POLIO TRANSITION
INDEPENDENT MONITORING BOARD

05

FIFTH REPORT

Building stronger resilience

THE ESSENTIAL PATH TO A POLIO-FREE WORLD

DECEMBER 2021

Polio Transition Independent Monitoring Board

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ORIGINS AND INDEPENDENT STATUS

The Transition Independent Monitoring Board (TIMB) was created in 2016 by the Global Polio Eradication Programme (GPEI) to monitor and guide the process of polio transition planning. It has produced four reports, and this is the fifth. Following WHO taking over the leadership and management of polio transition planning from the GPEI, the TIMB was reconstituted.

It is convened under terms of reference matched to the *Strategic Action Plan on Polio Transition 2018–2023* that was received by the 71st World Health Assembly in May of 2018. The TIMB works closely, and has a common chair, with the Independent Monitoring Board (IMB) that has been evaluating the process of polio eradication since 2011 and has published 20 independent reports.

The TIMB's reports are entirely independent. No drafts are shared with WHO or other organisations prior to finalisation.

TIMB MEETING IN NOVEMBER 2021

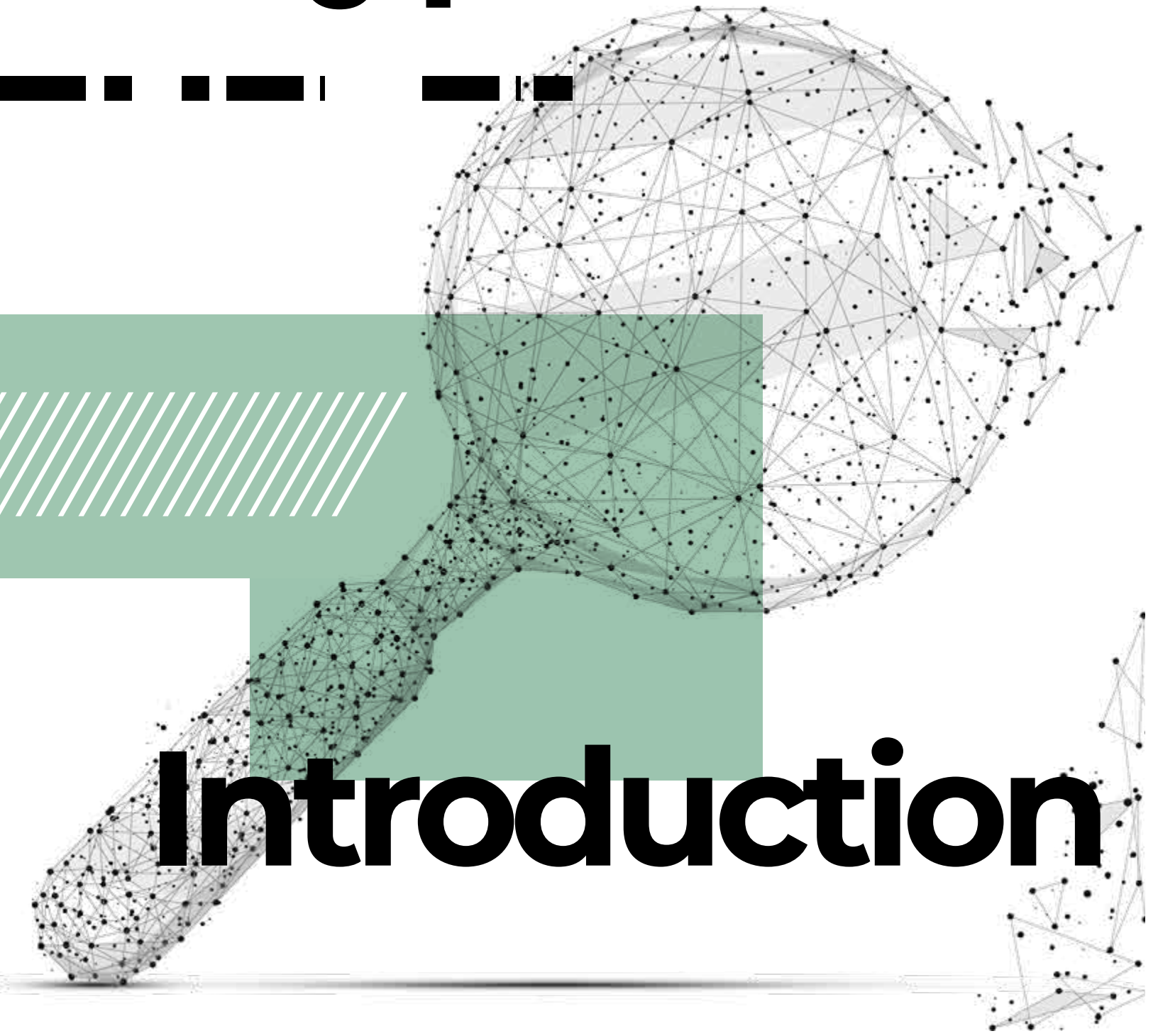
The TIMB met between 3 and 5 November 2021. This report is based largely on the presentations and discussions at that meeting. The meeting was opened by WHO's Deputy Director-General. It heard presentations from WHO's Polio Transition Team, and leaders of work programmes on essential immunisation; health emergencies; global vaccine-preventable disease surveillance; and laboratory containment and security.

A wide range of delegations attended the meeting and participated in discussions. They included donors, polio extended partners, UNICEF, Gavi (Global Alliance for Vaccines and Immunisation), CDC (US Centers for Disease Control and Prevention), Rotary International, the Bill & Melinda Gates Foundation, and polio transition leads from the Africa, South-East Asia, and Eastern Mediterranean regional offices of WHO.

content

Section

01



Introduction

The last TIMB meeting and subsequent fourth report, *Navigating Complexity*, fell in the middle of the peak of the early waves of the COVID-19 pandemic. It was clear, at that point, that there had been major disruption both to health care systems (including delays in treating serious non-COVID-19 conditions) and to public health services.

In particular, many vaccination activities – including essential immunisation programmes, polio surveillance and polio vaccination campaigns – had been suspended or vastly scaled down. The majority of polio staff had been redeployed to fight the pandemic; their expertise and ability to organise a population-based response were being greatly valued. Most countries' polio transition plans, which were at various stages of development and implementation, were put on the back burner.

A year on, the pandemic virus is still affecting large numbers of people and putting pressure on public health services and health care systems. The roll-out of COVID-19 vaccines on a massive scale is a further development in the story of the pandemic and has diverted capacity from many childhood immunisation programmes. It is not yet clear what additional complexity the emergence of the Omicron variant will bring to the delivery of the polio eradication and polio transition programmes.

The Polio Transition Programme is having to rapidly adapt to this new context and to show increasing operational sensitivity to the poliovirus epidemiology.

The first part of this report (sections 2,3,4) is based on the accounts of programmatic progress and new developments given at the TIMB meeting by members of the Polio Transition Team, other WHO departments involved in the transition process, WHO regional offices and some of the polio partners.

The second part of the report (sections 5,6,7,8) covers the TIMB's assessment, analysis and conclusions based on what was presented to it, together with the results of other fact-finding and information gathered outside the meeting. As is customary in TIMB and IMB reports, the number of recommendations has been kept to a manageable size. However, throughout the report there are insights, not all of which have led to a direct TIMB call for action at this time. It is important that those involved in the Polio Transition Programme read the entire report, reflect on it and plan action based on their insights as they do so.

Section

02

Programmatic developments

In its report to the plenary session of the TIMB meeting in November 2021, the WHO Polio Transition Team described its adaptations to the changing transition context; this was explained as seven strategic shifts.

First strategic shift: a more risk-based approach. This is tailored to the regional and country context. At the start of the polio transition process, 16 countries were prioritised for close attention at the global level. Four were added later. They were treated pretty much equally. The GPEI supported and assisted these countries in constructing the first versions of their polio transition plans. When WHO assumed responsibility for polio transition, it began to help countries move into the implementation phase. Each WHO region has a different approach, depending on context and priorities.

The TIMB was told that there is a new, two-phase approach in the Africa Region, with a focus on stopping and preventing vaccine-derived poliovirus outbreaks in 10 newly designated high-risk countries, with a less intensive focus on the 37 designated lower-risk countries. The Eastern Mediterranean Region approach is to develop comprehensively integrated public health teams. The South-East Asia Region emphasised consolidating and sustaining the progress.

Second strategic shift: realistic scope and timelines for country transition. Many countries' polio transition plans looked unachievable on the timescale originally envisaged. This was so even before the COVID-19 crisis but now plans (especially in the Africa and Eastern Mediterranean

Regions) are being radically revised to produce realistic timelines and accurate assessments of budgetary needs. This is happening gradually. In places where implementation is already underway, lessons are being captured in order to inform the implementation process as it moves forward elsewhere.

Third strategic shift: stronger coordination, management and accountability mechanisms. The Polio Transition Steering Committee within WHO has been expanded to include the regional offices. There is a technical working group, which ensures alignment across the three WHO management levels (global, regional, country). There are fortnightly meetings to review progress in each priority area. The WHO Polio Transition Team told the TIMB that oversight is strong both at the global and regional levels. The mechanisms used in this oversight function include the World Health Assembly, the WHO Executive Board, WHO regional committees, the Programme, Budget and Administration Committee of the WHO Executive Board, and Technical Advisory Groups. There is a separate track for the Africa Region, in order to monitor the new two-phase approach to polio transition there. The WHO Polio Transition Team met with their colleagues in the Africa Region in Brazzaville in May 2021, to look at the different components of transition (e.g. budget, human resources and funding), and believe that they now have a new, stronger monitoring system in place for this important region. Finally, there was a recent high-level presentation on polio transition to the Polio Oversight Board.

Fourth strategic shift: programmatic integration. WHO has now fully integrated the essential functions that have been supported by the polio eradication programme into its immunisation and health emergencies activities; these activities no longer receive support from the GPEI. There is a joint work plan that reflects evolving programmatic priorities, and which holds accountable each WHO regional office, country office and programme.

Fifth strategic shift: strategic communications. The WHO Polio Transition Team identified weaknesses in understanding, beyond the "polio family," of the concept of polio transition and its relationship to integration. It has sought to align eradication, integration and transition messaging, so that all speak with one voice, say the same things, and understand the same things.

Sixth strategic shift: alignment with the broader health agenda. The TIMB was told that there is now an ownership and accountability framework for the implementation of the *Immunization Agenda 2030* strategy. Polio eradication, and the future of polio-essential functions, is firmly embedded in that. Other new tools to advance the aims of polio transition are being developed. For example, a surveillance, planning and budgeting tool is being developed under the Universal Health Coverage Partnership. In health emergencies there has been an integration of operational planning. Potential synergies with primary health care are also being explored; for example, in polio transition priority countries, work is progressing to see how the polio workforce might strengthen primary health care.

Seventh strategic shift: engagement of civil society. The WHO Polio Transition Team concedes that its programme's relationship with civil society is "an area which was neglected for quite some time now". The engagement of civil society organisations in countries' polio transition planning has been too ad hoc. The Team is aiming to make it much more strategic and systematic. The United Nations Foundation has helped to bring together a network, at the global level, to support polio integration and polio transition efforts.

ESSENTIAL IMMUNISATION: PRESSURES AND PROGRESS

The COVID-19 pandemic had a devastating impact on essential immunisation performance during 2020. Additional pressure from the Omicron variant of the virus is inevitable but its size is not yet predictable.

The number and proportion of children who have received the third dose of diphtheria-pertussis-tetanus vaccine (DTP3) by 12 months of age is a major indicator of immunisation programme performance (though there are also others). The TIMB was told that in 2020, compared to 2019, the coverage for DTP3 dropped globally, from 86% to 83%, losing more than a decade of progress, and leaving 3.7 million more children un- or under-immunised. The majority were zero-dose children (those who received no DTP vaccines). The number of children who failed to go from DTP1 (first dose) to DTP3, increased only marginally, but it was the number of zero-dose children that grew the most.

The 17 million zero-dose children largely live in communities lacking access to immunisation and other health services. The majority live in the three polio transition regions: Africa (7.7 million), South-East Asia (4.1 million) and Eastern Mediterranean (2.3 million). They are also found disproportionately in countries affected by conflict.

