Nigeria, and, therefore, Africa, cannot be certified free from the wild poliovirus unless there is better surveillance and better access to these areas.

The poliovirus and the Programme's overconfidence fooled everyone once, for five years. The world cannot afford to be fooled twice.

Advocacy is needed from the top leadership of the GPEI and from donor governments to the highest level of the Nigerian government. The Borno government must be left in no doubt that it is essential to continue efforts to further open up access and to increase surveillance by novel means as much as possible. It must clearly get the message that two years without the wild poliovirus does not mean that there is no virus there. That was the mistake before. It was humiliating for Nigeria to be leading the joyful cries of a polio-free Africa only to have to face the reversal of this achievement.

The Nigerian government's leadership must allocate resources to the Polio Programme to finish the job. Over the years, the government has been reducing its contribution to the Polio Programme. The contribution for 2018 has not yet been released, and, therefore, not committed for next year. In the current political environment in the lead-up to the elections, it is not clear that the budget will be acted upon until afterwards.

Outside government, the Dangote Foundation, is playing an invaluable role, including regular interactions with the Governor of Borno.

The Bill and Melinda Gates Foundation and the Dangote Foundation have a memorandum of understanding on polio and routine immunisation integration with the six critical states in northern Nigeria (Borno, Kano, Kaduna, Sokoto, Yobe and Bauchi). Every six months, there is a video conference with each of the Governors. If the Governor does not show up, the videoconference is cancelled, so the Governor has to be present. The Governor's Health Commissioner makes a presentation, and then there are questions, and interrogation of the key problems and planned solutions.

The President has established a Presidential Task Force for polio. It has met twice this year, but chaired by the Vice-President, not the President himself. The world watches and asks: Is Nigeria really serious about its polio eradication Programme? This high-level commitment on the part of the government is vital to ensure that there is an improved response to the Programme.

ACCESS AND INSECURITY

The success of the Polio Programme in all three endemic countries continues to be threatened by severe limitations in access to children. Movement is restricted by insecurity or outright bans to vaccination imposed by anti-government elements.

Although no area of Pakistan is currently inaccessible to the Programme, significant threats of violence and intimidation to polio workers and local communities in effect mean continuing fluctuations in vaccine coverage rates particularly in high-risk areas.



In northern Nigeria, Boko Haram is still active. Fear is running high. People are fleeing to towns and sheltering in refugee camps. An estimated 100,000 children are trapped. The figure could be higher.

In Borno, there are two million displaced people. They have essentially come into the towns and are either living in camps or within the communities. Once they are registered, those in camps qualify for food rations. At the same time, agricultural activity in the whole area has ground to a halt and so have all other forms of economic activity. The host populations into which the internally displaced people have come are in many ways equally vulnerable and as much in need. But because they are not formally classified as internally displaced persons, they do not have access to the same services. People refuse the polio vaccine because they are not getting access to food and water. The children who are the target of vaccination have very limited access to education. There are no opportunities.

The current situation of inaccessibility in Afghanistan has precipitated an unprecedented crisis in the whole global polio eradication programme. There is a long history of problems of access in that country but they have tended, in the past, to be ad hoc and localised. There is now a much more organised and geographically widespread approach to denying access. Generally speaking, attempts at negotiation have been less successful than in the past. The Afghanistan Polio Programme says that it has tried negotiations, to gain access, using channels at all levels: local, provincial, regional, national and international.

The current approach to break through access restrictions is not working. In the east of Afghanistan, radio stations are aggressively targeting the Polio Programme and the response strategy is hopelessly ineffective. In the south, there has been some change in access negotiation, with just a couple of exceptions. In the past, access restrictions tended to be negotiated valley-by-valley, using the good offices of local influencers, including religious leaders. There now appears to be a rapid recourse to regional, national and international levels. This is sometimes counterproductive due to fragmentation within the anti-government elements and may potentially offer the opportunity for unhelpful political leverage with regard to the Polio Programme.

The Polio Programme in Afghanistan has rejected the idea of departing from standard practice to deal with the restriction that would only allow children to be vaccinated in mosques and not at home. This is judged to be much inferior to the current house-to-house campaigns. The Programme estimates that the reach would not be more than 20-30% of total children. Moving to mosque-to-mosque campaigns is also seen as a thin-end-of-the-wedge to a permanent decline in campaign quality in the future, if they became the norm.



This is the biggest ban on access that the Afghanistan Polio Programme has ever faced. It has been running for seven months, with no end in sight. The current ban is not on vaccination per se, but on doing it house-tohouse. There is choice for the Polio Programme as to whether to accept vaccinating no children, or to look at the opportunity that some form of renewed campaigns might offer. Achieving a compromise may lead to agreements on reformatted campaigns later as well as building trust with those imposing the ban. There is no unified group of antigovernment elements in Afghanistan. They might be thought of this way, but they are completely different groups. They have little in common, and some are fighting with each other. Some have never opposed polio, and indeed have traditionally been supportive to ridding Afghanistan of polio. Given persistent suspicions and doubts on the part of sections of the Taliban, it is important to remember that they have children too.

The Polio Programme must work harder to communicate its ethos - independent, universal, apolitical and free from any other special interests - to emphasise that it is only visiting communities to bring benefit for their children. Given the political complexity of the polio-affected countries, this is not easy but it is critical that the Polio Programme constantly promotes its humanitarian origins and identity.

As long as the Polio Programme can connect, valley-by-valley, with the right local leaders, religious leaders, traditional leaders, and people with influence, then much more could be achieved. For example, in Pashtun culture, the influence of local leaders is still very strong. If they can be found, their views in representing their community's interest to the anti-government elements stand a good chance of being listened to. Such routes of communication need to be pursued with great urgency but also with great skill. A tendency to escalate the level of negotiation so as to use interlocutors from other governments has its place, but is not always the right way to unlock an intractable local problem of access.

In Pakistan, four years ago, in the region then called FATA, there was great hostility to the Polio Programme and health volunteers were killed.

