



Role of the polio network in COVID-19 vaccine delivery and essential immunization

**Lessons learned for successful
transition**



**World Health
Organization**

Role of the polio network in COVID-19 vaccine delivery and essential immunization: lessons learned for successful transition

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Abbreviations

AEFI	adverse event following immunization
AVADAR	Audio-Visual Acute Flaccid Paralysis Detection and Reporting
bOPV	bivalent oral polio vaccine
EPI	Expanded Programme on Immunization
IA2030	Immunization Agenda 2030
IDSR	Integrated Disease Surveillance and Response
nOPV2	novel oral polio vaccine type 2
tOPV	trivalent oral polio vaccine
WHO	World Health Organization

1. Executive Summary

“The COVID-19 pandemic underlined the importance of preparedness for health emergencies, the value of immunization and disease surveillance, the need for building resilient health systems. Polio transition is our chance to retain the polio expertise to build back stronger and more robust health systems.”

Dr Zsuzsanna Jakab, WHO Deputy Director-General¹

Over the last two years, the COVID-19 pandemic has dominated the public health agenda. The new virus revealed major gaps in health systems at the national and subnational levels. These gaps are felt more acutely in low- and middle-income countries.

As the world continues to respond to the pandemic, there is renewed focus on the need to close these gaps, and to build stronger, more equitable and resilient health systems. Building a skilled public health workforce that is well equipped to prepare for and respond to future health emergencies and to provide essential health services is at the centre of these efforts.

In many low-resource settings, the network set up to eradicate polio is a critical component of the public health workforce. Building on their historic contributions to global health, polio workers have been at the front line of pandemic response and immunization recovery efforts, including the massive endeavour to deliver COVID-19 vaccines. In June 2021, Group of Seven health ministers acknowledged their critical role in reaching vulnerable communities during the pandemic (1). Their support in areas ranging from coordination and training to data management and community engagement has reiterated their value as an agile and experienced public health workforce able to pivot to support national health programmes.

The work of the polio workforce during the pandemic has above all proved the case for polio transition on a global scale. As the world moves closer to eradication, the financial resources of the polio programme are increasingly concentrated on endemic countries and stopping polio outbreaks. This puts the future of the polio network at risk in many low- and middle-income countries that are now polio free, and risks backsliding on both polio eradication and the many immunization-related goals that the network routinely supports. This double jeopardy can be mitigated if there is a sustainable transition that will strategically keep or repurpose these networks to serve broader public health priorities.

Looking ahead, we have a shared responsibility to ensure a sustainable transition – one that enables us to build stronger immunization programmes, protect against outbreaks, and deliver essential health services to communities.

¹ Polio transition Member State information session, May 2021.

2. Role of the polio workforce in a changing global vaccine and immunization landscape

“There have been some outstanding examples of leveraging polio outbreak response to support COVID-19 vaccine roll-out. In Nigeria for example, co-delivery of nOPV and COVID-19 vaccines at the same facility has reduced the number of visits families need to make to health centres.”

Dr Katherine O’Brien, Director, WHO Immunization, Vaccines and Biologicals Department²

The COVID-19 pandemic has renewed focus on the essential role of the polio eradication network in immunization delivery. National immunization programmes are under enormous pressure to deliver the COVID-19 vaccine, while trying to avoid backsliding on essential immunization gains due to the impact of the pandemic. As of December 2021, more than 600 million doses of COVID-19 vaccine had been shipped by the COVAX initiative to 144 countries (2). National governments have prepared their health systems to manage increased vaccine supply (3). Simultaneously, incredible efforts are being made to deliver vaccines to children who missed out on routine immunizations during the first two years of the pandemic. In these activities, the polio workforce is playing a vital supportive role, underlining its value for broader vaccine priorities.

The Immunization Agenda 2030 (IA2030), which was launched in May 2021, lays out a strong global framework for vaccines and immunization (4). IA2030 places immunization programmes at the centre of primary health care, as one of the most cost-effective health investments. A key goal of IA2030 is to overcome challenges to reach and fully vaccinate “zero-dose” communities. Gavi, the Vaccine Alliance’s strategic plan, Gavi 5.0 (2021–2025), has an equal focus on zero-dose children, reflecting determination to address inequities to overcome barriers to access (5). These strategies

aim to respond to stagnation in immunization coverage, which left 17% of the world’s children consistently under-protected or unprotected in 2020. COVID-19 exacerbated this gap, leaving 3.7 million more children under-vaccinated or unvaccinated in 2020, compared to 2019 (6). Concerted, collaborative efforts are needed now, and in the years ahead, to minimize the negative impacts of the pandemic on overall childhood vaccination.



Caregivers maintain physical distance whilst waiting for routine immunization services in Bangladesh. Reaching all under-protected and unprotected children with vaccines is a priority of IA2030. Credit: WHO Bangladesh / Jubair Bin Iqbal

² 5th Meeting of the Transition Independent Monitoring Board.



Vaccination during a national polio and measles immunization campaign in Somalia. Polio staff are experienced at reaching zero-dose children, who often live in remote or conflict-affected areas. Their diverse skills and strong relationships with communities make them indispensable for broader public health. Credit: WHO Somalia / Ismail Taxta Ildoog

The integration of polio expertise, knowledge and assets into broader immunization programmes may help address this backsliding. Polio teams are highly skilled and focused on reaching “every last child” in the most vulnerable settings. They have strong partnerships with communities and local actors. In recent years, the polio programme has taken major steps towards overcoming barriers to immunization, including those related to gender and building trust with communities (7). The whole systems approach advocated by IA2030, underlining government ownership and integration, aligns with the aims of sustainable polio transition. In Nigeria, for example, the government aims to utilize polio assets to work on three core health priorities: essential immunization, disease surveillance and outbreak response, and primary health care.³ In India, the National Polio Surveillance Project has been renamed the National Public Health Support Programme, with an expanded remit that focuses on overall population health. By expanding the role of the polio networks and

using their skills more widely, countries aim to sustain vital parts of this workforce to make progress on national health priorities.

Vaccine-preventable disease surveillance is the “eyes and ears” that should guide vaccination programmes to prioritize and deliver vaccines with equity. However, an efficient disease surveillance system needs locally based staff who are well trained and equipped with communication systems and laboratory support. It takes many years to develop and nurture an efficient disease surveillance network. Strategies for strengthening disease surveillance, including the Global Strategy on Comprehensive Vaccine-Preventable Disease Surveillance (8) and the African Regional Strategy for Integrated Disease Surveillance and Response 2020–2030 (9), recognize the valuable role that polio staff can play in achieving an integrated surveillance system that functions for all priority vaccine-preventable diseases.

³ Nigeria costed polio transition plan, 2020–2023.