In reviewing the impact of COVID-19 on essential immunisation in the three polio priority regions, two of them, the South-East Asia and the Eastern Mediterranean regions, were most affected. The South-East Asian region went from 91% DTP3 coverage in 2019

to 85% in 2020, largely driven by the drop in India (but not only by that). In the Eastern Mediterranean Region, the corresponding drop was from 85% (2019) to 81% (2020). In Africa, the same vaccine coverage indicator fell from 74% (2019) to 71% (2020), a quite resilient response to the pandemic, though the starting coverage level was much worse.

COVID-19 has also had its impact through postponed vaccination campaigns. Although many have been reinstated during 2021, in 46 countries planned and postponed campaigns still had not taken place by the beginning of October 2021.

The TIMB was told that inactivated polio vaccine coverage has also slipped backwards. Coverage for the first dose of this polio vaccine fell from 82% in 2019 to 80% in 2020. In total, 99 countries still need to introduce the critical second dose. Of the 63 Gavi-supported countries, 41 have applied to introduce the second dose of inactivated polio vaccine, 28 have been approved, and nine (including Afghanistan, Pakistan and Nigeria) have actually introduced it.

The Gavi board is due to review co-financing of this vaccine introduction in 2022. Any changes will have vitally important financial implications for the countries. Some may shift to an inactivated polio vaccine-only schedule and others may not move ahead with the second dose. A hexavalent vaccine, with inactivated polio vaccine included, is on the horizon, but the product and schedule changes required present both opportunities and risks. Planning will be needed to support countries to do this.

The global COVID vaccine roll-out is another factor that will add to the pressures on essential immunisation as governments increasingly give priority to fighting the wide-ranging effects of the pandemic on their populations and countries. So, health systems will be aiming to deploy about four to five times more COVID vaccine doses in the last quarter of 2021, than a typical essential immunisation programme delivers in a three-month period. The surge capacity needed to do this will be a formidable increase over current frontline public health workforce levels. Worryingly, many low- and lower-middle-income countries may need to start making difficult choices between COVID-19 vaccination and other primary health services, unless considerable support is mobilised. The additional stresses will also very much depend on which demographic groups- over 50-year-olds, over 20-year-olds or over 12-year-olds- countries decide to include in their COVID vaccine programme. Even under a pretty non-ambitious COVID vaccine scenario of only immunising the 50-year-olds and above, many countries will be really stretched. The global COVID vaccine policy implications of the emergent Omicron variant are not yet clear.

Integration is now seen as being on the critical path to polio eradication. Most vital to this is the identification and catch-up of high-risk communities. The focus on zero-dose children in polio core reservoirs is essential in the final phase of polio eradication. The zero-dose children for polio and for essential immunisation, are those in the most marginalised communities in different settings.

The TIMB was told that quantitative and qualitative analyses in the polio and essential immunisation programmes have identified three archetypes. The “dense urban”, the “remote rural”, and the “conflict-affected” are the three community contexts where

zero-dose children are predominantly found. Specific actions tailored to these different contexts enables children to be identified and reached with immunisations.

Developing primary healthcare-based services is another integrative priority, as zero-dose communities often have no regular access to such services. They require a more extensive package of support to address all their needs beyond solely protecting against polio and other vaccine-preventable diseases.

This whole zero-dose agenda is building momentum across polio and essential immunisation programmes. The TIMB was told that three strategies are particularly important. First, listening and understanding to identify where the children are and why they are zero-dose. Second, using that evidence to make the case for political action and resources. Then, third, reaching children with tailored and sustainable strategies, addressing the barriers to vaccination.

Another key player is Gavi. Its Equity Accelerator Funding is a $500 million fund for integrated delivery of services, specifically targeting zero-dose communities.

A joint approach to zero-dose communities has been piloted in Pakistan. The essential immunisation programme and the community of polio workers collaborated closely in planning and implementation. This campaign aimed to protect up to 96 million children in 12 days. This initiative represented an unprecedented level of coordination between the essential immunisation and the polio programmes at the national and subnational levels. It showed the importance of using zero-dose data recorded by polio community workers to drive both programmes. The follow-up household coverage survey showed encouraging results.

UNICEF is another key partner in polio transition and has long emphasised the synergistic and critical relationship between polio transition and integration, within the broader framework of immunisation strengthening. The UNICEF representative at the TIMB meeting pointed to a programmatic window of opportunity to align common immunisation goals. Working in the COVID-19 context, GPEI, the *Immunization Agenda 2030* and Gavi 5.0 strategy can support each other's programmes and work together towards a polio-free world. AS UNICEF sees it, the achievement of the *Immunization Agenda 2030* targets will directly contribute to the eradication goals, increasing coverage of both oral polio vaccine and inactivated polio vaccine, reducing the numbers of unvaccinated children, and also promoting sustainable financing for immunisation.

SURVEILLANCE: FURTHER PLANNING AND COSTING WORK

The TIMB was told that vaccine-preventable disease surveillance is completely aligned with the *Immunization Agenda 2030* and anchored in at least two strategic priorities relating to strengthening immunisation as well as to responding to outbreaks. There has been integration of multiple surveillance workstreams at the global, regional and country levels.

At the global level, the comprehensive vaccine-preventable disease surveillance strategy presented last year, lists the minimum of diseases that countries in different tiers should cover. This strategic approach is still in place.

Tier 1 countries are those with limited surveillance capacity, which have a high communicable disease burden and risk, including for polio. Most are low, and lower-middle-income countries and some are fragile states. They are considered to be able meet the minimum surveillance standards for only five vaccine-preventable diseases. Tier 1 countries will need considerable external financial support, as well as technical assistance, to enable this to happen.

Tier 2 countries have some surveillance capacity, but also have a high communicable disease burden and risk; these are mainly lower-middle-income countries. The aim for them is to meet the minimum surveillance standards for at least seven vaccine-preventable diseases. They will need moderate levels of external financing and technical assistance.

Tier 3 is made up largely of upper-middle-income countries with a lower disease burden and stronger existing surveillance capacity. They will

be expected to meet the minimum or enhanced surveillance standards for all priority vaccine-preventable diseases (at least 10) using less external financing and technical assistance.

Tier 4 countries are those with high surveillance capacity, low communicable disease burden and risk, and higher income. They have little need for external financing or technical assistance.

Integration of vaccine-preventable disease surveillance with immunisation support, has progressed on different tracks in countries of the three polio transition priority regions.

In the South-East Asia region, vaccine-preventable disease surveillance has always been an integral part of transition plans of all five priority countries. Historically they have been supported by GPEI, but lately by other donors, notably including Gavi.

Four out of the five countries in this region use the WHO-supported polio surveillance network for their integrated surveillance, again with a broader donor base. The approach is a surveillance system aimed at strengthening immunisation and reaching zero-dose children. Across the region, surveillance teams have supported the COVID-19 response network. The TIMB learned that, in the Africa Region, work has moved ahead on building an Integrated Disease Surveillance and Response strategy. An investment case has been made, but because of COVID-19, the anticipated rapid progress has been somewhat impaired. The Eastern Mediterranean Region has gone ahead with the Integrated Disease Surveillance strategy, in line with its operational model of integrated public health teams.

The laboratory network and trained human resource capacity has been extensively used in the COVID-19 response in almost all countries.

Global health security concerns, in the aftermath of COVID-19, have encouraged WHO programmes involved in polio transition to initiate a working group on global surveillance in collaboration with other programmes (e.g. tuberculosis, HIV) and external stakeholders. In September 2021, the Health Emergencies Programme of WHO launched a "Berlin Hub," in collaboration with the government of Germany. Its mission is to build a system of collaborative intelligence enabling better decisions to avert and manage pandemic and epidemic risks. It involves a wide range of internal as well as external stakeholders. It is not going to be an entirely WHO plan or programme, but the execution will likely be with WHO.

New initiatives are being taken at country and global level on the costing, budgeting and planning of surveillance. A minimum of $300 million per year is required (this is $50 million more than donated in recent years). This would increase as new vaccine-preventable diseases (e.g. COVID-19, norovirus) were added.

HEALTH EMERGENCIES: FURTHER STRENGTHENING OF THE FUNCTION

The third objective of the *Strategic Action Plan on Polio Transition 2018 –2023* is to strengthen health emergency preparedness, detection and response capacities in countries so as to be able to implement, in full, International Health Regulations, as well as to contribute to achieving a polio-free world after eradication.

The scope of WHO's work in protecting people from health emergencies is to:

- Prepare for emergencies by identifying, mitigating and managing risks;
- Prevent emergencies and support the development of tools necessary during outbreaks;
- Detect and respond to acute health emergencies;
- Support delivery of essential health services in fragile settings.

Polio teams have played, and continue to play, a key role in the health emergency preparedness and response role in many of the polio transition countries. Once polio funding ceases, it will be important to make sure that this capacity and expertise remains in place.

The capacity of the WHO health emergency preparedness and response function and its budgets have increased greatly over the last five years. Significant investments are being made not just at country level in the fragile, conflict, vulnerable settings and other at-risk countries, but also at the subnational level.

It is particularly at subnational level where polio staff work alongside health emergencies staff, shaped in some places into integrated public health teams. The move is to make them part of the core programme budget for health emergencies, where appropriate.

The Health Emergencies Programme within WHO, previously had two management divisions, health emergency preparedness and health emergency response. There is now a third division, health emergency intelligence and surveillance. Within the three divisions, there are eight major areas of work. A new programmatic area is opening up in 2021 focusing on country readiness and community resilience.

The TIMB was told that the current view of the GPEI, given the scale of the polio outbreak events that they are dealing with, is that they continue to maintain primary responsibility for operations. Rather than bringing the whole management of

polio events under the management of the health emergencies platform, the emergencies mechanisms- such as grading, three-level coordination, release of contingency financing, and supply chain collaboration- is being made available to polio outbreak management teams. This is especially so in fragile, conflict, vulnerable settings where health emergencies infrastructure is present.

In other places - for example in Pakistan, Somalia, and Afghanistan - it is the Polio Programme that has a field-level presence and operational capacity that the health emergency programme does not yet have. The Polio Programme also has experience in running emergency operation centres. In the recent turmoil in Afghanistan, all the field-level information (e.g. documenting the status of health facilities that are still functioning and assessing the integrity of supply chains) has been provided by the polio staff because they are on the ground with deep system knowledge.

CONTAINMENT: CONTINUING WORK TO GAIN COMPLIANCE

All WHO Member States are signed up to the requirements of the polio containment plan through a World Health Assembly resolution (71-16) in May 2018.

This identified a series of key actions, including:

- To complete inventories for type 2 polioviruses, destroy unneeded type 2 materials and to begin inventories and destruction of unneeded type 1 and 3 materials;
- To ensure that any confirmed event associated with a breach in poliovirus containment is immediately reported to the national International Health Regulations Focal Point;
- To reduce to a minimum the number of facilities designated for the retention of polioviruses, prioritising facilities performing critical national or international functions;
- To appoint, as no later than the end of 2018, a competent National Authority for Containment that will process containment certification applications submitted by the facilities designated to store and/or handle poliovirus post-eradication and communicate its contact details to WHO by 31 March 2019;
- To make available to the National Authority for Containment all necessary resources, including technical, personnel and financial, required for the full and successful certification of implementation of appropriate poliovirus containment measures;
- To request facilities designated to retain poliovirus type 2 to formally engage in the Containment Certification Scheme by submitting to their National Authorities for Containment their applications for participation, which is the first step of the global certification process no later than 31 December 2019.

The work to deliver these actions is led by a small WHO team based at its headquarters in Geneva. This team works with two high-level advisory structures. The Global Commission for the Certification of Eradication (chaired by Professor David Salisbury) is mainly monitoring implementation and compliance. The Containment Advisory Group (chaired by Professor David Heymann)

provides guidance on policy and technical matters related to containment. These committees sit within a more extensive scientific and administrative governance structure including SAGE (Scientific Advisory Group of Experts) that has an important role in relation to all polio eradication matters.

The WHO poliovirus containment team told the TIMB that COVID-19, in addition to its wider impact on progress with polio transition, has affected the activities of officials at national level who are in charge of containment functions. They were completely diverted by the COVID-19 national efforts. However, since 2021, countries that paused containment work during 2020 have resumed some of their programmes.