One of the innovative approaches involved an international advisory group of religious scholars. It changed the kind of propaganda that was circulating in Pakistan.

There is much to learn from such successes. In the Horn of Africa, and Somalia, polio access was maintained despite a failing state. Some of the creative approaches in northern Nigeria carry lessons, where there is better access because of work with the military and the Joint Civilian Task Forces. Questions of access and security are not limited to the effectiveness of vaccine campaigns and polio surveillance activities; they are also relevant to human resources policy and practice. The Polio Programme has a vital duty of care to its people. They are working in highly insecure, dangerous and threatening places. Developing sensible, well-informed and adequate security risk management policies does not always seem to be a priority. Also, terms and conditions of employment have to be in a form that will encourage people to go and work in some of these difficult places. There are programmatic weaknesses here too. For example, the WHO contract format, the Agreement for Performance of Work (APW) is highly unsatisfactory in giving no security of tenure, no basic benefits and no proper cover for staff and their families if exposed to injury or death in service.



DEPRIVATION, POLIOVIRUS CIRCULATION AND HOSTILITY TO THE VACCINE

The highest priority areas for polio are also, by no coincidence, the most deprived areas in provision of basic services. Where there is lack of clean water, poor sanitation, under-nutrition. absence of health and other public services, the poliovirus thrives. Communities affected by such profound deprivation and poverty are those most likely to reject the polio vaccine. In Afghanistan and Pakistan, there is huge frustration at community level, mounting to anger in many places. The only time they see anybody from government, or anything connected with health services, is when polio workers knock on the door. For example, the Loya Walla District is a major engine for circulation of the poliovirus in southern Afghanistan. It is closely linked to Shawalikot, the location of eight polio cases in Afghanistan between June 2017 and April 2018. This community has no public water supply, no sanitation, no refuse disposal. The Review Team was told that 60% of children are suffering from diarrhoeal illnesses, and there are only rudimentary health services. They have nothing. Another example is in Balochistan, in Pakistan where there were 200 cases of Leishmaniasis and no adequate response.

In such circumstances, refusal of the polio vaccine is not a mere gesture. It is a distillation of the anger that communities feel when polio workers knock on their doors over and over again in the absence of other governmental services.

In Borno, however, the Polio Programme hosts a weekly humanitarian coordination meeting. It invites non-governmental organisations and humanitarian actors working in the area. It creates opportunities to better respond to the needs of communities, whilst improving polio activities. The Review Team reported that this broader sectoral outreach is mostly lacking in the other two endemic countries.









The answer is to systematically build the infrastructure and access to services in the most deprived communities. In order to do this, the underlying reasons for the linkage between development indicators, poor acceptance of polio vaccination and continued circulation of the poliovirus, need to be understood.

The legitimacy of the institutional players viewed through the eyes of community members is vital. Poliovirus thrives in fragile environments, where institutions of the modern state have eroded or become delegitimised. Whether it is northern Nigeria, or parts of Pakistan and Afghanistan, the most severely affected geographies are also ones where the state appears to lack legitimacy. This is for various reasons, such as: electoral processes, lack of governmental effectiveness and delivery, corruption and unshared values. The entire GPEI approach assumes the existence of institutions of modern state as legitimised from mostly external angles. Correcting this imbalance of legitimacy means realising that the alternate institutions may be outside the core of the "modern" state in the affected areas. Understanding these institutions, mapping them and using their channels, which are more trusted, is how polio eradication efforts became more successful in vast areas of northern Nigeria between 2008 and 2014. Community engagement approaches designed with this lens of legitimacy in mind, will bring the right actors and institutional mechanisms into appropriate engagement. In turn, this will influence communities, households and parents to immunise their children.

If the Polio Programme continues to regard multiply-deprived and polio-vulnerable areas as the development community's business and not theirs, a massive opportunity is being squandered. It is an opportunity to bring tangible help to the poorest and to deal a hammer blow to the most important root causes of continuing poliovirus circulation. It is an opportunity for transformation.

DATA: AN UNDERPOWERED TOOL FOR IMPROVING PERFORMANCE

The Polio Programme spends a great deal of money, energy and expertise collecting data. It then spends far too little time to use data to make the Programme better. This is a poor return on investment.

There are many facets to the polio data question.

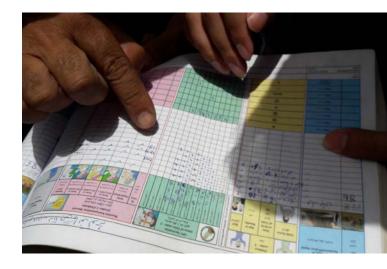
The Review Team and several highly placed IMB sources have said that the Afghanistan Polio Programme cannot handle its own data. External help with data analytics has been offered on different occasions but seldom seems to have been taken up. Similarly, from a recent exercise in Pakistan to look at general polio monitoring data, and also data on mobile populations, it was clear that the country's teams were struggling to understand and interpret the findings.

Both countries need to ask for, and welcome, external help and, as part of this, make a critical assessment of what data are actually important to collect and what are not. This is a hard thing to do and needs to be a serious project supported by experts from the Centers for Disease Control and Prevention (CDC).

Data are not being used to truly understand polio at local community level. In the highest risk districts in Pakistan, the right data are not usually available at the Union Council level. For example, in Karachi, more efforts are needed to understand the designation of children as "silent" refusals. When challenged as to why they are not looking at the coverage data, the monitoring data, or the quality data, at Union Council level, the Polio Programme in that country has said that they cannot do it. They point to insufficient staff, lack of time, no budget, and the need to get permission from higher authorities. This push-back against Union Council analysis is strongest in Karachi.

Local polio teams have to have a granular understanding of the poliovirus' behaviour and this means examining data at Union Council level. This is another example of how higher layers of the Polio Programme are failing to add value to the work at ground level.