Demonstrating this, in the World Health Organization (WHO) African, South-East Asia and Eastern Mediterranean Regions, polio surveillance personnel supported by the Global Polio Eradication Initiative have expanded their roles in disease surveillance beyond polio to include such diseases as measles, rubella, neonatal tetanus, Japanese encephalitis, yellow fever, meningitis, rotavirus diarrhoea and invasive bacterial diseases. They have supported routine and supplementary immunization activities and have also supported outbreak and emergency response efforts. Last but not least, they have amply demonstrated

their value in COVID-19 surveillance and vaccination response in all countries where such networks exist.

Looking ahead, a successful decade for immunization will be defined in part by the establishment of more integrated, responsive and resilient health systems that can detect outbreaks and effectively deliver vaccines to populations over the life course. With their adaptable skills and relationships with local communities and professional networks, which have been built up over the years, polio assets are well positioned to play a vital role in achieving this goal.

Strategic shifts in polio transition to align with the changing global landscape

Over the last three decades, the polio programme has set up a network with benefits that extend far beyond eradicating polio. Polio transition aims to build upon and sustain these critical capacities to continue to serve broader health priorities. The Strategic Action Plan on Polio Transition (2018–2023), which was presented to the World Health Assembly in May 2018, provides the global framework for this work, with a focus on three core aims: to sustain a polio-free world; to strengthen immunization systems, including surveillance for vaccine-preventable diseases; and to strengthen emergency preparedness, detection and response capacity (10).

Since 2018, the global health landscape has changed dramatically, including challenges in eradicating polio and the devastating impact of the COVID-19 pandemic on health systems. These changes have led to several strategic shifts, allowing transition efforts to remain fully aligned with and attuned to country needs.

One of these strategic shifts is taking a more risk-based approach to transition, tailored to regional and country contexts, with more realistic scope and timelines for implementation. Another critical new element is the increasing engagement of civil society, especially at the country level. Civil society organizations are playing an important role in supporting advocacy and resource mobilization efforts to strengthen government ownership and accountability. Furthermore, polio transition activities are fully aligned with the broader health agenda. For instance, sustainable transition from donor-supported to country-driven programmes is a core component of IA2030. Similarly, there is strong focus on primary health care, building upon the specific strengths of the polio network to deliver immunization and other health services to the most remote communities. A strong focus on integration is another important strategic shift, which aims to build synergies and find efficiencies among different health programmes and initiatives.

The Strategic Action Plan on Polio Transition will continue to be adaptive and responsive to these changes and other new and emerging needs.



A polio worker speaks to a family in Borno State, Nigeria. In Nigeria, polio personnel have played a vital role to educate communities on COVID-19 and register individuals for their vaccination, underlining the necessity of sustaining these networks. Credit: WHO / Andrew Esiebo

3. Contributions of the polio workforce to essential immunization

The contributions of polio staff and assets for COVID-19 vaccination and immunization recovery builds upon the historical support provided by the polio programme to vaccination and disease surveillance efforts.

A strength that has become more evident during the pandemic is the historical ability of the polio network to step up in the most difficult of circumstances. In Nigeria, the polio emergency operations centre and surveillance infrastructure was used to detect, track and halt the 2014 Ebola outbreak (11). In conflict-affected areas, including Deir ez-Zor and Raqqah governorates in Syrian Arab Republic (12) and Mosul, Iraq (13, 14), the polio programme was amongst the first United Nations programmes to deliver health services following the re-establishment of access. In Papua New Guinea in 2019, polio staff overcame extraordinary logistic and security challenges to deliver integrated outbreak response for polio, measles and rubella, reaching remote communities by helicopter, boat and foot (15). Thanks to their experiences tackling health emergencies, polio staff are well equipped to respond to new and complex health challenges.

The polio networks have also been utilized to support broader immunization delivery. This support over time has become wider in scope and more systematic. Integrated campaigns, where multiple antigens are delivered at once, are an important way of reaching communities with broader immunization services. The polio workforce often supports these campaigns, especially in difficult-to-access contexts – in 2020, for instance, over 459 000 children in Somalia were reached during a joint polio and measles campaign, with co-delivery of deworming medication and vitamin A (16). In Gavi-eligible countries, this extensive network has played a major role in the introduction of new vaccines, such as rotavirus, pneumococcal conjugate and human papillomavirus vaccines, by providing logistics, data management, cold chain support, transportation, training, monitoring and social mobilization for these interventions (17).

The polio programme is also known for its ability to detect the poliovirus in the most difficult places, using its sensitive and far-reaching surveillance system. Making use of this for other diseases, staff use polio surveillance visits to check health records in medical clinics for cases of measles and other common childhood illnesses. The geographical information system software, and the Open Data Kit application for recording polio surveillance data, are used to detect, record and respond to multiple diseases. The polio workforce also performs an active surveillance role in outbreak and emergency situations. For example, polio staff played a critical role in monitoring, analysing and responding to an outbreak of cholera in Nigeria in 2018 (18), whilst in 2017, surveillance medical officers were regularly deployed from Bangladesh, Nepal and India to Cox's Bazar, Bangladesh, to strengthen vaccine-preventable disease surveillance and support vaccination campaigns for Rohingya people (19). During the pandemic, polio surveillance staff have applied their experiences to detect and monitor cases of COVID-19.

Thanks to this diverse set of operations, polio staff are experts in coordinating with a wide range of actors, including government, civil society, nongovernmental organizations and other groups, to effectively deliver broad interventions. Country-specific polio programme innovations, such as the hubs system established in the Lake Chad basin in 2011, have brought together partners to facilitate the distribution of resources for immunization and other public health interventions, in order to improve immunization coverage (20), whilst in Nigeria, coordination with other partners enabled the delivery of a more comprehensive primary health care package (21). In the early stages of the pandemic, having a system in place that could be immediately deployed and operational was a strong asset for countries.⁴

Looking ahead, these examples lay the ground for further opportunities for integration, building on the synergies developed during the pandemic.

⁴ Personal correspondence, Dr Richard Mihigo, WHO Immunization and Vaccines Development Programme Coordinator for Africa.



Polio personnel undertake Integrated Public Health Team (IPHT) training in Sudan. As of 2022, IPHTs are being set up in the country to bring together broad WHO expertise under an expanded public health remit, to serve the needs of populations more effectively. Credit: Brahim Ahmad / WHO Sudan

Integration on the pathway to transition

In the new Polio Eradication Strategy 2022–2026, the polio programme commits to stronger integration with other programmes, with the intention of achieving polio eradication, improving overall health outcomes and solidifying existing collaboration (22). In particular, the strategy recognizes the value of working more closely with essential immunization programmes. This is because polio and essential immunization programmes share a common goal – to reach and fully immunize chronically missed children in key geographies.