The TIMB was told that there are five countries that have said that they intend to hold polioviruses and hence have polio-essential facilities, but have not identified or authorised a national authority for containment. They are:

- Brazil
- China
- Romania
- United Kingdom
- Viet Nam

Section

03

WHO situation reports on country transition planning

Countries' transition plans aim to define how the government will integrate essential public health functions – supported until now by external funding – into its national health programmes. The transition plans include mapping human resources and, where possible, matching and aligning them to existing functions within the country's national health priorities.

The Polio Transition Teams from each of the three WHO regions containing priority countries provided a progress report to the TIMB.

SOUTH-EAST ASIA REGION

The WHO South-East Asia Region was certified polio-free in March 2014, and has maintained that status. The five countries prioritised for polio transition in the region – Bangladesh, India, Indonesia, Myanmar and Nepal – have significant polio funding assets to support surveillance and immunisation. These assets include workforce, surveillance and laboratory infrastructure.

India is the largest and most complex polio eradication funded country in the region, followed by Bangladesh and Nepal. These three countries have similar transition models. In Myanmar, the polio field staff are on annual deputation from the government. In Indonesia, there are minimal field staff recruited to respond to the vaccine-derived outbreak in 2021. Three countries- Indonesia, Myanmar and Nepal- are awaiting government endorsement of polio transition plans.

The first steps for financial sustainability were taken before GPEI's call for transition planning in 2016. For example, the Government of India's funding was secured for the polio laboratory network in 2013/14, and a year later there was funding with non-GPEI resources.

The WHO regional office team told the TIMB that there are three key components of the vision for polio transition in the region: mainstreaming the assets and capacities of the network into the government, but in a phased manner; eventual transfer of the network infrastructure to the government (with different timelines) and a post-transition WHO role in which it will maintain its

core capacities to provide technical expertise and capacity-building. A regional steering committee on polio transition meets to provide oversight and monitor progress.

Seemingly, polio transition countries in this region prefer to have WHO continuing to manage and finance the integrated networks in the short- to medium-term. Ministries of finance are very much engaged in the process, and there is a two-way capacity-building plan between ministries of health and WHO.

The timing of full transfer of responsibilities under polio transition in the South-East Asia Region will be between 2024 and 2028, varying between countries. WHO's management of the transition is being guided by each country's readiness. This is especially so now, with COVID-19 impacting technical, financial and managerial capacity. Polio-essential functions in the post-certification strategy will remain protected.

In their presentation to the TIMB meeting,

the WHO regional office team highlighted progress in each of their polio transition countries.

In **India**, state-specific transition plans have been drafted, with timelines. A monitoring and evaluation framework has been agreed to track progress in the technical, financial and human resources areas. Meetings with staff at regional and subregional levels are helping to finalise the plans as well as to communicate and implement them. It is expected that this work will be completed by the end of 2021.

Recently, the Government of India has given approval in principle to creating a $56 million budget to cover the period 2022 to 2024; final authorisation is awaited.

Bangladesh was one of the first countries to endorse its national polio transition plan, to be implemented in three phases, from 2018 to 2026. There is a dedicated WHO consultant supporting implementation and liaising with the government. A $3.5 million annual surveillance budget has been built into the government's operational plan. Phase two of implementation will be delayed due to COVID-19. This will affect the endorsement of the operational plan and the creation of new district-level positions.

Indonesia is viewed as low-risk for polio transition. The TIMB was told that Indonesia has "almost fully transitioned." However, the country still needs sustainable investment to support subnational functions over the next five to 10 years. The GPEI and WHO, alongside other donors, have partially supported costs that have been incorporated into the government budget. Currently, the central government contributes a much higher share to these activities than provincial governments, so mechanisms for decentralisation are being developed.

In **Myanmar**, the transition implementation phase planned for 2020 to 2024, as well as the associated capacity-building, has been disrupted by political unrest on top of the ongoing pandemic. A high proportion of the health workforce has not been participating in service delivery due to a campaign of civil disobedience. There are delays in filling the government positions. In order to close some of the programmatic gaps (for COVID-19, as well as for essential immunisation) WHO is, with external funding, recruiting surveillance monitoring officers. The implementation of the polio transition plan is reported to be at serious risk in this country.

Nepal has also divided its planning into two phases. The WHO regional office reports little sign of progress. WHO will intensify discussions with the Government of Nepal to fast-track the polio transition agenda, but in this country, too, political instability is seriously limiting the scope for progress.

In summary, the WHO South-East Asia Regional Office sees the main challenges of sustaining their early progress in polio transition as:

- The COVID-19 pandemic has slowed the pace of implementation;
- There are potential delays in allocating domestic resource commitments, given the impact on economies and the diversion of polio resources and staff to fighting the pandemic;
- There are risks to mid- and longer-term financial stability if donor commitments are not secured to sustain the network until its eventual takeover by the national governments.

EASTERN MEDITERRANEAN REGION

This region contains the two remaining polio-endemic countries: Pakistan and Afghanistan. In addition to the endemic countries, six priority countries are also a focus for the polio transition work. Three (Somalia, Sudan and Yemen) are countries where there are major vaccine-derived poliovirus outbreaks, and three others (Iraq, Libya, Syria) are judged to be high-risk because of ongoing emergencies and conflict, with these potentially impacting on their health systems.

The WHO regional office Polio Transition Team reminded the TIMB that the region has within its borders 10 major humanitarian emergencies, with a huge number of people needing assistance. Indeed, the region contains two-thirds of the world's refugees. These pressures on countries' health systems, economies and governance arrangements exist without taking account of the COVID-19 pandemic.

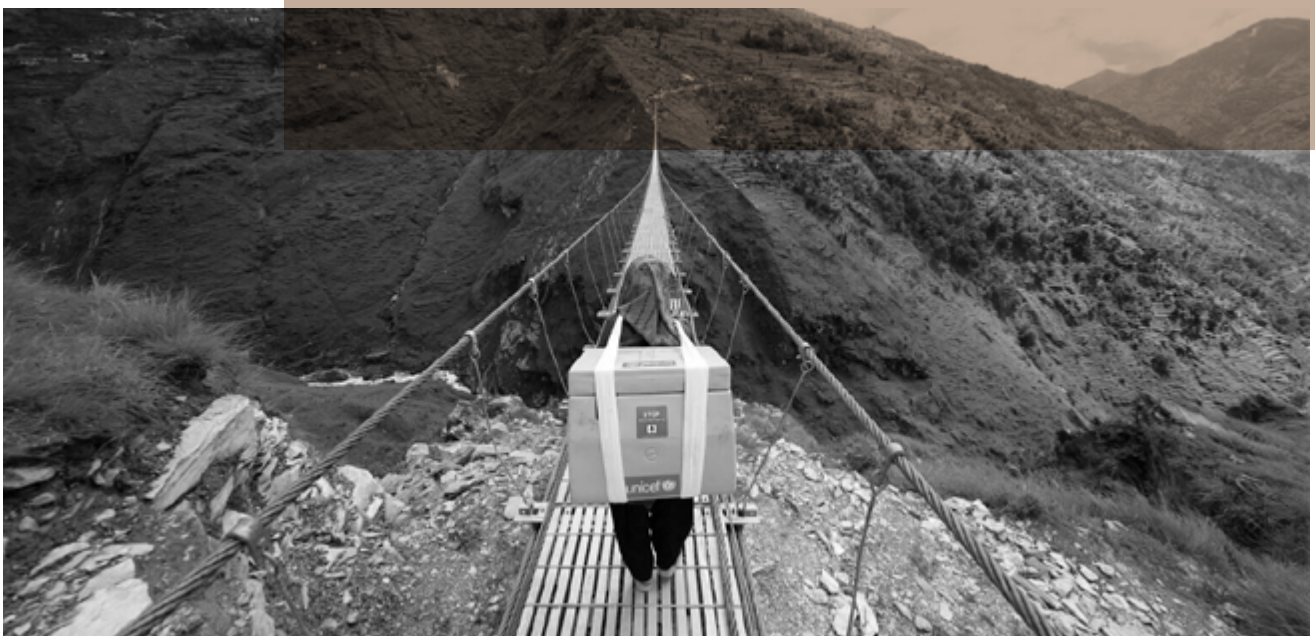
The impact of the pandemic on essential health services overall and, in particular, on essential immunisation coverage has been serious. For the first year in over a decade, in most of the polio transition countries, coverage levels for essential immunisation have fallen.

WHO's focus for polio transition in the region and its countries has mainly been on sustaining immunisation levels, integrating surveillance systems, and constructing a

strong emergency response capability. Much attention has also been given to sustaining the polio-essential functions, which have been maintained by heavy polio funding investments over the years.

The pandemic response has heightened the region's political leaders' awareness of the value of polio assets and polio staff's expertise and experience in this wider public health context. Polio field staff are heavily engaged in COVID-19 response activities, including surveillance, case identification, and contact tracing, as well as, most recently, with the COVID-19 vaccine roll-out.

The WHO regional office has established a regional Polio Transition Steering Committee. It has developed a regional work plan and one of



the key activities recommended is further work on the national polio transition plans of all six priority countries, outside the endemic countries. Each of the six countries in this region has a polio transition plan that has been discussed and revised. With the exception of two countries (Iraq and Libya) the plans have been finalised. Though the plans have been submitted to the respective national governments, all have yet to be endorsed.

The regional office team pointed out to the TIMB that this is the first biennium where polio transition funding is no longer part of GPEI. They saw this as a very good opportunity to move ahead with the whole polio transition implementation process. This has meant integrating polio staff and their activities into the other existing functions within WHO, namely the essential immunisation and health emergency response departments. WHO took the polio-essential functions and mainstreamed them under the immunisation and the health emergency outputs. Only one country, Somalia, is still receiving some funding from the polio eradication budget.

The WHO Eastern Mediterranean Regional Office has developed a single integrated public health team approach. In 2021, these teams were introduced in all six of the region's polio transition priority countries. Most countries had some integrated functions already. This helped implementation. There are now detailed plans for the roll-out of these teams in four of the countries: Somalia, Sudan, Syria and Yemen. In Iraq and Libya, there are few polio staff supported by GPEI, so no major change of emphasis is required.

The Eastern Mediterranean Regional Office offered the TIMB deeper insights into two transition plans: Sudan's and Yemen's.

Sudan has used the integrated public health team concept to expand the role of field staff and let them perform a wider range of public health functions. Instead of having a polio officer at the subnational level, there are now state public health officers. They direct and perform more of these integrated functions. New reporting mechanisms support this management approach. Planned capacity-building for 76 officers from the various teams, for November 2021, is on hold because of the political unrest in the country.

Yemen still has the largest humanitarian crisis in the world, but efforts are still going into building polio-essential functions within integrated public health teams. Indeed, the polio-essential functions are already integrated with the essential immunisation and health emergencies functions. The terms of reference of 47 polio surveillance officers have been revised to redefine their role so that it fits within integrated public health functions.

In summary, the WHO Eastern Mediterranean Regional Office sees the main challenges in making substantial further progress in polio transition as:

- The COVID-19 pandemic has stalled planning and implementation;
- There are many outbreaks of vaccine-derived poliovirus and other communicable diseases;
- Governments are having to address competing health priorities and may not always see transition as the most important one;
- There is much political instability and conflict that are disrupting health systems;
- As much as 43% of the world's population reliant on humanitarian assistance are in this region;
- Long-term sustainability of the plans needs very substantial financial investment.

AFRICA REGION

The Africa Region was certified free of wild poliovirus in August 2020. There are seven polio transition countries in this WHO region: Angola, Cameroon, Chad, Democratic Republic of the Congo, Ethiopia, Nigeria and South Sudan.

The TIMB was told that all seven priority countries for polio transition now have endorsed national transition plans by national interagency coordination committees. However, five of the seven countries' plans have not been endorsed by national governments. Only the plans in Nigeria and Angola have been officially endorsed. The region has a functional Polio Transition Steering Committee, which meets every month. Polio transition has become a standing agenda item in the Africa regional committee of health ministers.