Another good example of this local disempowerment is in Kandahar where the provincial Emergency Operating Centre is still not incentivised to process and use its own data. Everything goes to the central Emergency Operating Centre. The Provincial Coordinator and his staff know the situation and should be able to analyse and use local data to drive targeted action.





There is an argument that if the work of organising and delivering polio vaccination campaigns is all consuming then the "doing" squeezes out the "thinking" time; this might lead to falls in performance. If there is this overload, the teams lose the moments between vaccination rounds where they can really sit and analyse what is going on in that community. There are differences in the way each country manages its vaccination campaign schedule. In Afghanistan, it seems that there is not enough time, given the amount of data being collected and the frequency of vaccination campaigns, to actually analyse those data and then make the improvements at the local level, before the next vaccination round starts. There has been some movement in Pakistan to reduce slightly the number of vaccination rounds in the hope of creating more space for analysis to improve capacity and to strengthen targeting of specific communities. In Nigeria, where they have more time in between vaccination rounds, there seems to be more room for thoughtful analysis.

The whole question of false or misleading data has dogged the polio eradication effort. In some parts of the countries' Polio Programmes, the extraordinary pressure to stop poliovirus circulation has created a climate of fear. This has affected even the partner agency staff, not only those working for the governments. They feel forced to come up with good data returns. The Nigeria Polio Programme was caught in a disgraceful surveillance data mock-up two years ago. They should have credit for working hard and correcting some of those things. However, no one can be sure that this dishonest behaviour has been completely stopped.

If too many data fairy stories are being told, whether motivated by reluctance to report bad news or fear of punishment, polio will never be eradicated.

A WEAK EMERGENCY CULTURE

Polio remains a Public Health Emergency of International Concern. What does an emergency imply? What behaviours does it demand within the Polio Programme? How does the emergency handling of polio compare with recent experience with the Ebola virus outbreaks?

A public health emergency demands speed of response. It requires immediate and well-informed assessment of rapidly changing situations on the ground. It means having a clear understanding of the capacity and capability of staffing on the frontline. It means being tough enough to make leadership changes when things are not working or people are out of their depth or someone has been too long in a stressful duty station.



Members of the Review Team told the IMB that a striking and consistent question that they kept asking each other was: "If we can see this problem in a 10-day visit, then why is the current leadership of the teams not seeing it? Why are the country representatives of the United Nations Agencies not seeing it? Why are the regional office people not seeing it? Why are they not doing something about it?" These are intriguing questions. They raise the fundamental point: at this stage of the eradication effort, should not the right people be in the right places? Or even more so, the right people in the most difficult places. That is no criticism of the dedicated and hardworking teams in the polio-affected areas, but recognises that an influx of new energy and leadership experience might prove the turning point in supporting those teams. This is not straightforward, and there are organisational traditions involved. For example, UNICEF and WHO have not been able to react rapidly to this need in the past. There are often short-term financial and other benefits from serving in emergency duty stations. However, by responding to a global

"call of duty", staff know that their contribution is unlikely to be recognised in subsequent career development and seen by the hierarchy as vital service in a global crisis. They ask: "Would serving in Kandahar for two years be a badge of honour; Would it be a big gold star on my resume; Would it give my career a stellar boost?" They are likely to answer: "No".

Despite all of this, a move to boost the leadership capacity and capability with polio's top performers in the areas with the most intractable problems is likely to be transformative if it can be engineered.

If an urgent, deliberate effort is made quickly to address leadership and management gaps, then it should also focus on building competencies of key individuals who are then in place in the affected areas. It is important that formal profiles should be created for all key roles in the Polio Programme so that staff competencies can be assessed against them. A targeted approach to training,



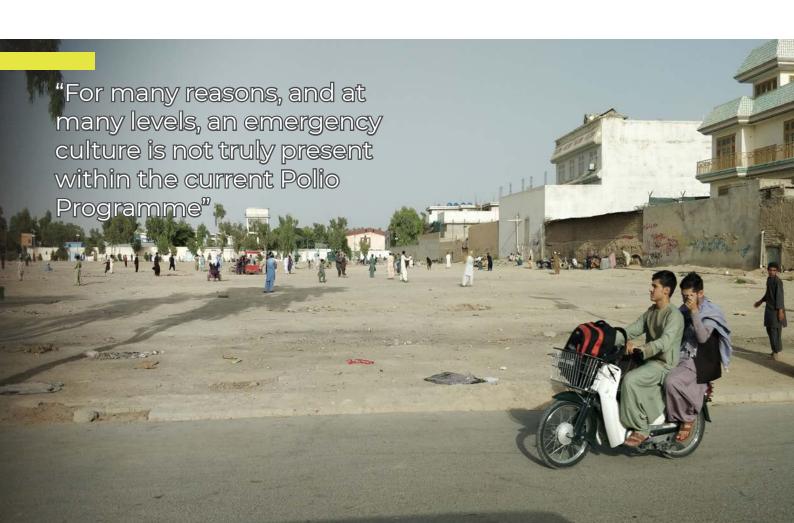
development and mentorship can then be put in place for a new cohort of Polio Programme staff in the poorly performing areas.

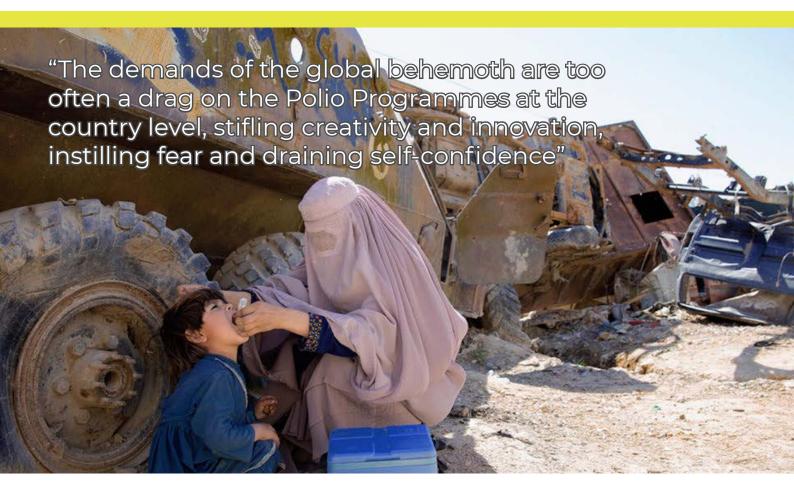
Emergencies must embody a degree of decentralisation, of giving authority to frontline leaders and their teams. It must give them flexibility, respecting their local knowledge of the situation and empowering them to act.