Cross-cutting integration efforts have already been accelerated by the COVID-19 pandemic, resulting in efforts to, for instance, identify urgent actions that could be taken to strengthen immunization programmes (23). In Pakistan, close collaboration between the polio and immunization programmes for the November 2021 nationwide measles-rubella and oral polio vaccine catch-up immunization campaign ensured that over 93 million children were reached with vaccines. At the global level, coordination of different catch-up and supplementary immunization campaigns for vaccine-preventable diseases and COVID-19 is critical to ensure that country capacity is not overloaded and opportunities for collaboration are recognized. Through working together, the polio and essential immunization programmes can become better equipped to reduce the number of children who are not immunized against polio or other vaccine-preventable diseases.

Integration is also an essential step towards the long-term, sustainable transition of polio functions to other health priorities and national health systems. By aligning its priorities with key global vaccine and immunization strategies, including the Immunization Agenda 2030 and the 2021–2025 strategy of Gavi, the Vaccine Alliance, the Global Polio Eradication Initiative recognizes the broader role that polio workers play in identifying and reaching zero-dose communities, as well as in disease surveillance and other operational areas. Integration offers a way to both improve immunization outcomes now, and lay the groundwork for polio staff to contribute their skills differently in future.



Polio vaccinators travel on camel during the November 2021 integrated measles-rubella and polio campaign in Pakistan. Close collaboration between the polio and immunization programmes helped to reach over 90 million children. Credit: Gavi/2021/Asad Zaidi

4. Contributions of the polio network to COVID-19 vaccination

More than 500 staff in the WHO African Region supported national governments with COVID-19 vaccination activities in 2021, alongside hundreds of staff in the South-East Asia and Eastern Mediterranean Regions. The polio workforce is primarily located in these three regions, often working in rural areas where there are limited numbers of health workers with sufficient experience to take on the task of preparing for and executing the COVID-19 vaccine delivery. Building on their contributions during the initial emergency stage of the pandemic response, the workforce continues to support diverse areas of the COVID-19 vaccination efforts, including coordination, cold chain management, community mobilization, training and microplanning, and adverse event following immunization (AEFI) surveillance.

In contrast to the first months of the pandemic response, when all polio vaccination campaigns were suspended, polio workers have supported the COVID-19 vaccine roll-out in addition to their tasks related to polio eradication. In January 2021, the Polio Oversight Board issued a statement committing “the polio programme’s continued support for the next phase of COVID-19 response, COVID-19 vaccine introduction and delivery, through existing assets, infrastructure and expertise in key geographies” (24). The Polio Oversight Board underscored the mutually beneficial opportunities for the polio programme to both contribute to and learn from the COVID-19 collaboration, especially in the areas of integrated coordination, planning and service delivery.

This collaboration has been exemplified at the community, national, regional and global levels. At the community level, the polio workforce has assisted partners to create and disseminate messaging to increase trust in the COVID-19 vaccine. At the country level, partnerships have been established between the polio eradication and essential immunization programmes on data management and information sharing. At the regional level, polio staff have been a part of the management of COVID-19 vaccination efforts, as well as country vaccine readiness assessments. At the global level, COVID-19 presented an opportunity to strengthen

integration in specific technical areas between the polio and essential immunization programmes, where there is particular scope for urgent, feasible and achievable actions (23).

The following sections and annex describe the extensive support provided by the polio network to COVID-19 response and recovery in 2021. In the African Region, a qualitative and quantitative survey was sent to WHO polio eradication programme staff in June 2021, to gather data on their contributions to COVID-19 response (25). In the Eastern Mediterranean Region, country office focal points provided details of how polio staff in their country had contributed to COVID-19 vaccine rollout and recovery. In the South-East Asia Region, a desk review was conducted, and country offices shared written information about the contributions of staff to COVID-19 response. In all three WHO regions, interviews were undertaken with WHO staff who consented to provide greater insight into their work for the COVID-19 vaccine rollout. Figures and narrative are sourced from survey responses, regional and country office inputs, and interviews, validated by the WHO regional offices. This consolidated information provides a rich description of the significant work undertaken by the polio network for the COVID-19 response and recovery.

4.1 African Region

"As we continue to implement polio transition, our shared objective is to stop transmission of all polioviruses by 2023, and to integrate the polio infrastructure to strengthen broader disease surveillance and outbreak response systems as well as immunization services."

Dr Matshidiso Moeti, WHO Regional Director for Africa⁵

The roll-out of COVID-19 vaccines in the African Region is slowly picking up pace, as more vaccines become available through the COVAX facility and the African Union's Africa Vaccine Acquisition Trust (26). Nonetheless, with only 7% of the population fully vaccinated as of November 2021, the continent remains at high risk (27). Achieving high coverage requires country commitment to dose sharing and equitable distribution, which can be bolstered by ongoing investments in health system strengthening.

In 33 of the countries where the polio programme has a significant footprint, real-time data and interviews with polio workers demonstrated their contributions to COVID-19 vaccine roll-out (25). Polio workers contributed to COVID-19 vaccination work in surveillance (77%), training (70%), coordination (57%), community engagement (49%) and data management (46%). Most staff were based at the provincial level. Regarding time allocation, 39% of staff reported spending 20–50% of their time on the COVID-19 vaccine roll-out, whilst 37% contributed more than 50% of their time.

The polio workforce also provided administrative and logistic support and helped to develop guidance documents. In some locations polio staff have taken on considerable responsibility as the key WHO focal point for coordinating overall COVID-19 vaccination efforts. This work has been particularly noteworthy as, in contrast to the early months of the pandemic, polio vaccination and other immunization campaigns are now largely resumed. In addition to their COVID-19 contributions, many staff members are undertaking urgent work on immunization recovery efforts, to catch up with the backlog of children who missed their vaccinations during the first year of the pandemic.

Specific examples of support to COVID-19 vaccination include the following.

- In Angola, Ethiopia and Nigeria, polio teams supported the collection and investigation of AEFI data, and trained the surveillance officials in charge of AEFI detection.
- In Cameroon, polio workers helped develop communication tools to promote the COVID-19 vaccination campaign.
- In Chad, the polio workforce helped to supervise COVID-19 vaccination sites at the district level.
- In the Democratic Republic of the Congo, polio staff evaluated vaccine storage capacities and supported the maintenance of the cold chain.
- In Ethiopia, polio staff provided training for Expanded Programme on Immunization (EPI) health staff on COVID-19 vaccine handling, management and administration, and promoted vaccine uptake.
- In Nigeria, polio teams assisted with data cleaning and documentation of lessons learned from phase 1 of the COVID-19 vaccine roll-out.
- In South Sudan, the polio workforce assisted with the formation of state-level task forces for COVID-19 response, vaccination and advocacy efforts.