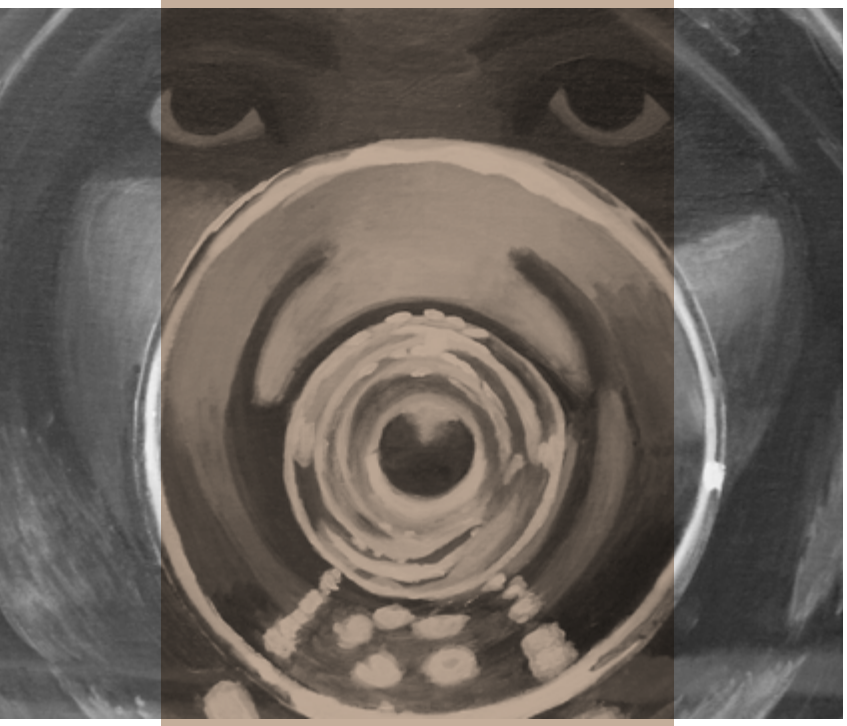
The regional office has been able to organise WHO advocacy missions that were planned in 2021, despite the challenges of COVID-19. Three have happened: to Democratic Republic of the Congo, to Ethiopia and to Nigeria. Timelines for polio transition plans have been reviewed and different meetings used to fully engage partners. Visits to follow up on these missions will be carried out in early 2022 to check on progress with implementation of agreed actions. There is very close working between the WHO Regional Office and the Polio Transition Team in Geneva on these countries' engagement.

Very prominent in all the TIMB's recent discussions on polio transition has been the high level of concern about the recent

sharp "ramp down" of polio-funded staff in the Africa Region who are paid for by the GPEI. This phenomenon is not new to the Africa Region. In 2016, there were 800 such polio staff and the process of making cuts in their numbers began in 2017. By December 2020, a total of 237 positions had been abolished. However, in March 2021, redundancy notices were sent to staff in the remaining 554 GPEI-funded positions, to take effect in December 2021.

A new two-phase approach for implementing polio transition in Africa was subsequently agreed. The GPEI has restored much of its support to an agreed group of 10 African countries designated as high-risk. In addition to the seven priority countries for polio transition, the new high-risk classification includes Guinea, Kenya and Niger.

Out of the total 554 GPEI-supported staff, 409 people are working in those 10 countries. In the seven priority countries for polio transition in



Africa, the figure is 380 GPEI-funded staff (out of the 409).

The remaining 37 countries in the Africa Region have been designated as lower-risk. The 37 countries have 145 GPEI polio-funded staff.

The new approach will start in January 2022. The polio-essential functions necessary in the 37 low-risk countries will be funded through the WHO base budget, at current 2021 levels. At the time of the TIMB meeting this was only to be for the first six months of the year. As a result of concerns expressed, the funding will now be for an initial 12 month period.

The TIMB was told that the rationale for this approach is to continue "polio-transition-in-action", essentially a move towards more integrated functions, and to accelerate the interruption of all forms of polio by 2023. Then, "full transition" will begin and be completed by 2024.

One of the ways that polio transition is moving forward in the Africa Region is through a WHO process called functional reviews. Functional reviews are an internal WHO process which aims to evaluate the WHO offices and better align them to the health sector needs and priorities of the country. The planning for these started in 2017.

The Member States already saw the WHO country offices as having a unique role in the integrating and strengthening of health systems and functionality, as well as investing in emergency preparedness and addressing determinants of poor health. The WHO regional office told the TIMB that the implementation of the polio "ramp down" and

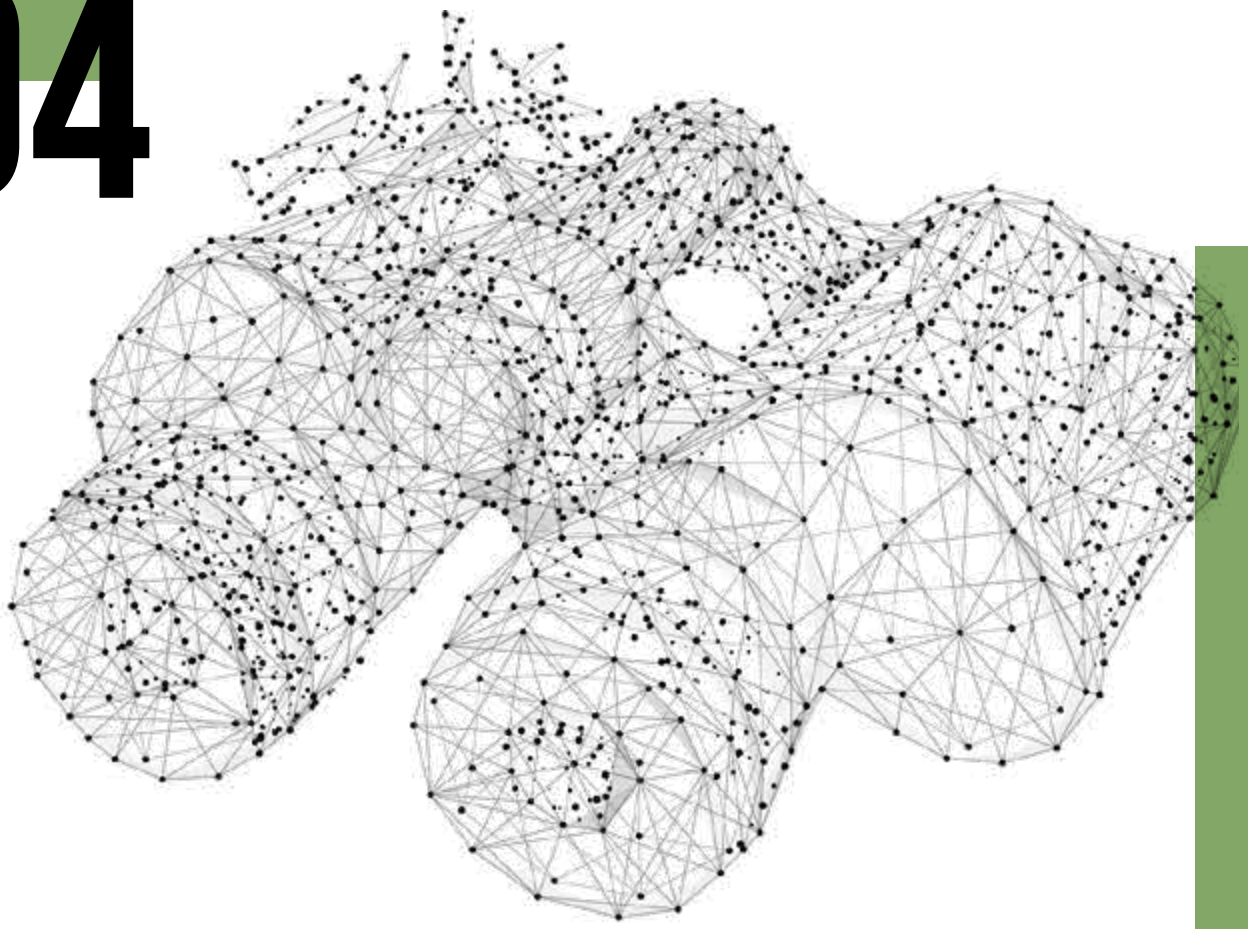
polio transition offers an opportunity for the affected polio-funded staff, who may lose their jobs, to be integrated into positions that have been created through WHO country office functional reviews. This has been accelerated through integration into the health teams in the country offices, as well as in the health ministries in the different Member States, to prevent the loss of very experienced staff.

In summary, Africa Regional Office sees the main challenges in making substantial further progress in polio transition as:

- Insufficient capacity to mobilise resources at country levels;
- The COVID-19 pandemic is affecting national economies, as well as the donors' willingness to fund polio transition activities;
- The big adjustment necessary to the GPEI polio staff and funding "ramp down";
- The scale, scope and complexity of the required response to the extensive vaccine-derived poliovirus outbreaks.

Section

04



WHO REPORT BACK ON PREVIOUS TIMB RECOMMENDATIONS

The WHO Polio Transition Team reported back on progress in addressing the 10 recommendations in the fourth TIMB report, *Navigating Complexity.*

It classified the TIMB recommendations as "high priority" and "other" and the responses to them as "on track", "mixed progress", and "no action yet".

The WHO team wanted to make clear that it sees implementation as a shared responsibility and that fulfilment of TIMB recommendations requires the commitment and collective action of other stakeholders, including national governments, partners and donors.

The WHO team's **self-assessment** of progress in implementing the recommendations, as presented at the TIMB meeting, is as follows.

Recommendation 1

A policy decision is urgently needed on whether the GPEI should continue to manage and coordinate all polio functions (eradication, outbreaks, building polio immunity, surveillance, containment) or whether a subset of functions should move permanently to other global management structures to advance polio transition.

WHO response: Progress has been made in transitioning functions away from GPEI. The programme has started moving in this direction in many of the countries, and with many of the functions. However, the Polio Transition Steering Committee wanted to discuss this further, as it felt that it is premature to transition too far, given the current polio epidemiology.

Recommendation 2

Each of the 20 polio priority transition countries' plans should be reassessed in the light of COVID-19 and three high-level summary descriptors produced quickly: a) an indicative annual budget for the next five years showing what would be necessary to secure continuity of polio-subsidised services; b) a brief synopsis of how the components of the services will be integrated and organised; and c) a short statement on whether the government will assume responsibility for management and funding the essential services and, if it will, when.

WHO response: This is more relevant for some countries than others because there are already countries with fully operational plans. This is on track and moving forward but should be more explicitly focused on countries where progress is needed and not yet reliably underway.

Recommendation 3

The model of integrated public health teams (polio, essential immunisation, surveillance, health emergencies) at the country level should be expanded further; care should be taken to ensure that it does not develop a "service bundle" or vertical programme ethos that would make it difficult to integrate later with government or primary care services.

WHO response: The integrated public health teams' configuration is being rolled out and expanded. Good progress is being made.

Recommendation 4

A comprehensive human capacity-building plan should be formulated and implemented to counteract the risks of losing capable members of staff (e.g. surveillance officers) because of salary differentials; country by country, national public health experts should be trained and brought into government service on civil service remuneration structures.

WHO response: Each country now has a staff capacity-building plan.

Recommendation 5

A high-level strategic meeting should be convened to explore the creation of a global surveillance network to capture information from primary sources of surveillance data, including national vaccine-preventable disease systems, other major communicable diseases systems (e.g. HIV, malaria), new and emerging infection detection systems, and more informal methods of recognising outbreaks or emergence; attention should be given to the feasibility of achieving interoperability, the inclusion of genomics, and artificial intelligence methods.

WHO response: The Polio Transition Steering Committee's assessment was that, while this is something relevant and important, given the priorities and risks at country level, country surveillance work should be the priority. The WHO Director General recognises the relevance of convening a high-level strategic meeting on surveillance, however the priority for immediate focus is the integration of surveillance.

Recommendation 6

The establishment of a containment programme within the polio transition planning process offers the opportunity to create a broad-based biosafety and biosecurity unit within WHO to provide expertise, guidance and monitoring of all dangerous pathogens; this possibility should be considered.

WHO response: There have been discussions between the WHO polio department and the health emergency team working on biosecurity. It is something being considered in the long-term, but WHO has not yet moved forward on this.

Recommendation 7

As part of the work on creating operational "annexes" for the next phase of the new global strategy, Immunization Agenda 2030, *the global team and their partners should seek to establish how they will drive improvements in essential immunisation performance in a way that is stronger than advocacy, will sustain momentum, yet is acceptable to countries; the GPEI strengths in global oversight, coordination, performance management, and use of data provide helpful pointers.*

WHO response: The *Immunization Agenda 2030* goes well beyond advocacy. There are 10 specific areas that imbue the operational framework with success measures that will be enablers or drivers of a pathway towards the achievement of the strategy's specific goals. Several link very specifically and intentionally to the Polio Programme. A tailored monitoring evaluation framework is being adapted to the country context. There is a clear focus on addressing immunisation coverage; equity; gender-related barriers; strengthening partnerships beyond immunisation and health; and, very importantly, the integration of the disease-specific initiatives (of which polio eradication is one).