The Emergency Operations Centre concept has been vital in creating and sustaining a cohesive "emergency" culture within the polio endemic countries. However, the concept alone is not enough to have an impact. It must operate consistently and be implemented in a highly skilled and authoritative way. The establishment of such a centre made an immediate impact in Nigeria because of two key factors. Firstly, a Cabinet Minister, who had the credibility and authority to convene sub-national leaders and take decisions, led a strong secretariat of the multi-stakeholder task force. Secondly,

the positioning of the Emergency Operations Centre within the Nigerian governance structure enabled remedial actions to be taken immediately when they were escalated up the chain of accountability. If the Emergency Operations Centre is operated and managed in a purely technocratic manner, with ineffective connection to the highest-level decision makers, then the Programme in the country will never reach a pinnacle of performance. This is the lens through which Afghanistan must critically review the effectiveness of its Emergency Operations Centre. Pakistan must beware of the danger of the changed political circumstances diluting the effective leadership that existed in its country only a few months ago.

For many reasons, and at many levels, an emergency culture is not truly present within the Polio Programme currently.





THE GLOBAL GOVERNANCE SUPERSTRUCTURE

There are only three endemic countries left and yet the global structure of the GPEI to support eradication efforts in those countries is large and complex. Thirty years ago, with 350,000 cases of polio a year affecting many more countries, it may have been appropriate to develop a big management structure for the partnership at global level. Today, the complexity, the number of working groups and taskforces together with a style that at times borders on micromanagement may be counterproductive.

Comments of frontline staff suggest that the demands of the global behemoth are too often a drag on the Polio Programmes at the country level, stifling creativity and innovation, instilling fear and draining self-confidence. Frontline staff report a heavy burden on their time to manage up, meet information demands, and seek permission for planned actions. Even some of the implementation structures at country level are complex. Teams in

the countries often find it confusing to work out whom to deal with on any particular issue. Also in Pakistan and Afghanistan, there are a limited number of international people from the GPEI agencies, or from outside, who can actually visit the countries and get out into the field. In Afghanistan, apart from WHO and UNICEF, it is very difficult for any other GPEI agency internationals to get in there and actually see anything other than the inside of a compound. They cannot lead and manage properly when they have not understood the realities first-hand.

A strong message from the Review Team's discussions with country teams was that they felt under pressure to do work that was not necessarily helping them in their main task. It was an almost constant demand, consuming large amounts of time in teams, already working to their limits in very difficult environments.

Earlier in its work, the IMB recommended a review of this global polio "superstructure". This led to management consultants being called in about five years ago. Changes were made. At that time, the IMB was concerned that there was no place where major policy decisions were made, and an imbalance in the power of different components of the partnership. All those things, and more, changed and improved with a redesigned governance structure. So too did financial planning, management and transparency.

Despite these beneficial reforms, seen on an organogramme, the current global polio structure does look very daunting. It is important though to distinguish between the centre's activities that add value to what is happening in the field and those which are necessary for performance accountability, financial accountability, and overall stewardship of the Programme. On that basis, an element of "feeding the beast" will always be necessary because information has to be available for accountability and to reassure funders and donors that their money is being used properly. However, the emphasis should be on getting the very strongest possible teams at country level and minimising requests for data and information to those that are truly important, not only to donors, but, especially, to those who are implementing the Programme. Global support mechanisms outside the country must be responsive to requests and demands initiated by the countries rather than imposed from outside. This points to the need for the GPEI to take a fresh look at its approach to adding value to the country and local teams.



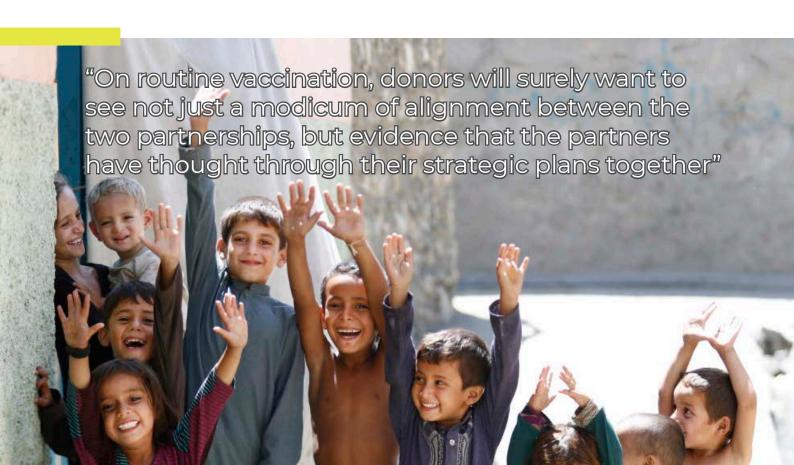
ROUTINE IMMUNISATION

The IMB has previously expressed its regret that the GPEI and Gavi - these two sometimes unwieldy partnerships - sharing the same technical partners and the same donors, do not work as effectively together as they should. This is ironic given that the second strategic objective in the GPEI's Polio Eradication and End-game Strategic Plan 2013-2018 involved strengthening routine immunisation. It is almost as if there is a dominant belief within the polio community that zero can still be reached with the current state of routine immunisation.