⁵ Seventy-first session of the WHO Regional Committee for Africa.

Building vaccine confidence in South Sudan

Polio workers in South Sudan have used diverse methods to build trust and reduce COVID-19 vaccine hesitancy, using the lessons learned from polio eradication. Dr Jiel Jiel, WHO South Sudan state polio officer, explained: “For the COVID-19 roll-out, the implementing partner turned to the polio programme, as they know we have experience in delivering vaccines. The expertise from the top to the bottom of the polio team was utilized.”

“We received the consignment of COVAX on 9 June 2021 and the roll-out was planned to begin on 14 June. We received the vaccines at the airport, together with partners and the Ministry of Health, and then we delivered them. Before that there were a lot of tasks to complete for coordination and planning. WHO was in the middle of this, providing support. The role of WHO was to mobilize the partners and use our expertise to make things move. We chose three hospitals for vaccine delivery.”

“A daily experience was vaccine hesitancy. We had to mobilize people to break down myths and ensure that we led by example. Initially, we tried open-air messages to reach as many people as possible, but loudspeakers in the market were not effective. Innovative approaches for building vaccine trust included adverts on radio stations, targeted social mobilization activities and a presentation to government officials. When we finished our presentation, the governor promised that he would be the first to get the vaccine at the campaign launch.”

“In this sense, every day was different. We had to work with the United Nations Children’s Fund and the government to vaccinate health staff alongside the community, to show communities that everyone was getting the same vaccine. In addition to all this, we reviewed the vaccination coverage and provided supervision at the sites, monitored for adverse events following immunization and looked for ways to improve.”



Dr Jiel Jiel and colleagues at the launch of a COVID-19 vaccination event in South Sudan. The work of the polio team helped to ensure adequate preparation for the successful rollout of the vaccine. Credit: WHO South Sudan

Reaching populations in Ethiopia

The prior emergency experience of polio staff has been critical for the COVID-19 response in Ethiopia. Dr Eshetu Wassie, WHO Ethiopia national polio officer said: “In every disease outbreak of a graded nature – including the nationwide cholera outbreak in 2017, the COVID-19 pandemic and the effects of the ongoing humanitarian response in northern Ethiopia – polio staff are amongst the first WHO workforce to be repurposed to respond.”

“The biggest value add of the polio team for broader public health is that it has helped set up the platform for public health surveillance in general, and case-based surveillance in particular. This includes yellow fever surveillance, COVID-19 surveillance and the Integrated Disease Surveillance and Response (IDSR) framework – all of this is really supported by the polio team.”

“The second area is the capacity-building – the polio team is always at the forefront of trainings on IDSR and other vaccine-preventable diseases, routine immunization and other public health emergencies.”

“The third area is that as a polio team we provide added value in active case search. We are required to visit 15 health facilities per month. These facilities provide a range of preventive and curative services. Even if the purpose of the visit is for polio-related activities, we provide active case search for other diseases and we monitor and supervise immunization performance. During these visits, we provide mentorship and on-site sensitization of health workers – these trainings focus not only on polio but also routine immunization and prevailing diseases, for instance if there is a yellow fever outbreak. We also supervise the cold chain system and the data quality of the system.”

“The fourth area is to do with outbreak detection and response – for polio or other diseases, including for instance dengue fever. We really train and help the health system to detect and respond to emergencies. There is no outbreak response that is done in the absence of the polio team. We are everywhere.”



In Angola, polio staff contributed to COVID-19 vaccination by registering and training vaccination teams, supporting vaccine logistics and assisting with the organization of COVID-19 vaccination sites. Credit: WHO Booming / Carlos Cesar

4.2 South-East Asia Region

“The network has made critical contributions to the COVID-19 response with the help of its human, logistics and laboratory resources, which must continue to be leveraged.”

Dr Poonam Khetrapal Singh, Regional Director, WHO South-East Asia Region ⁽¹⁹⁾

In the five countries prioritized for polio transition in the South-East Asia Region, hundreds of personnel of the integrated immunization and surveillance teams are contributing to the COVID-19 vaccine roll-out, supporting governments to deliver vaccines efficiently to populations. As the Region most advanced in transitioning polio assets to serve broader health priorities, including the COVID-19 pandemic, the South-East Asia experience has shown the extent to which polio skills and infrastructure can be adapted to serve acute needs.

In the South-East Asia Region, integrated immunization and surveillance teams supported the development of guidelines for rolling out mass COVID-19 vaccination, assisted with pre-campaign preparatory work, monitored vaccination coverage and facilitated real-time reporting, data management and problem-solving during campaigns ⁽¹⁹⁾.

In the five priority countries, there has always been a single integrated immunization and surveillance network, with the focus gradually shifting from polio eradication towards supporting measles elimination and other immunization priorities. With polio transition, the scope of work is being broadened in many cases to provision of primary health care and supporting health system strengthening.

The challenges associated with the pandemic, such as managing the different cohorts eligible for COVID-19 vaccination and responding to each new wave of infections, have revealed the specific strengths of the network. The work of staff during the pandemic proves that sustaining polio personnel, and using their skills differently, can pay dividends to country health systems.

Specific examples of support to COVID-19 vaccination include the following.

- In Bangladesh, more than 70 surveillance medical officers engaged in planning, coordination and decision-making committees, meetings and expert groups on COVID-19 vaccination. Personnel have played a vital role in advocating vaccination of Rohingya refugees, and have taken part in subnational vaccine and logistic planning.
- In India, polio and immunization staff supported guideline development, selection of appropriate vaccination sites and assessment of cold chain capacities. Ahead of the first roll-out of the COVID-19 vaccine, they assisted state authorities with a “dry run” of the campaign.
- In Indonesia, staff have used their experience reaching remote communities and introducing inactivated polio vaccine into the routine immunization schedule to inform planning for the COVID-19 vaccine roll-out.
- In Myanmar, three national polio and immunization officers have supported EPI staff with the reporting and investigation of AEFI cases, whilst 21 data management assistants have provided technical assistance to state and regional immunization, surveillance and response teams in the areas of data collection, data entry and daily reporting of COVID-19 surveillance data and test results.
- In Nepal, 15 polio-funded surveillance medical officers are assisting with monitoring COVID-19 vaccination sessions, taking corrective action and conducting specific surveys to validate coverage levels in priority groups, including health workers and the elderly population.