Recommendation 8

Given the synergies between polio eradication and polio transition activities, the appropriate teams involved in polio transition should become directly involved with the GPEI in the implementation of four recommendations in the 19th IMB report: integrated models of service; learning from polio outbreaks to strengthen resilience; use of inactivated polio vaccine in polio outbreak zones to achieve "zero" paralysis; and creation of high-level regional Member State commission on polio in the Eastern Mediterranean Region.

WHO response: The Polio Transition Team has been involved in the development of the new GPEI strategy, which is now being implemented. There is an intention to achieve stronger and fuller engagement and involvement of all the WHO teams with polio eradication planning and delivery.

RECOMMENDATION 9

Each subnational administrative jurisdiction in the priority countries should be assessed for its capacity and capability to contribute to the objectives of polio transition (in particular, polio immunity; the risk of outbreaks and preparedness to deal with them; essential immunisation coverage; and surveillance quality); the resulting analysis should be presented as a comprehensive evaluative profile.

WHO response: The quality of subnational mapping of capacity and capabilities is a mixed picture. It is a part of the national planning process, but doing a full mapping at the subnational level will take time and will require full engagement by national governments.

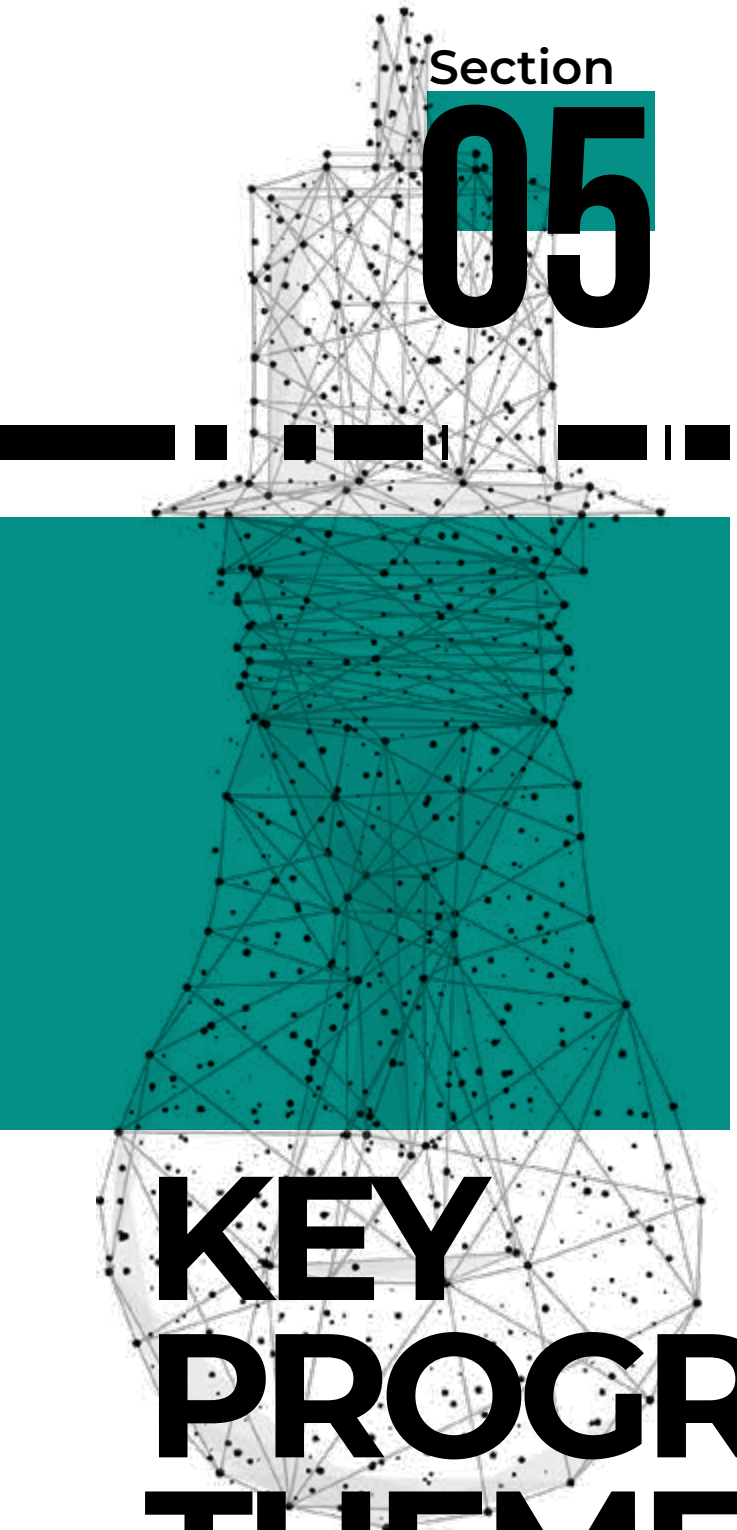
RECOMMENDATION 10

A comprehensive risk register covering all aspects of polio transition planning should be drawn up and published as part of documentation reporting on progress.

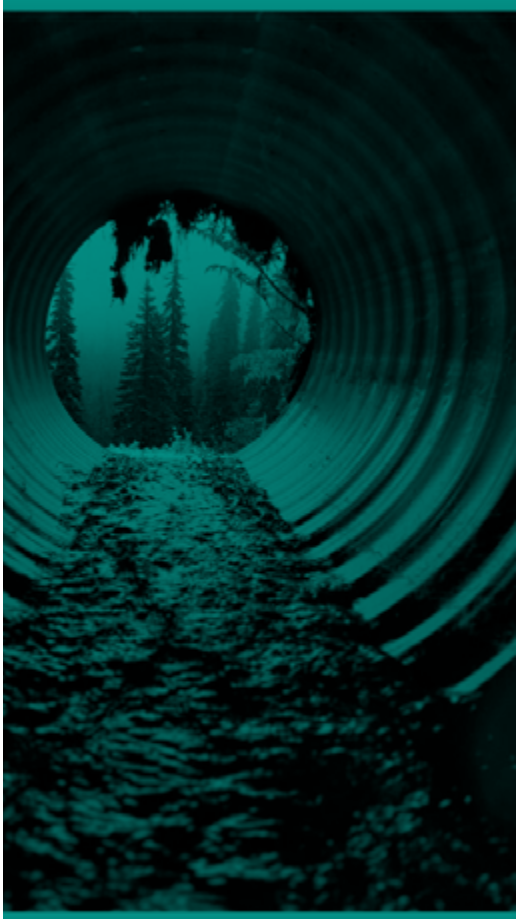
WHO response: WHO has a risk register, both at the corporate and programmatic levels, and work is underway to ensure that this is aligned with risk approaches and risk registries across other initiatives.

Section

05



KEY PROGRAMMATIC THEMES IN THE TIMB ANALYSIS



Polio transition has always been a complex global health programme to design and manage. It has become more complex over recent years. The epidemiology of the poliovirus has entered a very dynamic and rapidly fluctuating phase. Key regions of the world are experiencing natural and human-induced disasters that affect governance, public health infrastructure, and community safety and welfare. There is a current and highly disruptive COVID-19 context to be taken into account in all polio planning and delivery activities.

ERADICATION AND TRANSITION: THE TIES THAT BIND

In the original endgame strategic plan covering 2013 to 2018, polio transition - in other words polio legacy - was one of the four objectives.

Early on, in 2013, the GPEI created a polio transition management group to help to address these issues. Over time, it became obvious, and was explicitly stated, that GPEI leadership had begun to think that polio transition was a distraction from achieving polio eradication. Some in the leadership even considered the concept of polio transition as potentially damaging to resource mobilisation for polio eradication. In fact, the reason for the reduction in resources was the delay in achieving eradication year after year. So, disengagement of the GPEI leadership at the global level from polio transition issues occurred and the polio transition management group was discontinued by GPEI in 2018.

Far from being a distraction, it has been clear over the last few years that polio transition is essential to polio eradication. It is important that the GPEI is fully re-engaged with polio transition, to understand what is going on, to be a part of it, and to shape it.

The polio eradication programme had to adapt its strategies and operations to combat unexpected surges of wild poliovirus in two of the endemic countries (Afghanistan and Pakistan) during 2019, when only a year earlier claims were being made that the world was on the brink of interrupting wild poliovirus circulation. Furthermore, in the wake of the celebrations of Nigeria leaving the list of polio-endemic countries and the certification of a "polio-free" continent of Africa, a surge in paralysis-causing vaccine-derived poliovirus blazed through Africa and into countries beyond. Much of it emanated from Nigeria.

It has been something of a communications nightmare to have the juxtaposition of Africa's polio-free status and a large number of paralytic (vaccine-derived poliovirus) cases on the self-same continent.

Dealing with multiple outbreaks at once has become a major task. There has been some difficulty in engaging national governments that have many other priorities to deal with. The planned budgets of the GPEI have come under heavy pressure as a result of this turn of events, with the outbreak responses being particularly expensive.

The IMB documented and analysed these painful setbacks in its 19th and 20th reports. The situation of wild poliovirus circulation in the two remaining polio-endemic countries is currently looking more favourable, but experience has shown that there are no certainties when dealing with this great adversary of humankind.

The polio eradication programme has tracked and responded to the changing situation using its time-honoured methods and some new ones, recommended by the IMB and others. The Polio Transition Programme has found itself in an unexpected position, needing to play a much earlier and wider role than originally envisaged.

Although technically the two polio-endemic countries are not focusing on polio transition, there is an opportunity in Pakistan, in particular, to balance what is absolutely urgent (i.e. eradication), against the near-term and longer-term planning needed to really understand how essential polio functions are sustainably incorporated into broader primary health care. Some of the budgetary cycles, associated with the World Bank and Gavi funding offers, create openings for Pakistan to advance its thinking and planning in this area. The Polio Programme needs to be at the table in such discussions, not least because a lot of these investments, from the Gavi side in particular, are going to be targeting high-risk areas that are a priority for polio eradication; they also converge with Gavi's zero-dose agenda.

RECOGNISING THE CHANGING FACE OF POLIO TRANSITION

Polio transition can no longer be seen as a linear process. It was originally set up to be fully operational in the phase following the interruption of wild poliovirus circulation. That has not yet happened, so polio transition is being implemented anyway.

It became increasingly untenable to keep polio entirely separate from other essential immunisation; some integration was important to match the overall design of public health and primary care in serving communities at subnational level. Also, integrated delivery of polio vaccine with other antigens was vital to stop some communities rejecting it. Funding held within the GPEI vertical polio delivery budget, was being used up faster than anticipated. The GPEI needed to withdraw support from countries perceived to be at lower risk of polio and from those deemed capable of funding themselves.

Surprisingly, for a programme now of six years' duration, the TIMB has found that perceptions vary greatly about what the polio transition process is exactly. The differing degrees of understanding are leading to very diverse expectations among polio partners, donors and wider partners of what polio transition will deliver. These expectations range from simply ensuring that polio assets and staff supporting essential immunisation functions are retained and integrated, to the hope that the Polio

Transition Programme will deliver universally strengthened health systems in the poorer countries of the world.

The TIMB has also encountered a range of opinions from those asked to describe the end-point(s) of the programme, because the term "transition" implies a move from one state to another, not a never-ending process that will retain polio "branding". It is important to draw the distinction between the polio eradication programme which is a "long haul" programme of change and the Polio Transition Programme which is a "task and finish" project (and if it is not, it should be).

Adding to the complexity is the role required of teams contributing to the Polio Transition Programme at global, regional and country levels. In the original concept of transition, a major goal of their work was to shepherd the populations in polio-risk and polio-vulnerable

areas to a polio-free world, with minimal resurgences of the poliovirus and with no unplanned financial demands in a well-executed and implemented strategy. Today, everyone in the Polio Transition Programme is part of a real-time context in which the current poliovirus epidemiology and the risks of further surges demands their strategic and operational skills in "doing" as well as planning.