This is not simply a matter of working more cooperatively at global level, but creating conditions on the ground by mutual effort to transform the quality and performance of routine immunisation programmes. The networks of polio staff in the hardest to reach areas would help to improve routine immunisation in the worst performing districts of the 10 focus countries.

It is part of Gavi's mission and mandate to help improve coverage and equity of routine immunisation. At the same time, it is governments that need to be accountable. In turn, it is Gavi and the GPEI together that should be pushing governments to cement that greater accountability. This is not straightforward because IMB sources report situations where government officials want to bring polio and routine immunisation under the same umbrella, but the fissures between the partnerships at local level are too great.

There is an opportunity to rethink this relationship and help it to reach what has not been achieved so far. The GPEI will be producing a new strategic plan for 2019 to 2023. Gavi is in the process of determining what its next strategic plan will look like for 2021 to 2025. Both will find themselves going to the same donors, at the same time, asking for money. Donors will surely want to see not just a modicum of alignment between the two partnerships, but evidence that the partners have thought through their strategic plans together. It is not just a question of collaborating on inactivated polio vaccine (IPV) but looking at what can be done together to get to the polio end goal and strengthen routine immunisation.



OUTBREAKS OF VACCINE-DERIVED POLIOVIRUS

There have been nine circulating vaccinederived poliovirus (cVDPV) outbreaks in six countries between 2017 and 2018. Three separate outbreaks have occurred in the Democratic Republic of Congo resulting in 35 Type 2 vaccine-derived poliovirus (cVDPV2) cases in total, 22 in 2017 and 16 in 2018. In the location of the first outbreak in that country. there has been no detection of the poliovirus for 16 months but surveillance activity is very patchy. So the Polio Programme cannot be sure whether transmission has stopped in that area. One of the other affected areas is also suffering an Ebola virus outbreak. Access is a major problem there and polio vaccine rounds have been stopped, partly because of the Ebola response, and partly because of insecurity. There is a threat that this outbreak could cross borders. For example, there is no good global level risk assessment for the Uganda border. This was something that was done quickly in response to Ebola but not for polio.

The government commitment to polio eradication in the Democratic Republic of Congo has been better lately at the national level. This leadership and coordination must continue. At the provincial and lower level geographies, the political commitment is not strong.

Nigeria, still defined as an endemic country for wild poliovirus, has two distinct vaccine-derived poliovirus outbreaks. One is in Sokoto State. The other is in multiple states, covering a consequently large geography, including Jigawa, Katsina, Gombe, Bauchi, Yobe and Borno. There have been a total of 19 cases of cVDPV2 as a result of these outbreaks (30 October) There has also been spread into neighbouring Niger, with six officially reported cases (30 October). The transmission in Niger necessitates the declaration of a national public health emergency. There seems to be some hedging about whether to do that.

A Horn of Africa outbreak has involved three countries: Somalia, Kenya and Ethiopia.

In Somalia, five cases of cVDPV2 have occurred across several provinces (30 October). There have also been six cases of Type 3 cVDPV, and an additional child infected with both Type 2 and Type 3 CVDPVs. More than 300,000 children are inaccessible in Somalia. So it is highly likely that transmission will continue to persist.

In Ethiopia, there has been no detection of vaccine-derived poliovirus. There has been a heightened focus on improving immunity in the districts bordering Somalia. The security situation has led to the postponement of polio vaccine rounds. Planning is underway now to determine when and how they will be administered.

There has been an environmental detection of vaccine-derived poliovirus in Kenya. Kenya has completed its polio vaccination rounds in response to the outbreak but their quality was low. This is a feature in countries that are no longer used to doing supplementary immunisation activities, in the way that the endemic countries do. For example, the Kenyan response did not build in sufficient mop-up activities. This is established good practice elsewhere. These quality issues will need to be addressed in Kenya.



An outbreak of 21 cases in Papua New Guinea involves a Type 1 cVDPV (30 October). The country has a poor routine immunisation system and has done no polio vaccination rounds in recent years. As a result, this outbreak is of a large number of cases. Also, older children are affected more than is usual. The response has been to carry out two nationwide polio vaccination rounds for the under-15s, recognising that there is a large immunity gap in these older children. Closing it is critical to stopping the outbreak. There is a low human resource capacity, and so the vaccination rounds have been extended. Insecurity is real. It has affected vaccinators. Two female vaccinators were raped.

The GPEI has traditionally been quite effective in outbreak responses but it has sometimes taken a year, two years or three years to stop an outbreak. However, the problem now is that the background risk has increased dramatically, following the oral polio vaccine switch. Population immunity to the Type 2 poliovirus is waning. There is rising susceptibility of a cohort of under two-and-ahalf-year-olds who have not been immunised and have no mucosal immunity against poliovirus Type 2. It is now over two years since the switch. There has been a concerted effort to find and destroy the triple strain oral polio vaccine. At some point, the principal tool for responding to cVDPV2 outbreaks, which is monovalent Type 2 oral polio vaccine (mOPV2), could start seeding new outbreaks. For example, already, a great amount of mOPV2 has been used in Northern Nigeria. Over 100 million doses were administered in the greater Chad area (including Nigeria) shortly after the oral polio vaccine switch. This is a place with very low routine immunisation coverage rates.

Is this tool - the monovalent Type 2 oral polio vaccine - beginning to become dangerous? Is there any evidence of seeding of new outbreaks or new vaccine-derived polioviruses from the use of mOPV2 post-switch? The outbreak in Jigawa, Nigeria does indeed look to have been seeded post-switch.

There are real prospects for a safer monovalent oral polio vaccine (mOPV), called nOPV (n, "new") that is likely to be much more genetically stable and less likely to cause cVDPV. Subject to regulatory approvals, this could be available within a few years. Until then, if the monovalent oral polio vaccine tool is becoming more dangerous as time passes, the Polio Programme has to get better and quicker at outbreak response. If not, outbreaks could rapidly reach epidemic proportions and spread across borders.