Building health worker capacity in India

The Government of India's commitment to and vision for sustaining the polio infrastructure and utilizing its expertise for broader public health goals has positioned polio transition in a key role nationally and subnationally, especially during the COVID-19 pandemic. Following the polio-free certification of the WHO South-East Asia Region, members of the National Public Health Support Programme (previously named the National Polio Surveillance Project) were repositioned to work on more diverse areas, including health system strengthening. This expanded remit, which forms a cornerstone of India's national transition plan, has proved critical for the COVID-19 vaccine roll-out.⁶

In 2021, National Public Health Support Programme personnel stepped up to help train more than 1.3 million health workers involved in India's immense COVID-19 vaccination effort. Dr Danish Ahmed, WHO India national professional officer for immunization, explained: "There are around 150 000 government vaccinators, plus private vaccinators and many social mobilizers amounting to a number close to 1.3 million. We have supported training and retraining of this health workforce on the evolving programme guidelines."

"In the first wave of trainings, we trained our health care workers on how to set up and manage a vaccination session. Then we had a second set of trainings, which were largely focused on details around the approved COVID-19 vaccines. We also built their capacity on adverse events following immunization."

"In India, we are using a new platform to register beneficiaries for COVID-19 vaccination. The cohorts we are dealing with are also new, as most vaccinators were used to childhood vaccination. We had to adapt to the challenges presented when working with senior citizens."

"The National Public Health Support Programme has also played a key role in monitoring the vaccination activities, using the lessons learned from polio eradication. For instance, we are using the polio and immunization software Open Data Kit to record data and convey it in real time to different levels to enable timely corrective actions. As we speak, we have monitored more than 450 000 COVID-19 vaccination sessions."



The National Public Health Support Programme (NPSP) in India played a central role in the COVID-19 vaccine rollout. Across the country, hundreds of thousands of vaccinators and social mobilizers have been trained by this experienced network initially set up to eradicate polio. Credit: WHO India

⁶ Personal correspondence.

Using polio outbreak response to inform COVID-19 vaccine rollout in Indonesia

In Indonesia, experience with outbreak response, as well as new vaccine introductions, gave the teams the tools to assist with the COVID-19 vaccine introduction.

Dr Olivi Ondchintia Putilala Silalahi, WHO Indonesia national professional officer for routine immunization, and a team member of the WHO Indonesia Incident Management Team for COVID-19 vaccination, explained: “For planning, coordinating and collaborating, we used our previous experience in introducing new vaccines: switching from trivalent oral polio vaccine (tOPV) to bivalent oral polio vaccine (bOPV), and also the introduction of inactivated polio vaccine into the routine immunization schedule. We applied this experience for the COVID-19 vaccine, especially at the subnational level.”

“I think the value add from polio eradication is our experience in not just targeting the populated areas, but also targeting the high-risk and hard-to-reach areas. The polio and immunization teams already have the microplanning capacity and strong collaboration with other sectors to implement the vaccination.”

“During the 2019 polio outbreak, I was deployed for a short time in the remote, mountainous areas of Papua New Guinea. It taught me that the experiences of urban people are very different to rural areas. Rural communities generally welcome vaccination, but there can be challenges, and this has been the case for COVID-19 vaccination. A lot of people who live in the mountains are socioeconomically disadvantaged, and have a low level of education. The health promotion and social mobilization part of the pandemic response has been challenging and requires more effort, but our previous experiences and successes for polio eradication have given us the tools to better reach them.”



Dr Olivi inspects a COVID-19 vaccination site in Indonesia. Her experiences conducting polio outbreak response have helped to equip her for COVID-19 response, vaccination and recovery. Credit: WHO Indonesia

4.3 Eastern Mediterranean Region

"We need to use the momentum from the pandemic response to achieve lasting gains in health security and accelerate progress towards universal health coverage, strengthening our health systems, and developing resilient communities."

Dr Ahmed Al-Mandhari, WHO Regional Director for the Eastern Mediterranean (28)

The Eastern Mediterranean Region, the only Region that remains endemic for wild poliovirus, retains a significant Global Polio Eradication Initiative footprint. The polio workforce is a mainstay of the health system in several conflict-affected settings, whilst in other countries, their far-reaching presence and extensive experience have placed polio workers in a unique position to play a critical role in COVID-19 response.

In the Region, the contributions of the polio workforce have focused primarily on continued surveillance for COVID-19 cases, as well as targeted technical support to COVID-19 vaccination, notably in Iraq, Somalia, Sudan, Syrian Arab Republic and Yemen. These efforts, undertaken alongside regular polio eradication work, will continue to be vital whilst the Region remains highly vulnerable to the COVID-19 virus. As of November 2021, 21.1% of those living in the Region were fully vaccinated, with a majority of these doses administered in just six high-income countries.

In Pakistan, the role of the polio eradication Sehat Tahaffuz 1166 helpline has been expanded to respond to rare cases of AEFI related to COVID-19 vaccination. In several countries, including Afghanistan, Pakistan, Sudan and Yemen, staff continue to play a key role in COVID-19 contact tracing. In addition, the strong community mobilization networks set up to eradicate polio are paying dividends for building trust in COVID-19 vaccination.

Specific examples of support to COVID-19 vaccination include the following.

- In Somalia, polio personnel played a critical role in COVID-19 vaccination, including conducting training of trainers for both technical and non-technical staff, recruiting vaccinators and developing microplans in cooperation with Ministry of Health staff.
- In Afghanistan, polio teams continue to use their visits to health facilities to train acute flaccid paralysis surveillance focal points on identifying and reporting suspected COVID-19 cases.
- In Pakistan, polio workers led the development of the COVID-19 data management system and continuously managed it by extracting and analysing data and updating the COVID-19 case dashboard.
- In Sudan, 13 polio medical officers were directly involved in planning COVID-19 vaccination campaigns, including coordination with partner agencies, conducting training of vaccinators and providing comprehensive technical support.
- In Yemen, 47 Ministry of Public Health and Population surveillance staff subsidized by the polio programme have continued to support COVID-19 surveillance and the training of surveillance staff and rapid response teams.



Through 2021, the Sehat Tahaffuz 1166 helpline in Pakistan, set up to answer queries about polio vaccination, continued to address questions on COVID-19 from the general public. At the community level, polio health workers have used polio immunization opportunities to encourage caregivers to take up the COVID-19 vaccine. Credit: WHO Blink Media / Saiyna Bashir

Using polio lessons learned for COVID-19 vaccination in Somalia

The polio workforce in Somalia is contributing to keeping the country free from wild poliovirus, and will continue to play an additional role in delivering routine immunization services, disease surveillance, emergency response and supporting primary health care services to vulnerable communities as the country moves towards transition. In 2021, working hand in hand with the immunization and emergency teams, the polio team stepped up to support COVID-19 vaccination activities.

Mohamud Shire, WHO Somalia polio eradication officer working in the central zone of Somalia, explained: "Polio staff are an asset for all integrated activities. I have worked as a supervisor for Wadajir district health facilities for the COVID-19 vaccine roll-out. My daily activities have included visiting each facility, evaluating the cold chain and ensuring adequate vaccine stock."