ERADICATION AND TRANSITION FUNCTIONS IN AN UNSTABLE POLIOVIRUS LANDSCAPE

If the interruption of wild poliovirus transmission is getting closer, as may be the case, then the Polio Programme is going to have to turn its attention to consolidating this success and moving to a polio-free world.

At that point in the polio journey much of the responsibility of finishing the job of polio eradication will be in the hands of the WHO teams that are currently part of the Polio Transition Programme. They will need to forge stronger and wider partnerships with others. This area of the Polio Transition Programme is underdeveloped. The success of this next phase of polio transition will be judged by performance on factors such as the strength of the overall immunisation programme, the quality of surveillance, the timeliness and effectiveness of outbreak responses, and the dynamism of policy-making and decisions on the deployment of polio vaccines. In short, the challenge will be in keeping polio out. The programmatic skill required will be in building "resilience."

It is likely that stopping the transmission of vaccine-derived poliovirus will take longer and be much messier than the mopping up activity that was talked about a decade ago. Then, eliminating the vaccine-derived poliovirus was seen to be a trivial step in the endgame. This was unsubstantiated and complacent thinking.

In the last three years, the huge and unpredicted increase in the number of countries affected by vaccine-derived poliovirus has been met with too many outbreak responses that are slow to start and not on a sufficiently large geographical scale. The most egregious example is Senegal which, when reviewed recently, had gone 280 days without a response since the detection of circulating vaccine-derived poliovirus. The rule is to respond within 25 days of detection. There are other affected countries with slow or hesitant responses.

There are several possible reasons for the disorderly approach at such a crucial stage of the polio eradication programme.

First, with the creation of a novel type 2 oral polio vaccine, designed to stop the circulation of type 2 vaccine-derived poliovirus without seeding further infection, some countries are choosing to wait for its arrival rather than use the existing type 2 oral polio vaccines. This is against the policy recommended by SAGE, the IMB and GPEI. All advise using the established vaccine until such time as there is a sustained supply of the novel type 2 oral polio vaccine.

The data about the use of the novel type 2 oral polio vaccine, so far, are encouraging. It is a vaccine that has been rolled out very quickly. Other than the COVID-19 vaccine, it is the fastest ever in the world to be approved for use under the Emergency Use Listing. Its impact and safety are being closely monitored. It is not yet known how good it will be at stopping outbreaks. Nigeria was provided with a relatively small amount of novel type 2 oral polio vaccine in the Spring of 2021, as one of the few countries to test it. It has only been in use for six months, mostly in Nigeria. There has been considerable

breakthrough infection there, but this is probably due to shortfalls in the scale and quality of vaccination rounds, rather than a problem with the vaccine.

The decision not to fully deploy the existing monovalent type 2 oral polio vaccine in Nigeria will have contributed to the yawning immunity gap that opened up through the rest of 2021. Nigeria has had a very large number of vaccine-derived poliovirus cases: 280, as opposed to much smaller numbers in preceding years. Given the threat that Nigeria has posed to other countries in the recent past, this is a worrying situation.

The TIMB understands that a recent decision by the GPEI Strategy Committee means that 57 million doses of novel type 2 oral polio vaccine will be provided to Nigeria so that the Polio Programme can conduct two rounds of vaccination in the northern part of the country in the first quarter of 2022. It is important that this move does not reinforce the tendency for "watchful waiting" instead of using the abundant supply of monovalent type 2 oral polio when needed. Even though it is not the ultimate vaccine solution, it would close the immunity gaps on an urgent and immediate basis.

In determining polio vaccine policy for outbreaks, it is not clear whether other potential vaccine strategies are being explored. For example, to deal with multiple countries' demand for the new vaccine to fight outbreaks, is the option of deploying the monovalent type 2 oral polio vaccine as the initial response and following through with round(s) of novel type 2 oral polio vaccine to stop seeding being considered?

Second, the traditional role of the GPEI in making policy decisions on responding to outbreaks, on preventive activities and on vaccine deployment that are then assiduously followed by countries appears weaker than five years ago. One of the strengths of the GPEI, in marked contrast to almost all other global health programmes, is that its implementation style has had a command-and-control flavour. This was referred to by one seasoned polio field worker as its "Big Daddy" function. Possibly because of the sheer number of outbreak countries, or the loss of influence through its reduced financing, polio-affected and polio-vulnerable countries today do not always follow the GPEI lead.

The programmatic goal is to eliminate transmission of vaccine-derived poliovirus circulation by the end of 2023. This is a huge challenge.

MANAGING THE RISKS OF ACCELERATED POLIO TRANSITION

Towards the end of 2020, WHO accelerated the pace on polio transition and started the process of transferring essential public health functions and capacity from the GPEI budget to WHO's base budget (created to manage polio transition) for the biennium 2022–2023. WHO regional and country offices were asked to proceed on this basis. From 2022, the countries and regions that have been polio-free will be required to replace most GPEI resources with funding from other sources and programmes.

Implementation of this policy in the Africa Region led to the rapid reduction of GPEI-funded staff (widely referred to as a "ramp down"). The TIMB meeting heard concerns and anxieties about the timing and approach to the implementation of these changes, given the very active vaccine-derived poliovirus outbreaks in the region.

Subsequently, based on a risk assessment, 10 high-risk countries in the Africa Region (plus Somalia) were placed on a "deferred transition path" and GPEI funding to them was largely reinstated. The high-risk list comprises all seven existing polio priority countries and three other countries: Guinea, Kenya, Niger. Some of the staff who were issued with redundancy notices have been restored to their previous roles. Other experienced workers have not returned.

Nigeria is a particular concern because, as the most recent country to leave the polio-endemic list, it moved to being at the heart of an outbreak of paralysis-causing vaccine-derived poliovirus that swept across Africa and into other parts of the world.

The IMB has repeatedly urged the Nigeria Government to concentrate its focus on

resilience. This clearly has not happened to the extent that it ought to have. About 90% of global cases of vaccine-derived poliovirus in the six months leading to the TIMB meeting were in Nigeria. At the time of the TIMB meeting, there were approximately 3.1 million zero-dose children in Nigeria. This was around the same figure as two years ago.

The TIMB was informed that some members of the team involved in achieving certification of elimination of wild poliovirus in Nigeria (and consequently the continent of Africa) have moved on. This is crucial experience to lose at such a vital time. Changes of leadership and new thinking about the distribution of polio budgets, as well as audits and reviews of financial records, seem to have led to feelings of frustration and resentment amongst some hard-working polio staff.

The insecurity in the north-east of the country (particularly Borno) that dogged the later stages of wild poliovirus elimination is still present. The Polio Programme had made great inroads in building trust with communities. However, these activities are no longer happening so intensively. Even worse, insecurity has spread to other states.

After an intervention from WHO's Regional Director for the Africa Region, the Polio Programme is now receiving greater attention. A new polio transition plan has been formulated. The roll-out is from now to 2023. In recent months, key coordination mechanisms have been revitalised and a Polio Emergency Programme established.

The other 37 countries in Africa were described at the TIMB meeting as lower-risk. However, at the time of the TIMB meeting, seven of them had a current vaccine-derived poliovirus outbreak. Others had cases in 2020.

The concern about the 37 is that, as a minimum, their polio-essential functions should be robust and competent personnel should be in place to manage outbreak preparation and response. The acceleration of polio transition in these 37 countries carries a risk of emerging immunity gaps. It is important to be clear how effective oversight mechanisms will operate.

In its meetings with donors and wider partners, the TIMB heard specific concerns about oversight and how progress with the polio transition process is measured, discussed and communicated. Transition planning should be transparent, with a very clear open methodology, as well as milestones and markers for assessing quality on a continuous basis. Concerns were also expressed about funding for the so-called lower-risk countries in Africa. At the time of the TIMB meeting, this was covered by the WHO base budget for only six months. It has since been extended to 12 months.

A related concern expressed was on governance. It is well understood that WHO has long-standing and effective governance structures within its statutes to manage and evaluate progress on global health programmes established by the World Health Assembly. However, given the uniqueness of the polio eradication initiative, the ties between it and polio transition cast a somewhat different light on governance. Polio transition policy and management decisions have a direct bearing on the polio eradication agenda. Slips in the quality of performance of any of the components of polio transition are potentially very detrimental to the polio eradication initiative. Donors and other partners with large global investments in eradication, and accountability to their own governing bodies, are used to their fuller involvement in the GPEI's structures to discuss, debate and share views on the programme.

This is an issue that needs to be addressed.

INTEGRATED SURVEILLANCE: A CRITICAL GLOBAL GOOD NOT YET FUTURE-PROOFED

The recent history of developing vaccine-preventable disease surveillance goes back to the 1990s. So, the Polio Transition Programme is picking up the baton at the end of a 30-year process of building this surveillance system, including the laboratory networks. It has repeatedly been called upon to do surveillance not only for polio and other vaccine-preventable diseases but also even for other epidemic-prone diseases that are non-vaccine-preventable.

There can be no doubt that the biggest potential legacy of the polio eradication programme, apart from the elimination of polio itself, will be to sustain and further develop this very comprehensive system of surveillance, created using polio resources and expertise. This means that it provides the vital intelligence needed for the prevention and control of a wide range of communicable diseases that cause illness and death across the world, particularly in the poorest communities. There is great potential, and arguably a pressing need, to extend it even further by embracing and developing integrated surveillance for other important communicable diseases and infectious agents with pandemic potential.

Vaccine-preventable disease surveillance is integral to achieving numerous global public health goals. For example, the United Nations Sustainable Development

Goals, the global health security agenda and the I*mmunization Agenda 2030,* which includes, of course, finishing the task of polio eradication. New diseases are added as they become vaccine-preventable (e.g. COVID-19), as new vaccines are rolled out and as additional goals are formulated. This increases the power and value of surveillance but also inevitably leads to a growth in costs.

The surveillance system is largely paid for by polio funding. That polio funding needs to be sustained for the sake of maintaining polio surveillance, but also securing the comprehensive vaccine-preventable disease surveillance system overall.

This does not simply equate to taking account of headline GPEI funding levels – it is important to examine the ultimate source of funding for surveillance. For example, USAID has received funding in excess of $2bn from the

United States of America's Congress since 1996. About 70% of that has gone to polio surveillance: the laboratory network, the surveillance medical officers and community-based surveillance.

Clearly understanding the basis for donor funding of surveillance is very important in seeking the continuity of that funding. For example, if the polio transition process seeks to grow this surveillance system and include more and more diseases, as far as this large donor is concerned, it needs to ensure that data to sustain core polio performance indicators is still at the heart of its work. This is because the funding is underpinned by a polio eradication rationale. Developing deeper insights into the position of other donors whose money currently supports surveillance is essential.

There is still a troubling degree of uncertainty about the longer-term funding for surveillance and not knowing how successful WHO will be in fundraising. Polio surveillance is a big pillar of the funding, with an estimated annual cost of vaccine-preventable disease surveillance of about $300 million per year (about $250 million of that is currently drawn from the polio budget, coming from the GPEI). Resource mobilisation is a key part of the new vaccination strategy and a very high priority part of that relates to the imperative to fund surveillance.

In some ways, the continuation of the GPEI organisational and funding model in order to deal with widespread vaccine-derived poliovirus outbreaks could slow the development of a sustainable funding basis for all vaccine-preventable disease surveillance. This is because a heavy

emphasis will remain on a single focus or "silo" of polio surveillance rather than on an integrated approach.

In considering the $300 million per annum for surveillance, it is not prudent or realistic to piece this together by cost-sharing and co-funding between countries and the global partners. There will still need to be very substantial external funding to sustain a viable, effective vaccine-preventable surveillance programme.

It is vital that the advocacy and resource mobilisation for surveillance is tightly coordinated between the polio and the essential immunisation teams. There must be no competing demands and mixed messages for the funding partners. The profile of surveillance must be explained as a global good, when most audiences of potential donors will be non-technical people.

On a region-by-region basis, the South-East Asia Region has done a good job of integrating the surveillance systems. The Eastern Mediterranean and Africa Regions have produced interesting plans to develop systems of integrated surveillance, which the TIMB heard about in previous meetings. However, these are largely at the conceptual stage and so represent small steps. The plans on the drawing board are very good, but the implementation will still be lacking until the kind of funding and resource mobilisation to proceed in that direction really comes into being.

Community-based surveillance was not emphasised in the presentations from the Polio Transition Team at the TIMB meeting. A truly comprehensive disease surveillance system must include a community-based component.