The global level of the Polio Programme has a vital supervisory and coordinating role in outbreak response. With the current number of outbreaks, they need to treat the situation as an emergency in which their top leadership must be very hands-on and directly involved, working closely with their regional offices.



CONCLUSIONS AND RECOMMENDATIONS

In its last report (Every Last Hiding Place), the IMB reflected on the criticisms of some polio observers that the GPEI has run out of ideas and is at risk of coming to a stalemate in its battle with the poliovirus. At the time, multiple IMB sources were consistently reporting that a pervasive sense of fatigue and low spirit seem to be permeating the GPEI. A small number of leaders even reflected privately on whether eradication is even possible in the next few years. In this same report, the IMB questioned the wisdom of a communications strategy that was based on an "almost there" narrative. The dogged belief that this maintains morale, momentum, and fundraising traction is seriously undermined when year-on-year, the wild poliovirus outwits the Polio Programme and runs free. Indeed, the recent trumpeting of the level of polio being at the "lowest in history" surely will no longer hold good by the end of this year.

THE IMPORTANCE OF TRULY INDEPENDENT SCRUTINY

The IMB's critique of the Polio Programme over 15 reports has, at times, made uncomfortable reading for the Programme's leadership within countries and globally. However, to their credit, many of the findings and recommendations have been taken on board and this has helped to drive improved performance. The IMB's worry over the past year is that, with the enormous political pressure to hit the end goal, attitudes in some parts of the Programme below global level are becoming defensive, and that some people are in denial that their strategies are not fully working. This is well exemplified by the widely reported comment picked up by the IMB: "Why do we need an IMB when we have TAGs [Technical Advisory Groups]?" This suggests a yearning for a softer, kinder form of scrutiny, and the removal of the searchlight of true independence. This sentiment was echoed in some of the comments made to the Review Team on its field visits. The Review

Team, when weary from being shown over 600 PowerPoint slides, felt that they were sometimes encountering great resistance to criticism of the programme.

This 16th IMB report enables the judgement of progress and opportunities to strengthen the Polio Programme based on a series of in-depth field visits to each of the three remaining polio endemic countries. This type of approach has been uncommon in the history of the polio eradication programme, in that it was a genuinely no-holds barred approach. It was independent. The Review Team saw and listened at all levels of the Programme, for 10 days, in each country. They went to the most difficult and dangerous areas. They talked to frontline workers in private, as well as having more formal meetings with leaders and their teams. The women members of the Review Team went into households to talk to women whose children were being vaccinated, and also to communities where there was resistance to vaccination. They heard the hard facts and opinions with no filtering whatsoever. They also talked frankly to female frontline workers. The Review Team challenged the leaders of the Polio Programme. Where the responses lacked credibility, they confronted them.

If ever an unvarnished, unequivocal diagnosis of the current state of polio eradication was needed, it is now. Progress has stalled and there is no sign of momentum building. The Review Team's forensic analysis of the root causes of the continuing failure to interrupt transmission is as true and authentic as could be achieved. All readers of this 16th IMB report are strongly encouraged also to read the Review Team's report in full here.

The country-by-country diagnosis of the Review Team and the IMB is very clear.

AFGHANISTAN IN A SITUATION OF THE UTMOST GRAVITY

Afghanistan is failing at multiple levels, and the Polio Programme in that country is currently out of its depth in trying to deal with where they are. Afghanistan is not on a journey to eradication; more, it seems to be on a lost highway. Around 1.3 million children were missed in the August 2018 campaign, and that is up from one million in May 2018. The situation is getting worse. The levels of insecurity there are the highest for many years, and there is no early prospect of a decline in hostilities and insecurity.

At the IMB's meeting with the Review Team and the GPEI leadership, there was extensive discussion about how best to regain access to vaccinate in the areas of Afghanistan cut off by bans. The Polio Programme had taken the view that it should be all or nothing: if Taliban leaders would only allow mosque-to-mosque campaigns, or would not allow door or finger marking, then the Programme would not comply with sub-standard delivery mechanisms. However, discussants questioned this rigidity. Suggestions were made about temporarily removing some of the campaign assurance elements or doing mosque-to-mosque vaccination rounds on a pilot basis. All this was based on starting a dialogue with those operating the bans and building confidence.

A large part of Afghanistan is outside government control, and the country is socially, highly conservative. The status of women is low, and it is much more difficult to engage women as frontline workers. This measure has been transformative in neighbouring Pakistan's Polio Programme.

At the top level of the Afghanistan's Polio Programme, the government and the United Nations agencies need to redesign the governance and leadership structure so that it is effective and free of dysfunction and internal power plays. With elections, political instability and continued activity by the Taliban and other anti-government entities, interference is inevitable and could have significant impact on the Polio Programme.

The Emergency Operations Centre must be empowered to problem-solve, to innovate and to drive change. Data are not being analysed or used effectively. The country must accept external help in data analytics if it is to build its own capacity in this vital disease control function.

The leadership and staff of the Polio Programme in Afghanistan must be more open in recognising and owning the realities of the problems that confront them. They have more polio cases than last year. The numbers do not lie. Nor can they be blamed on Pakistan. They must not succumb to self-deception and denial. If they do, they will never eradicate polio.



PAKISTAN FAILING TO DEAL WITH ITS POLIO RESERVOIRS

In Pakistan, the greatest concern is that the country has not been able to demonstrate success in clearing even one of the three traditional reservoirs of wild polioviruses. There is a regular isolation of wild poliovirus from Karachi, Quetta block and Peshawar. A critical mass of children is being missed in vaccination campaigns. Pakistan's failure to address variations in the quality and general inconsistency in performance of polio vaccination rounds is coming home to roost. Too many children, particularly in high-risk mobile populations, are being missed, something that the IMB has expressed serious concern about in previous reports.

This is all fuelling the circulation of wild poliovirus and is revealed by the positive environmental samples. The percentage of positive environmental samples in Pakistan is at the same level as this time last year. Worse, five sites that were clear in October 2017 are now testing positive, indicating circulation of infection. The absence of cases counts for nothing with this pattern of environmental samples.