“The expertise of the polio programme in cold chain management, including temperature control and vaccine vial monitoring, has been important in ensuring the success of the vaccination campaigns.”

“Regional and district polio officers have acted as supervisors of the vaccine roll-out. Some of the polio health workers have worked as COVID-19 vaccinators, whereas others have been social mobilizers.”

The long experience of the polio team has also been vital. Shire explained: “In 2013 we held a polio vaccination campaign for older people, and that experience has helped us to effectively deliver COVID-19 vaccine to an older population.”

Dr Abdillahi Farah, WHO Somalia EPI officer, agreed, noting that the polio team’s expertise and reach makes their contributions to the COVID-19 vaccination invaluable. Polio personnel were an essential part of technical working groups focused on AEFI training, monitoring and supervision. The large footprint of the polio programme in the regions and districts means that they represent WHO in these locations, offering opportunities for the WHO country office to deploy these staff to support other priority public health programmes.

Dr Farah explained: “Polio personnel play an important role in sharing reports on the activities ongoing in remote areas. In addition, the polio programme knows where in the country communities are located, and have detailed microplans. So we use the polio numbers to estimate the population in different areas, and deliver the right number of vaccines.”



In addition to providing broad logistics and planning support for the COVID-19 vaccine roll-out, polio staff in Somalia helped to select COVID-19 vaccinators to ensure that all candidates had the appropriate qualifications and experience. Credit: WHO Somalia / Ismail Taxta Ildooq

5. Conclusion: Lessons learned for a successful transition

COVID-19 response and recovery efforts will continue to be a key focus in the coming years. Countries need to respond to this transformed health landscape, building on the lessons learned from the pandemic.

The role of the polio workforce in the COVID-19 vaccine delivery and immunization recovery efforts offers some valuable lessons for polio transition and the future sustainability of these networks.

First, COVID-19 has proven the importance of strong immunization programmes that can deliver vaccines across the life course. Polio personnel have specific strengths in childhood vaccination, but the pandemic has shown that their cross-cutting skills – including coordination, disease surveillance, monitoring, data management and microplanning – can be utilized to support broader vaccine delivery to make progress towards global immunization goals. Building on the existing networks, and using their skills, has proven to be both more cost effective and logistically less demanding than establishing a new workforce.

Second, the pandemic has underlined the value of creating synergies and fostering integration among various health initiatives. During the COVID-19 pandemic, polio workers have shown their ability to apply their skills and knowledge to fight emergent threats, in close collaboration with others. This shows that with an integrated approach it is possible to achieve more with limited resources, including drawing on existing networks in pursuit of shared objectives. Integration can maximize the abilities of national systems to make progress on current priorities, and cope with future health challenges.

Third, the pandemic has revealed the importance of national ownership and political commitment. In countries where polio eradication has been a success, and where pandemic response has been strong, government ownership has been the key determinant. Strengthening national health systems to become self-sufficient and more resilient is critical to prepare for future pandemics and outbreaks, and is the ultimate goal of polio transition.

Fourth, sustainability is the key for long-term success. Long-term, predictable funding is critical to sustain the networks built by the polio programme, as the Global Polio Eradication Initiative withdraws its support from countries that are polio free. As of 2022, many countries have transitioned out of Global Polio Eradication Initiative support, but they will still need assistance from WHO and other partners for disease surveillance, delivery of vaccines and emergency preparedness and response. To sustain capacity, polio staff and infrastructure in these countries have been fully integrated into other public health programmes. Long-term sustainable financing is essential for WHO to fulfil its mandate to support countries, and to ensure that the knowledge, expertise and lessons learned from polio eradication continue to serve populations. This is especially vital as governments face long-term financial constraints on their health spending due to the pandemic.

Whilst presenting huge challenges, the COVID-19 experience has demonstrated the indispensability of polio workforce and assets to strengthen essential immunization in low resource settings. As we move forward, we must build on these lessons to achieve more resilient health systems.

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Annex: Country highlights in 2021

AFRICAN REGION

Angola



- At least eight polio staff were engaged in COVID-19 surveillance (87%), coordination (87%) and training (100%), with support also provided for logistics (37%), guideline development (13%) and community engagement (13%).
- Specific contributions to the COVID-19 vaccine roll-out included registering and training vaccination teams, supporting vaccine logistics and registering individuals to receive the vaccine. The polio staff also assisted with the organization of COVID-19 vaccination sites in some provinces and ensured adequate social distancing throughout COVID-19 vaccination campaigns.
- In addition, the team supported the compilation and investigation of AEFI cases and trained the surveillance officials who are in charge of AEFI detection.
- Ahead of the first campaign, the polio team assisted with political advocacy around the importance of vaccination and held an advocacy meeting with religious and traditional representatives. Staff also worked with communities to sensitize them to the importance of vaccination and build trust.

Chad



- Thirty-seven consultants employed by the polio eradication programme in Chad contributed an average of 30% of their time to the COVID-19 response. They helped to supervise COVID-19 vaccination sites in districts and assisted with training health workers on how to administer the COVID-19 vaccine, vaccine management, surveillance and communication.
- The consultants continued to investigate suspected COVID-19 cases and trace contacts.
- The team regularly helped to transport COVID-19 samples for testing.

Cameroon



- Polio staff in all 10 regions of Cameroon assisted with the coordination of efforts for the surveillance of COVID-19 cases and contact tracing. They also provided a critical data management role and are responsible for validating the country's COVID-19 situation report.
- In recent months, staff conducted training of trainers to promote COVID-19 vaccination and participated in the development of COVID-19 vaccine deployment plans.
- Polio-funded officers also helped with the development of communication tools to promote COVID-19 vaccination, including posters, flyers, banners, a press kit and an advocacy kit.

Democratic Republic of the Congo



- Support provided by at least 33 polio staff in the Democratic Republic of the Congo spans both preparedness and implementation of vaccination activities. Key activities included surveillance (87%), training (48%) and community engagement and social mobilization (42%).
- In areas of the country yet to receive the COVID-19 vaccine, polio staff evaluated vaccine storage capacities, repaired cold chain equipment and sensitized communities in anticipation of future activities.
- During routine immunization and emergency response activities, including at the launch of a yellow fever outbreak response, polio staff raised awareness about COVID-19 and vaccination and emphasized the importance of social distancing during routine immunization sessions.
- Polio staff participated in coordination meetings for the COVID-19 vaccine roll-out. They assisted with the selection of vaccination sites, the development of vaccine request documents, readiness requirements for vaccination, and the training of individuals responsible for AEFI response. In one province, the polio staff trained 138 site providers on vaccination and provided AEFI management kits and vaccination management tools to 23 sites.
- The polio team developed a master list of priority groups for vaccination, and has helped to adapt strategies to effectively deliver vaccine to all target groups.