Some people view all vaccine-preventable diseases together, as if WHO runs surveillance for all of them. This is not the case. For example, surveillance for some bacterial vaccine-preventable diseases (e.g. those caused by pneumococcus) is run separately. This is so for some other diseases and varies in low- and middle-income-countries. There are gaps in supposedly integrated, comprehensive surveillance systems. Also, some systems are run by other organisations, including NGOs.

This varied position can also apply to laboratories. For example, in Bangladesh, the main four

bacterial vaccine-preventable disease surveillance laboratories are coordinated by an NGO. The laboratories are also rapid testing, for example, for *Haemophilus influenzae* type b (Hib) serotyping.

It will be important to establish the extent to which vaccine-preventable disease surveillance (bacterial as well as viral) is supported by the non-governmental sector.

The TIMB asked the WHO team whether the plans are based on adding more and more vaccine-preventable diseases into the backbone of a surveillance system, and whether they are trying to get a surveillance system that encompasses a multitude of countries and not just aggregating (in an old-fashioned way) the reports coming from each country. To develop such a system would involve a great deal of work on the data science front to set standards and on the information technology front to develop interoperability. The benefits of increasing the scope and scale, though, would be enormous.

The response was that the programme is taking it one step at a time, focusing primarily on vaccine-preventable diseases, in fear that too ambitious a scope might collapse on itself for lack of the resources to deliver it.

The TIMB remains of the view that the best approach to realise a more ambitious vision of a global integrated communicable disease surveillance system is to widen its scope to include other communicable diseases with a high burden (e.g. HIV and tuberculosis) and those with pandemic potential (defined or currently undefined). These have a very high political profile and a global health security dimension. Funds are more easily mobilised in these areas.

Also, COVID-19 creates a wonderful opportunity to "popularise" the importance of surveillance beyond its role as a hidden, behind-the-scenes technical function. First, the polio infrastructure – especially the surveillance infrastructure – has been indispensable and very visibly effective in the fight against COVID-19. Second, surveillance will be necessary for the control of COVID-19 and in the evaluation of multibillion-dollars' worth of vaccines and treatments for many years to come. Third, COVID-19 now falls into the vaccine-preventable disease category.

The challenge is to shape funding bids in the best manner.

BIOSECURITY: THE POLIOVIRUS IN LABORATORIES AND OTHER FACILITIES

The WHO team leading the poliovirus containment stream of polio transition work is managing the process well. It is supported by a strong expert advisory structure. It has a very clear framework for measuring progress.

Implementation is proceeding reasonably well but the TIMB has concerns about countries' speed of response and compliance.

Without a national authority for containment, the certification process cannot be performed. This raises the issue of non-compliance with a World Health Assembly resolution.

Section

06

TIMB COMMENTS ON COUNTRY PLANNING PROGRESS

The COVID-19 pandemic has prevented the kind of country visits that enable a first-hand understanding to be gained about progress, national and local context as well as insight into the dysfunctions that are impairing polio transition. The TIMB looks forward to being able to make such visits. Official accounts and presentations are helpful in providing an overview, but do not enable the in-depth scrutiny, the authentic perspectives and the awareness of field realities that are at the heart of the judgements necessary for independent monitoring to be of value. The TIMB chair and secretariat have had some conversations with those who know the polio transition countries well enough to provide further insights and supplement the information provided through official channels. These are reflected in this section of the report.

All countries have been hit badly by COVID-19 with consequent damaging effects on polio surveillance and vaccination as well as falling coverage of essential childhood immunisation rates. While there has been some recovery during 2021, countries are struggling with further waves of COVID-19 and trying to achieve adequate coverage with the pandemic vaccines. Many of the polio transition countries have (or have recently had) outbreaks of vaccine-derived poliovirus.

It is very striking how many of the polio transition countries are being affected quite profoundly by geopolitical forces that are working against governments being able, or willing, to fully engage with polio transition planning.

In this section of the report, the TIMB gives some examples within the constraints of not being able to do country visits to evaluate the situation on the ground. However, these situations are not static. New dimensions and complexities affecting the risks to the populations and the capacity for effective responses create a state of rapid flux.

Of the 20 priority countries for polio transition planning, 14 are in the World Bank's classification for 2022 of Fragile and Conflict-Affected Situations. The polio transition priority countries fall into the following categories within this classification: *High-Intensity Conflict* (4), *Medium-Intensity Conflict* (9), and *High Institutional and Social Fragility* (1).

Each of the countries in the World Bank's classification shares, to differing degrees, common features, especially in relation to the extreme poverty and deprivation of communities, violence and conflict, adverse climatic conditions, the displacement of populations, the severe limitations and lack of service provision, the presence of multiple health emergencies and limited capacity and capability of the health workforce. Their economic circumstances are also profoundly affected and this is important, because one of the pillars of polio transition planning is for countries ultimately to take over the funding of polio assets and infrastructure. The World Bank has estimated that by 2022, the GDPs (Gross Domestic Product) of countries affected by fragility, conflict and violence will have fallen to 8.3% below pre-pandemic levels.

Each country has other very specific features of national or subnational context that have a major bearing on their transition plans. The TIMB gives examples of this more granular context in the series of country vignettes that follow.

Syria is a *High-Intensity Conflict* setting. Its polio transition planning situation is highly context-specific and unusual. The Government of Syria manages and finances vaccination programmes and disease surveillance across the country, even in areas that are under self-administration and effectively under the control of Kurdish or Turkish authorities or Islamic anti-government groups. However, due to an embargo, the Government of Syria is unable to purchase consumables or equipment from overseas and requires WHO to purchase and disseminate essential supplies. The Government of Syria also relies on WHO to act as an interlocuter with local health officials from areas that are under self-administration. WHO mediates the movement of vaccinators and supplies. There are major issues with cold chain supplies because Syria cannot purchase anything in foreign currency. UNICEF mediates the acquisition of cold chain equipment and transport for vaccines.

Salaries for health workers have not risen at the same rate as inflation or living costs. There is a severe economic crisis, where the price of fuel and other essential items has sky-rocketed.

There is resistance to vaccination in the camps where previous supporters of ISIS now live. The biggest camp hosts approximately 70,000 inhabitants, of which, approximately 10,000 oppose vaccination.

Discussions on polio transition usually focus on transferring WHO staff to government payrolls but, in Syria's case, this is rather meaningless because immunisation and surveillance activities in key areas of the country would not function without the diplomacy and technical support provided by WHO.

Somalia is a *High-Intensity Conflict* country. Of its 15 million people, three million are internally displaced. There are reports of anti-government elements in conflict-affected areas who obstruct vaccination campaigns. Somalia's health system is very fragile. There is poor infrastructure and very low indicators for universal health coverage. Mortality and morbidity statistics are very adverse.

There are seven provincial ministries of health and one federal ministry of health. Each state also has its own president. This means the pace of activities and decision-making can be slow. This is compounded by the need to consult a high number of partners and health organisations operating in the country. The government does not have its own local revenue generation for services. It is almost totally dependent on donors for the functioning of the health system. There has been an ongoing type 2 circulating vaccine-derived outbreak in Somalia since early in 2018. Cases have been detected in both accessible and inaccessible areas. It is very challenging to

independently supervise and monitor activities in the inaccessible areas.

Somalia has one of the larger polio workforces among the priority transition countries in its region. Historically, the Polio Programme in Somalia has been purely vertical. Now, polio officers are gradually being integrated into broader public health functions.

Polio transition planning in Somalia began in 2018. A draft plan was developed but it did not materialise. A new plan has subsequently been drafted but not all provincial ministries have agreed to it.

Approximately $6.2 million per year is required to fund polio transition and ongoing essential activities. There are around 119 district positions and around 19 regional positions. Contracts for these are coming to an end imminently. The polio transition plan proposes that a third party should manage transfer of human resources for polio transition, with oversight from the Ministry of Health and WHO. Key staff positions to maintain essential functions will be advertised and the third party will conduct the recruitment process.

Yemen is a country categorised as *High-Intensity Conflict*. There is active warfare in one of the regions. There are air strikes elsewhere. Approximately 20.7 million people are in need of humanitarian-related assistance in Yemen. Tens of thousands of children are suffering from severe malnutrition. Continued attacks affecting health facilities and health workers, have obstructed the functioning of the health system.

Yemen is known to have had the world's largest recorded cholera outbreak. There have been more than 2.5 million suspected cases since the outbreak emerged in 2016. As a measure of how little protection against infections the child population is getting, it is only necessary to note that an outbreak of diphtheria began in 2017 and is ongoing in 2021.

Approximately 70% of the population of Yemen live in the north, which is partially controlled by anti-government elements who are reluctant to offer any vaccinations.

Yemen has received a large amount of humanitarian aid but, since 2020, funding from external donors has reduced. There was only one polio vaccination campaign in 2021 in response to an outbreak of vaccine-derived poliovirus. More campaigns were proposed, but funding was never secured.

It is essential that means are found to support surveillance functions and to respond to outbreaks, in a system in a state of collapse.

Sudan is classified in the category: *High Institutional and Social Fragility.* The country has experienced new political instability and

civil unrest since October 2021 when a military coup dissolved the civilian government and declared a state of emergency. Although the Prime Minister was reinstated in November 2021, protest movements, civil unrest and violence continue.

So far, 15 out of 18 states have been affected by a vaccine-derived poliovirus outbreak that started in August 2020. At the same time, the country has suffered multiple serious communicable disease outbreaks, including cholera and measles, as well as a devastating flood. Out of the 20 neglected tropical diseases globally, 13 to 16 of them are active in Sudan.

Surveillance for communicable diseases has been badly disrupted. Many surveillance staff joined a civil disobedience movement. This means there are no reliable data on the epidemiology of diseases with outbreak potential. Adequate response measures cannot be mounted because of the ongoing crisis.

The United Nations has estimated that a third of the country's population will be in need of humanitarian assistance in 2022. Sudan hosts a very large refugee and internally displaced persons population, including 60 million people who have recently fled the conflict in Ethiopia. In the Darfur region, tens of thousands of people have abandoned their homes due to recent violence. Severe flooding has further increased the number of internally displaced people.

Payments for health workers have not been reliable or consistent, so many are reluctant to carry out the high-risk work of taking care of COVID-19 positive cases. Routine immunisation coverage declined at least by 20% in 2020.

The discussion of polio transition was started prior to the COVID-19 pandemic. TIMB sources have commented that it was a very scattered discussion, not organised properly. At that time, most of the government was reluctant to move to transition. There was a visit by the WHO Eastern Mediterranean Office in December 2019, to develop the transition plan. Once this was underway, the COVID-19 and the vaccine-derived outbreaks arrived. It was at this point that WHO and the government paused discussions about polio transition. Polio transition has not been a high priority of government for multiple reasons including economic difficulties due to embargoes and workforce salary issues.

In Sudan, the concept of integrated public health teams means that polio, immunisation and emergencies staff must come together. This is organised and led by the polio team in country.

Myanmar is a *Medium-Intensity Conflict* setting. It is in South-East Asia, the region most advanced for polio transition planning. Myanmar has been hit by a major political crisis, with rapid, devastating effects on public health services. Large-scale protests have

been happening after the democratically elected government fell to a military coup on 1 February 2021.

A first draft of the polio transition plan development had recently been completed, discussions having been delayed by the COVID-19 pandemic. Myanmar had been viewed as a very good performer on essential immunisation. Routine coverage reached the level of 90% with 13 antigens, which is no small feat for a lower-middle-income country. The country managed to vaccinate 96% of health workers against COVID-19 in just a few days. In polio surveillance, the non-polio acute flaccid paralysis rate, the stool adequacy rate and the enterovirus detection level all showed good parameters. The laboratory performance proficiency tests too had almost reached 100%. This performance had held steady over many years.

Governance and coordination mechanisms were also strong. A national polio eradication committee, as well as committees for other vaccine-preventable diseases like measles had been well established. Gavi offered significant health system support. Even during the early stages of the COVID-19 pandemic, Myanmar introduced two new vaccines, against rotavirus and human papillomavirus (HPV).

From February to March 2021, 90% of the government health workforce joined a civil disobedience movement, which has severely weakened health service capacity. In May 2021, a third wave of COVID-19 began to surge. This paralysed the country's health system. Since the crisis, surveillance for vaccine-preventable diseases is severely weakened and polio surveillance levels have collapsed. At the time of the TIMB meeting, essential immunisation coverage rates were said to be running at approximately 10-14%. The current political context within Myanmar is extremely difficult but WHO is attempting to reengage with the current administration.