Alarmingly, the IMB is aware of comments made within the Pakistan Government's polio team in response to continued appearance of positive environmental samples. This was said to be a "distraction" to the real work of the Programme. Positive environmental samples and paralytic polio cases should be viewed as equivalent. Especially as vaccination coverage increases, cases are an ever-smaller fraction of total infections: one thousand, two thousand or even three thousand or more infections will be present for every case. If there are environmental positive samples then poliovirus transmission persists regardless of whether they are causing cases. Polio is polio and Pakistan is failing to deal with it.

The Polio Programme in Pakistan has been seriously disrupted by recent national elections.

The pre-election reassurances given to the IMB that there was political all-party agreement on retaining the national leadership arrangements for polio proved completely unsound. The highly effective Prime Minister's Focal Point for polio eradication has gone. There is currently a leadership vacuum. The new Prime Minister has previously shown great commitment to the Polio Programme. He needs to act quickly given the precarious epidemiological situation in Pakistan.

In private conversations with senior government figures in Pakistan, the underlying belief has been evident that the polio problem is coming from Afghanistan, and that the situation in Pakistan is under control. This is just not true. Polio must be seen as the challenge of one Afghanistan and Pakistan epidemiologic zone to which serious weaknesses in both countries' Programmes are contributing wild polioviruses.

The IMB praised the Pakistan Polio Programme when it fought back from its 2014 nadir. Its current performance level is not praiseworthy.

NIGERIA: THE NEED TO FEAR THE UNKNOWN

Nigeria has not found a polio case in over two years. With an estimated 100,000 children still trapped by insecurity in the north of their country, and two million displaced by the fear of violence, the poliovirus could still be circulating. There is a risk of creeping complacency if this is not acknowledged and backed up by strong polio activities. The Polio Programme eye may go off the ball in the run-up to the national election. The difficulty in controlling the vaccine-derived poliovirus outbreaks in Jigawa, which have now spread to four states, as well as Sokoto, give good reason to worry that all polio resilience measures are not in place.

THE POWER OF TRANSFORMATIONAL THINKING

Past IMB reports have repeatedly emphasised the distinction between incremental improvements to the Polio Programme and actions that produce transformational change. Both are needed. Both have proved difficult to implement at times. Both should be embedded in the thinking and practice of polio leaders and workers at all levels from global to very local. In general, incremental improvements involve doing the basics well (e.g. micro-planning, mop-up campaigns) and scaling-up best practices. However, improvements of this kind in health and healthcare often take a long time to get right.

Alternatively, other measures can sometimes produce big gains in the quality and performance of a programme. These can come about in a number of ways, for example: studying data in-depth, listening carefully to local communities and learning from other sectors. In short, they involve thinking outside-the-box, not simply doing things as they have always been done. They produce innovations that can have a dramatic impact. Two recent examples within the Polio Programme have been transformative in this way: the introduction of Community Based Volunteers in Pakistan and the establishment of Emergency Operations Centres, initially in Nigeria and now in all three countries. Why? Firstly, Community Based Volunteers are insiders trusted by communities; they are local women who gain the respect, trust and cooperation of parents. This was a paradigm shift in a Programme where previously community outsiders had come in to offer the polio vaccine. Secondly, the Emergency Operation Centre concept brought together in one place all the key country and agency staff plus administrative officials and others who could help, such as traditional leaders. Previously, such individuals worked in their own bases and came together periodically for meetings. Now they were together daily and worked as a true team, reviewing data, identifying problems and deciding on and formulating solutions.

Other ideas and new thinking like this that could lead to transformational change in the Polio Programme right now is vital. The incremental change is still needed. The good practice still needs to be strengthened and spread. However, if the Programme relies on incremental improvements in performance alone, it is likely that interruption of wild poliovirus transmission is some years away. But major breakthroughs in the level of performance could produce a surge forward.

The Review Team's findings and the IMB's overview of them point to strong candidate actions that will bring transformational change and the IMB highlights two here.

The first comes from a starkly clear observation.



Where there is no water, poor sanitation, no health or other public services and poverty, the poliovirus thrives. Where there is no water, poor sanitation, no health or other public services and poverty, the communities that are suffering those indignities resent the polio vaccine campaign. What further arguments are needed to introduce positive thinking and some strong intent to solve this? Even more importantly, it has long been known that communities with nothing are those with the highest risk of polio and the greatest resistance to accepting the vaccine. So why has this root cause of polio not been addressed before? The answer is simple. The GPEI has not considered the matter its business. In their minds, it is a development issue not something for a technical programme. The GPEI thinking has stayed inside the box. So ironically, looked at through the lens of the Polio Programme, a key root cause of polio is not perceived as a matter for the Programme. So far, too little has happened. Moreover, the GPEI does not see itself as having any role in raising resources or taking on a leadership or convening function in bringing partners together to help these communities. Polio-plus programmes and health camps have brought benefits but they are a much-diluted form of action compared to the transformative potential regenerating entire communities.

These were matters discussed during the IMB presentation to the Polio Oversight Board meeting at the end of September 2018. Key synergies were identified: for example, UNICEF is in charge of the WASH (Water, Sanitation and Hygiene) Programme as well as being a part of the polio leadership group. The leaders of the spearheading partners and the donor countries present expressed a strong intent to target the needs of deprived communities under threat from polio and initiate transformative action. The IMB really hopes this commitment will not dissipate and that, despite the complexity, something will happen quickly.