Ethiopia



- At least 35 polio staff supported the COVID-19 vaccine roll-out in Ethiopia, primarily in the areas of surveillance (85%), training (80%) and coordination (62%).
- Ahead of the COVID-19 vaccination, staff provided training for EPI health staff on vaccine handling, management and administration, and promoted vaccine uptake amongst priority groups. Staff also monitored AEFI, trained health workers on how to recognize and treat adverse reactions, and ensured sufficient supplies of adrenaline. They also provided logistic support for vaccine distribution and transportation.
- In six provinces, polio staff led the overall coordination of the COVID-19 vaccination activities on behalf of WHO, and assisted the Ministry of Health with COVID-19 vaccine monitoring.
- One of the polio-funded data managers in the country created a user-friendly data entry platform to enable the timely submission of data on COVID-19 vaccination and AEFIs.
- Staff supported the development of COVID-19 surveillance and laboratory guidelines, aided with cold chain management, produced the daily COVID-19 WHO situation report and worked to ensure that other essential health services were integrated alongside the COVID-19 response.
- The polio programme routinely shares data on internally displaced persons, refugees and pastoralists with the essential immunization programme to ensure that these groups are included in COVID-19 microplans.

Nigeria



- At least 121 polio staff in Nigeria assisted with the COVID-19 vaccine roll-out in 2021, focused on surveillance (79%), training (78%) and coordination (71%).
- Staff worked to sensitize communities to COVID-19 at health facilities, schools, universities, churches and mosques. This was a key aspect of broader support provided to local government authorities in the areas of advocacy, training, surveillance, microplanning and data entry.
- Polio personnel trained COVID-19 vaccination teams to use smartphones for e-registration of vaccine recipients and facilitated the training of trainers at the state level.
- The polio team also supported the training of monitoring and evaluation officers on the management of COVID-19 immunization data.
- In one state, the number of vaccinated health workers increased from 6402 in March 2021 to 10 350 in May 2021, in part due to the efforts of polio teams working as part of broader risk communication and community engagement efforts.
- In one province, over 81 400 persons were sensitized on the symptoms of COVID-19 during the first two quarters of 2021, resulting in 162 suspected cases of COVID-19 being reported by AVADAR informants.
- In some states, staff monitored AEFI or supported health workers doing so. Overall, the AEFI monitoring is considered to be sensitive and responsive, in part due to the efforts of the polio team.
- The polio team assisted with COVID-19 vaccine data cleaning and the flow of information upwards.
- Staff worked to ensure cold chain maintenance, providing guidance and technical support.
- Polio personnel assisted with the documentation of lessons learned during phase 1 of the vaccine roll-out to guide subsequent phases.

South Sudan



- Polio personnel in South Sudan, numbering at least 28 individuals, acted as a backbone of the response. Key areas of work include coordination (57%), surveillance (50%) and training (50%).
- Staff made particular contributions to the formation of state- and county-level task forces for COVID-19 response and vaccination and advocacy efforts, including efforts to mobilize funding.
- Polio staff helped to prepare the cold chain and train health workers ahead of the vaccination activities. They helped with the development of microplans, drawing on their polio experience.
- During COVID-19 vaccination campaigns, polio staff assisted with logistic support and the transportation of vaccines, and supported AEFI surveillance.
- Polio staff supported the training of COVID-19 vaccinators in Juba by facilitating the training venue and providing the training materials. Polio staff also facilitated the hiring of a mobile public address system to inform communities of the location of vaccination sites.
- Careful planning has been conducted to consider the logistic challenges of the dual introduction of the COVID-19 vaccine and novel oral polio vaccine type 2 (nOPV2).

SOUTH-EAST ASIA REGION

Bangladesh



- Since the pandemic began, more than 70 WHO surveillance and immunization medical officers and divisional coordinators have been providing support across all districts of Bangladesh in the areas of field coordination and monitoring, capacity-building related to infection prevention and control, contact tracing, transportation of COVID-19 supplies and laboratory samples, surveillance, undertaking health facility assessment and supporting the continuation of routine immunization.
- Support to the COVID-19 vaccine roll-out includes using polio and measles campaign microplans to conduct a successful pilot of the COVID-19 vaccine roll-out and drafting technical and operational guidelines for COVID-19 vaccination.
- Based on draft guidelines, national polio and immunization staff prepared a training package for district government and partners and have aided in the capacity-building of participants at national and subnational levels.
- The national-level polio and immunization data team developed a COVID-19 monitoring tool for government and partners to capture real-time resource gaps in vaccination centres and take corrective action. The same team developed a vaccination dashboard for real-time COVID-19 vaccination coverage and analysis.
- Nineteen surveillance and immunization medical officers have been actively involved in supporting district and city investigation teams in the follow-up of serious cases of AEFI.
- Polio staff have taken a leading role in supporting urban authorities to develop a strategy for immunization in poor urban settings, and for Rohingya people.

India



- Nearly 2000 polio and immunization staff have contributed to the COVID-19 vaccine roll-out in India. Personnel have assisted with operational guideline development and the writing of the vaccine deployment plan, and have provided support to the Ministry of Health and Family Welfare in the areas of capacity-building, microplanning, preparedness assessment and monitoring.
- Polio and immunization personnel have played an indispensable role in delivering multiple rounds of training on safe vaccination to health workers, as well as specific training on AEFI.
- A key role of the National Public Health Support Programme has been to monitor the vaccine roll-out. Using lessons learned from polio eradication and routine immunization, staff have helped to implement localized improvements to operations.
- Staff also worked to review cold chain requirements and make adjustments to capacity, running preparedness assessments and simulations before the launch of the vaccination activities.
- The Open Data Kit software, which is widely used in polio eradication, has been adapted to provide real-time monitoring of COVID-19 vaccination activities.
- In Maharashtra and Goa states, the National Public Health Support Programme has acted as a technical partner for a creative advocacy campaign about the COVID-19 vaccine, providing inputs into the script of a street play and training actors on accurate vaccination messages.⁷
- Polio and immunization staff continue to assist with community outreach, trust building and monitoring of vaccine uptake.

⁷ Maharashtra and Goa: use popular folk performing arts for COVID vaccination advocacy: <https://www.who.int/india/news/feature-stories/detail/maharashtra-and-go-a-use-popular-folk-performing-arts-for-covid-vaccination-advocacy>.

Indonesia



- In Indonesia, 13 polio and immunization staff assisted the Ministry of Health to develop the roadmap for COVID-19 vaccination, alongside technical guidance and training materials.
- Personnel provided capacity-building at the district level, and helped to monitor and supervise vaccination activities.
- National and subnational officers monitored the temperature of cold storage to ensure that the COVID-19 cold chain is maintained.
- Polio and immunization staff supported the Ministry of Health to develop, implement and monitor the COVID-19 vaccination electronic registry and dashboard.