The **Democratic Republic of the Congo i**s a *Medium-Intensity Conflict* setting but it continues to be beset by type 2 circulating vaccine- derived poliovirus outbreaks that began in 2017. This persistent outbreak raises doubts about the feasibility of transitioning polio assets to the government even though the transfer of polio personnel and essential functions to the government is outlined in the Democratic Republic of Congo's Polio Transition Plan 2022-2024. The TIMB does not see that the government can finance the implementation of the activities of the Polio Transition Plan 2022 to 2024.

Other polio transition countries also in vulnerable situations. For example, **Chad** is in the category *Medium-Intensity Conflict* due to the presence of the anti-government Boko Haram in the lakeside districts of Bol, Liwa and Bagassola which borders Nigeria, Niger and Cameroon. The latest estimates from the WHO and UNICEF immunisation surveys in 2020 indicate that coverage for DTP3 is approximately 52%, which is far lower than the administrative estimates provided by the government at 83%. There are 41 polio-funded staff, of which 36 are surveillance officers and five are administrators. Validating the plan and mobilising government funds are two central challenges facing Chad's polio transition planning, and there has been little assurance on how the country plans to advance these areas in the coming months.

Section

07

Conclusions

The need to make judgements about the state of readiness of country plans to integrate polio assets, polio staff and polio functions (e.g. surveillance, vaccination and outbreak response) into national and subnational public health services has been at the heart of the polio transition planning process.

Coupled with this is the need for country plans to state clearly if and when countries' governments will take over funding and ensure continuity of these services, given that they have received long-standing support from GPEI budgets and, in some cases, from other external donors.

LOOKING AT PLANS DIFFERENTLY: THE THREE LENSES

There are two additional ways of viewing the current status of polio transition plans.

The first is to recognise the sheer magnitude and complexity of the adverse forces buffeting the polio transition priority countries. The impact of conflict, insecurity, weak governance, abrupt political changes, large displaced populations, lack of service infrastructure, unavailability of strong public health professional leadership, adverse climatic conditions, and severe economic and social deprivation within communities are present to varying degrees in a substantial proportion of the polio transition countries.

The TIMB has found it difficult to evaluate the plans in a purely "process" way when the implementation and impact of polio transition are so heavily dependent on the complexity and rapidly changing geopolitical, humanitarian and environmental contexts in many of the priority countries. The TIMB believes that the Polio Transition Programme must focus more deeply and regularly on these factors, particularly where they are worsening, and assess the credibility of country plans in this light.

The second is the current capacity and capability of polio-affected and polio-vulnerable countries to help drive forward polio eradication and the steps necessary to achieve a polio-free world. This is a very important way to assess all polio transition countries. Indeed, it also applies to other countries that are no longer closely monitored by the GPEI, but could be the locus of a polio outbreak. It is highlighted by posing questions such as:

- Does the country, as of now, have the capability to protect itself and its neighbours from polio?
- Can the world rely on the country to be a safe and solid partner in navigating the years ahead to establish a polio-free world?
- Will the country build the necessary resilience through a strong surveillance system and increasing coverage of essential immunisation?
- If a polio outbreak occurs in the country, will it be recognised early and a rapid response mounted to close it down quickly?
- Is there a political leadership in place, well-coordinated with a public health leadership cadre, that fully understands what needs to be done on polio and is fully committed to delivering it?

To summarise, then, there are three ways (three "lenses") through which each country's polio transition plan can be viewed and judged:

- The extent to which plans have been written, discussed, agreed, endorsed and implemented (the "lens" that scrutinises strengths and weaknesses in organisation, governance and resource mobilisation);
- The reality, credibility and feasibility of the plans, given the immediate and future prospects for a range of wider influences on them that are part of the country's political, socioeconomic and conflict context and operating environment (the "lens" of situational awareness);
- The current strength and readiness of the public health functions to achieve optimum levels of immunity, run a high standard of surveillance, and identify outbreaks early and close them down quickly and effectively (the "lens" of performance capability and strength of resilience).

DOES EVERYONE UNDERSTAND WHO DOES WHAT?

The need to use the third of these lenses is very closely tied into the current polio epidemiology. Many of the polio transition priority countries have, or recently have had, outbreaks of vaccine-derived poliovirus. Their essential immunisation coverage is suboptimal and has been further weakened by COVID-19. There are serious gaps in immunity (i.e. resilience is not strong). Many responses to outbreaks have not been good (i.e. performance is not strong).

The focus on polio transition countries' resilience and performance has been heightened by the move to accelerate polio transition at the end of 2020 that led to the "ramp down" of polio-funded staff in Africa. The restoration of most of the GPEI funding to 10 high-risk countries in Africa (plus Somalia) and the provision of WHO core budget funding where necessary to the other 37 countries in the Africa Region makes the polio eradication capability of these countries a key determinant of the success of the entire Polio Programme.

The difficulty of reducing polio funding and maintaining resilience is illustrated by decisions on funding preventive polio vaccination campaigns. For example, a decision not to fund a $3 million campaign for a high-risk population could lead to an outbreak later costing the GPEI $20 million in response funding. With the current budgetary pressures, it will always be tempting to cancel the pre-emptive campaigns, or shift them to a lower priority. Sometimes, it will turn out to have been a bad decision and a costly one.

It is enormously important to sustain the polio performance indicators, to make sure that nothing is missed. There are so many places for the poliovirus to break through at such a critical time in eradication. A breach of the polio defences can easily happen and, equally, be easily missed. There have been very substantial COVID-19-related disruptions in routine immunisation. There were no polio immunisation campaigns for a long time. Yet, with the shrinkage of the GPEI global footprint, the challenge of completing the job of ridding the world of polio is still on the table.

It is essential to be absolutely clear, country by country, who –the GPEI versus the WHO Immunisation, Vaccination and Biologicals department – is responsible for closing the immunity gap and monitoring what is happening. With many senior programme managers, frontline polio teams and ministries of health overwhelmed by COVID-19 case surges, urgent care needs, and vaccination, who will be doing the comprehensive strategic thinking necessary to assess where the gaps and vulnerabilities are?

Which programmatic element has the money to close the immunity gap quickly?

Who does what, where? And how will we know they are being effective? These are questions without ready answers. Yet, answers there must be.

Section

08

RECOMMENDED ACTION

BROADENING THE SCRUTINY OF COUNTRY PLANS

01 The WHO Polio Transition Teams should broaden the criteria for making judgements on progress. In addition to checking the stage in the planning process, the extent of retention and integration of polio functions and staff, and the budgetary independence of governments, they should also be assessing two other dimensions: a) the country's current level of polio capability and resilience; and b) the feasibility of delivering the plan in the light of political, economic, population, conflict and other situational factors.

RECOGNISING THE INTERDEPENDENCE OF ERADICATION AND TRANSITION

02 Polio eradication, as well as the steps beyond to a resilient and polio-free world, cannot be achieved without the coordinated, combined effect of activities that fall within the remit of each programme. This goes beyond the integration of teams at the operational level. It is recommended that the WHO Deputy Director General (who has the overall lead on polio transition) should sit on the Polio Oversight Board and that the WHO Head of Polio Transition should sit on the Strategy Committee of the GPEI. These two changes would connect more strongly polio eradication and polio transition at the policy-making and oversight levels. Such changes will also provide more scope for donor and wider partner engagement in key discussions and decisions; a relationship based on liaison and briefing is not enough.

ASSESSMENT OF IMPACT OF COVID-19 VACCINE SURGE CAPACITY

03 An impact assessment (and attendant modelling) should be made of the scale, scope and duration of the staffing required for the global COVID-19 vaccination programme and its impact on essential immunisation (including polio) for all polio-affected and polio-vulnerable countries. Broad brush estimates suggest capacity increases of four- or five-fold above programmatic baselines may be required.

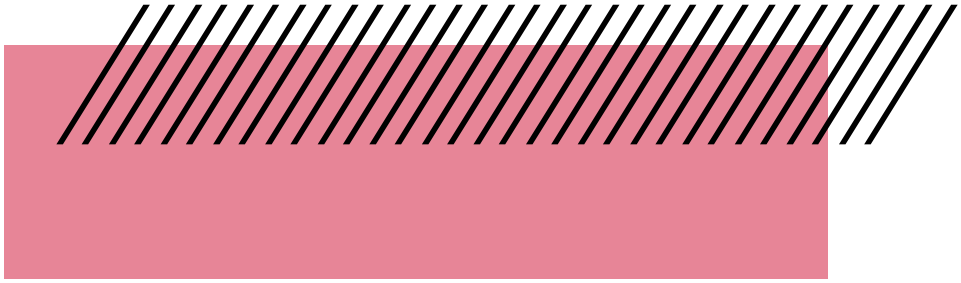
POLIO VACCINE LEADERSHIP TO MANAGE A COMPLEX STRATEGY

04 A global director focusing on polio vaccine implementation and a small support team should be established for a year to drive forward improvements, remove policy indecision, resolve dysfunctions, coordinate action across borders and regain governments' commitment to following agreed plans. The IMB made the same recommendation in its 18th report (July 2020) in anticipation of the strategic complexity of the introduction of the novel oral polio vaccine in limited supply, the need for countries to maintain the use of existing monovalent vaccines, and the associated deployment of inactivated polio vaccine. This recommendation was rejected by the GPEI at the time.

STEPPING UP TIMELY AND ASSERTIVE POLIO OUTBREAK RESPONSES

05 Each country government with a current, or recent, vaccine-derived poliovirus outbreak (or judged to be at risk of one) should receive an urgent, high-level communication, warning of the clear and present danger of failing to comply with GPEI standards and SAGE advice on response timescales and vaccine use. No response (while waiting for delayed supplies of the novel oral polio vaccine) or a delayed response (due to weak management) will create the certainty of international spread of this paralysis-causing virus.

This recommendation is synergistic with recommendation 4.



LONG-TERM FUNDING OF SURVEILLANCE: SECURING THE GLOBAL PUBLIC HEALTH GOOD

06 WHO, together with its key partners and major donors, should put together a high-level advocacy document to mobilise resources for a global comprehensive integrated communicable disease surveillance. The central vision of the document should combine the critical need for a vaccine-preventable disease surveillance system with a broader aim to realise a goal of protecting populations by widening the traditional scope to include other communicable diseases with a high burden (e.g. HIV and tuberculosis) and those with pandemic potential (defined or currently undefined). The latter has a very high political profile and a global health security dimension. Funds are more easily mobilised in these areas.

INTEROPERABILITY OF SURVEILLANCE SYSTEMS

07 WHO, working with other partners, should commission a group of data scientists and information technology experts to design an interoperability method to enable free-standing communicable disease surveillance systems to interconnect. This will enable analyses of patterns, trends, causation, outbreaks and emerging diseases in a way that spans borders. Interoperability of surveillance systems will not be possible without this data science preparatory work, including the setting of data standards.

This recommendation is synergistic with recommendation 6.

AN ORGANISING PRINCIPLE: CONTINUED FOCUS ON ZERO-DOSE

08 The current strategy of a combined approach by the polio and essential immunisation programmes for finding and vaccinating zero-dose children should be scaled up further, involve other partners notably Gavi, and receive targeted funding for initiatives in the poorest communities in the polio-endemic and polio-vulnerable countries. It is an excellent, outcome-oriented mechanism to overcome the weakness of using only vaccine coverage data and will also serve to advance the integration agenda.

This recommendation is synergistic with recommendation 4.

POLIO BIOSECURITY: THE NON-COMPLIANT GOVERNMENTS

09 WHO, at the highest level, should make contact with the five governments that have yet to identify or authorise a national authority for containment and ask them to comply urgently.

NIGERIA: RETURNING TO PEAK PERFORMANCE

10 The Nigeria Government working with polio partners should urgently review the capacity, capability, quality, strategic focus and resourcing of its public health and primary care programmes to establish high levels of immunity to poliovirus. This should go beyond relying on the novel oral polio vaccine to deal with outbreaks. Special attention should be given to identifying and reaching zero-dose children. The country's best public health leaders and staff should be deployed in key positions and tasked with returning their programmes to peak performance.

POLIO TRANSITION
INDEPENDENT MONITORING BOARD