The second potentially transformative action is prompted by the question: are the right people in the right places? Polio eradication creates an enormous opportunity to deliver to the world a permanent and major global public good. The Polio Programme is stalling in what should be its final stages. Costs of maintaining the current level of programmatic activity run to US \$1 billion a year. That does not include the enormous expenditures and opportunity costs for countries across the world keeping up polio vaccination to protect their populations; this is even though they may have not encountered the poliovirus for decades. All arguments point to this being the moment for the best and most respected polio leaders and managers to be confronting the poliovirus wherever it is making its last stand. This is not to criticise the existing teams that are dedicated and working incredibly hard on the frontline. It is to recognise that many are exhausted and burnt out and do not see an end. Others may not be in a role well-matched to their skills. The Polio Programme needs surge capacity and capability in key roles. The GPEI has been slow to act on this in the past. Now is the time to be bold and fire up this second potentially transformative move.

In this report, the IMB is making fewer recommendations so as not to distract from the recommendations of its Review Team that it fully endorses. The Polio Programme is at a difficult point. A major breakthrough is needed. Finding the path to polio eradication from here will require: creativity to find new solutions to intractable problems, bold action to revitalise leadership and teams, and most importantly, an unshakeable commitment to finish the job.

"This is the moment for the best and most respected polio leaders and managers to be confronting the poliovirus wherever it is making its last standⁿ

RECOMMENDATIONS

1. To mobilise urgent help for multiplydeprived and polio-vulnerable communities

The Polio Oversight Board members should use the stature of their offices urgently to convene key development partners and donors (perhaps as a multidisciplinary taskforce) to plan a rapid, locally-based assessment of the needs of multiply-deprived and poliovulnerable communities in the three endemic countries; this group should follow through with an action plan to provide a sustainable level of infrastructure and basic services (including water, sanitation, hygiene, and refuse disposal); and urgent resource mobilisation should be part of this work. UNICEF has teams in the WASH programme that can play an important part. WHO has expertise in the Universal Health Coverage programme. The thinking should also encompass the need to engage institutions outside the core of the state where trust in government has been lost.

2. To place the best people in the most challenging areas for poliovirus transmission

The GPEI global leadership, working with countries, should rapidly assess the effectiveness of all teams members, managers and leaders in key areas of the Programme, with particular emphasis on fatigue levels, skills and experience, and dysfunctional team working; where positions need to be strengthened, every effort should be made to bring in those with outstanding ability and records of achievement wherever they are currently stationed. It is important that this recommendation is implemented in a positive way, with great skill and care, so as not to demotivate the many excellent people who are working with great commitment in the Polio Programme. Moving forward, a strengthened and refreshed leadership and management cohort should be provided with ongoing formal training, support and mentoring to enhance their effectiveness.

3. To reduce the reporting burden on country programmes and frontline staff and add more value to support their work

The GPEI should seek to reduce non-essential burdens of reporting and information requests placed on the frontline by headquarters and regions; they should change the polio global superstructure to enhance the added value functions, remove wasteful structures and processes, whilst retaining essential accountability elements. Any large organisation failing to deliver its core mission would look at itself in this way. The capability and capacity of the polio frontline is vital.

4. To make Gavi a polio spearheading partner

Adequate routine immunisation is now becoming vital to finishing the job of eradicating wild poliovirus transmission. Poor routine immunisation levels are a cause of vaccine-derived polio outbreaks that are imperilling the whole polio initiative. The Gavi Board has just invested \$200 million in the Polio Programme. It made little sense to reject the IMB's 2014 recommendation that Gavi should become a sixth polio spearheading partner. In making this recommendation, the IMB wishes to make clear that it is not the only action that needs to be taken on routine immunisation. In all the discussions leading up to this report, and on many other occasions, deep concern has been expressed by a wide range of stakeholders on the weak and ambiguous roles and relationships at global level necessary to drive forward improvements in routine immunisation coverage. The need to urgently address current dysfunctions is technically outside the IMB's remit but it has to be dealt with. The Polio Transition planning process has an opportunity to do this, if it is able to act quickly enough and exert the necessary authority.

RECOMMENDATIONS

5. To establish powerful and effective government leadership arrangements for the Pakistan and Afghanistan Polio Programmes

The GPEI should work with the Pakistan and Afghanistan governments at the highest level urgently to ensure that their national polio leadership and governance arrangements are cohesive, effective, and staffed by individuals who will command respect at all levels of the Polio Programme. The role of the Emergency Operations Centres should be carefully reviewed to ensure that they are not too technocratically led but are well-connected to the political machinery and decision-making.

6. To establish a programmatic rule that positive environmental samples should trigger the same response as polio cases

The GPEI should immediately change its standard operating procedures to ensure that the detection of a poliovirus positive environmental sample triggers the same action as the discovery of a polio case; this should be reinforced by communication to managers at all levels.

7. To bring about much more skilled use of data

CDC should be asked to devise a dynamic methodology to directly support data analytical needs during vaccination campaigns. CDC should also lead a series of data insight teach-ins for frontline polio teams to show the sorts of analyses that are most effective at driving improved performance.

8. To improve surveillance in Nigeria and other parts of Africa where the virus may still be hiding.

The GPEI was deceived by the poliovirus and very weak surveillance in northern Nigeria, where the virus spread for five years undetected. WHO and countries of Africa must ask and answer the hard question: where, in addition to northern Nigeria, might polio be spreading today? Surveillance must be certification-quality, or no one will know if polio is continuing to spread.

9. To bring new expertise and flexibility in gaining access to restricted areas

The GPEI, working with the United Nations Foundation, should engage an international team of experts in access negotiation to share good practice, innovate and support parts of the Polio Programme that are being denied access to vaccinate children. The Programme should devise ground-rules for breaking from normal procedures in order not to lose access for critical periods of time. The Programme is encouraged to explore creative methods to vaccinate children in areas with bans that affect the standard way of conducting vaccine campaigns. They should invite help from local religious or traditional leaders and re-engage with the Islamic Advisory Group of Religious Scholars. By every means possible, the GPEI should insulate polio eradication and other health programmes from surrounding insecurity in the remaining poliovirus reservoirs. A new communication and advocacy plan, based on the realities of the local areas is badly needed; UNICEF should address this urgently.

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