Myanmar



- Three national-level polio and immunization staff are members of Myanmar's technical working group for the deployment of the national COVID-19 vaccination programme. Their work involved providing technical updates on the different types of COVID-19 vaccination, developing the guidelines for vaccination deployment, and providing technical assistance for the development of a digital immunization management system to track the vaccination effort.
- Polio personnel have also supported central EPI staff in the reporting and investigation of AEFI cases, as well as delivering orientation training on COVID-19 vaccination to health staff.
- WHO and UNICEF staff have provided support to cold chain assessment.
- Twenty-one central, state and regional-level administration and data assistants funded by the polio programme provided technical assistance to state and regional immunization, surveillance and response teams on data collection and data entry to inform the daily reporting of COVID-19 case numbers.
- Seventeen polio-supported drivers continued to support the transportation of COVID-19 samples to laboratories.

Nepal



- The 15 polio-supported surveillance monitoring officers in Nepal were fully engaged in the COVID-19 vaccination efforts. The officers monitored the quality of the vaccine sessions and take corrective actions where needed. They also conducted a small survey to validate the level of vaccination coverage amongst priority groups.
- Personnel additionally provided support to COVID-19 coordination, planning and management at the subnational level, and assisted with the training of health workers.
- The surveillance monitoring officers continued to assist with COVID-19 disease surveillance, including through involvement in a national COVID-19 serosurvey, and by assisting with sample transportation.

EASTERN MEDITERRANEAN REGION

Afghanistan



- The focus of support by the Afghanistan polio network has been COVID-19 surveillance and community engagement efforts.
- The acute flaccid paralysis surveillance reporting network is trained to report suspected COVID-19 cases and AEFI cases following COVID-19 vaccination. The reporting volunteers include community health workers and supervisors, pharmacists, nurses, shrine keepers, mullahs, faith healers and physiotherapists.
- Polio eradication staff continue to use their visits to health facilities to provide orientation to the acute flaccid paralysis surveillance focal points on identifying and reporting suspected COVID-19 cases.
- The polio communication network has been working to prevent the spread of COVID-19 at the Afghan–Iranian border. They have also helped to install handwashing facilities and have disseminated preventive messages through social mobilizers and via digital billboards.
- The polio programme provides approximately 850 000 face masks and 170 000 bottles of hand sanitizer to vaccinators and social mobilizers during each National Immunization Day for polio.

Iraq



- In Iraq, five staff funded by the polio eradication programme have been engaged in COVID-19 vaccination activities, devoting an average of 50% of their time to the rollout.
- A further staff member contributed 20% of their time to COVID-19 surveillance activities.
- COVID-19 vaccination-related activities undertaken by the polio staff include the training of health professionals on WHO COVID-19 vaccination modules, and trainings on COVID-19 vaccination digital platforms.
- In addition, the staff assisted with the establishment of a COVID-19 vaccination dashboard, showing daily coverage.

Pakistan



- In Pakistan, key surveillance support has continued to be provided to the COVID-19 response in support of the government and the EPI, particularly in contact tracing.
- Technical support has been provided to the COVID-19 vaccination roll-out, when requested by the EPI team.
- During national and subnational immunization days for polio, front-line workers asked community members whether they have received their COVID-19 vaccination, and encouraged them to visit the nearest vaccination centre if they were unimmunized.
- The Sehat Tahaffuz 1166 helpline, set up to answer queries about polio vaccination, continued to address questions on COVID-19 from the general public. A team of medical professionals responded to calls on AEFIs, reporting them through the official COVID-19 channels.

Somalia



- A total of 182 members of the Somalia polio eradication programme workforce engaged 25% of their time in COVID-19 response and vaccination in 2021, as well as in other health emergencies.
- The Somalia polio team have been fully engaged in COVID-19 vaccination since March 2021. District polio officers and regional polio officers were responsible for collecting COVID-19 vaccination data and submitting them to the Ministry of Health.
- Regional polio officers conducted training of trainers for both technical and non-technical staff and developed microplans for the campaigns in cooperation with Ministry of Health staff at central and regional levels.
- All COVID-19 vaccinators were selected by the polio team, who ensured that the candidates had the right qualifications and experience.
- Regional polio officers provided significant contributions to the development of COVID-19 vaccination standard operating procedures.
- Polio personnel were responsible for the COVID-19 vaccine distribution plan at regional and team levels, working to ensure that teams had adequate vaccine stock in urban and rural areas. District polio officers worked as team supervisors during the COVID-19 vaccination roll-out, whilst regional polio officers monitored the daily vaccine uptake.

Sudan



- The Sudan polio team comprises 13 medical officers, who continue to provide integral support to the COVID-19 response. They have been directly involved in planning COVID-19 vaccination campaigns in Sudan, including coordination with partner agencies, conducting training of vaccinators and providing comprehensive technical support.
- The Sudan polio team has also assisted with the implementation of a local vaccine deployment plan for the COVID-19 vaccination of United Nations and international nongovernmental organization personnel and their dependents.
- Several personnel continue to be involved in surveillance and contact tracing of suspected COVID-19 cases.

Syrian Arab Republic



- The polio team lead in Syrian Arab Republic has been supporting the COVID-19 surveillance team since June 2020, functioning as the COVID-19 coordinator for the United Nations in the country. In this role, they have led the COVID-19 vaccine roll-out as part of the national EPI programme. In addition, they are the acting surveillance lead, focused on outbreak prevention, detection and response.
- Integrated public health team officers, many of whom are former polio officers, have contributed over 50% of their time to COVID-19-related activities.
- The team has assisted with capacity-building of rapid response teams and the facilitation of risk communication and community engagement activities in camps for internally displaced persons, settlements and hard-to reach communities, including nomadic communities.
- In addition, they have coordinated with local health authorities and government entities to ensure access for surveillance and vaccination, and have organized the movement of vaccines to health centres and villages.
- They have also monitored the use of donor resources for the COVID-19 response.

Yemen



- In 2021, WHO employed one international and two national polio programme consultants in Yemen, and provided subsidies to 47 Ministry of Public Health and Population surveillance staff. During the first few months of the COVID-19 response, these personnel were highly involved in COVID-19 surveillance and data analysis.
- COVID-19-related activities undertaken included the identification and reporting of cases, contact tracing, data management, the training of health workers, building community awareness, coordinating governorate rapid response teams, and emergency preparedness and response.
- Currently, COVID-19 support delivered by polio-funded staff is focused on surveillance and the training of surveillance staff and rapid response teams.



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