



INVESTMENT CASE

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ERADICATION
INITIATIVE

INVESTMENT CASE

2019–2023

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Executive summary

The end of polio is within sight

The Global Polio Eradication Initiative (GPEI) was founded in 1988 at the Forty-first World Health Assembly by way of Resolution WHA41.28, with an aspiration to end polio forever.

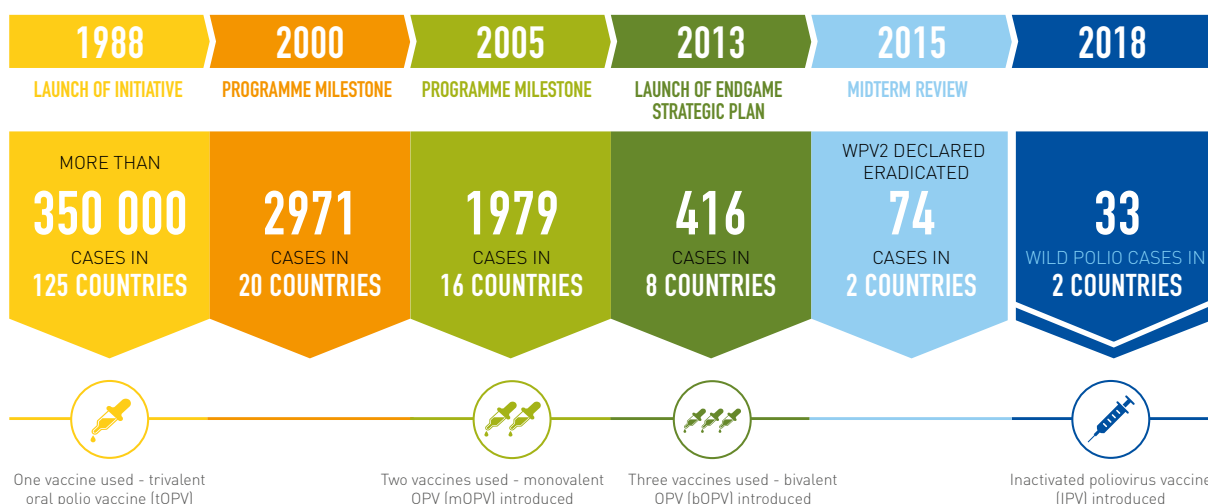
The GPEI brings together partner agencies, national governments, international nongovernmental organizations, civil society organizations, frontline health workers, and volunteers – all working together to provide critical health interventions for children living in the world’s most vulnerable communities. Through the eradication effort, 18 million cases of paralysis have been averted.¹ Nearly half a billion children were reached during national and subnational campaigns administered in 2018 – an immense feat which would be unthinkable were it not for the more than 20 million volunteers who give a human face to the eradication effort.²

The success of the GPEI’s approach is clear: of the three wild polio serotypes, only type 1 remains and transmission is limited to two countries, Afghanistan and Pakistan. Meanwhile, the African continent has not seen a case of wild polio in almost three years.

Rooting out polio from its last remaining strongholds will be the programme’s greatest challenge. Access to children in these areas can be hampered by weak and fragile health systems. In addition, low immunity levels have contributed to outbreaks of the vaccine-derived virus. Often, these challenges are exacerbated by difficult geographical terrain or compromised by conditions of insecurity that impact the delivery of critical health interventions. Vaccine refusals are also an increasing hurdle.

A HISTORY OF GLOBAL POLIO ERADICATION

Thanks to an integrated strategy leveraging vaccine innovation and complementarity to achieve global eradication, the number of polio-endemic countries has dropped significantly in the last three decades.



¹ Global Polio Eradication Initiative fact sheet. Geneva: Global Polio Eradication Initiative; 2019 (<http://polioeradication.org/wp-content/uploads/2019/03/GPEI-Fact-Sheet-March-2019-20190315.pdf>, accessed 12 August 2019).

² History of polio. Geneva: Global Polio Eradication Initiative; 2019 (<http://polioeradication.org/polio-today/history-of-polio/>, accessed 12 August 2019).

The Polio Endgame Strategy 2019–2023

The purpose of the *Polio Endgame Strategy 2019–2023* is to achieve eradication of all polioviruses.³ Key to the success of the programme is the continued use of proven strategies, such as the surveillance of acute flaccid paralysis, environmental surveillance and supplementary immunization activities.

To meet the final challenges, the new strategy leverages the GPEI's systematic collaboration with other health and humanitarian programmes. This model of collaboration will enable the GPEI and its partners to identify potential synergies, share information for action, increase capacity and more fully meet the health and humanitarian needs of communities. As a key example of this, the CEO of Gavi, the Vaccine Alliance, joined the Polio Oversight Board (POB) in March 2019. Gavi's commitment to bringing together public and private sectors in support of global health equity makes them an ideal partner for strengthening immunization systems and sustaining health gains achieved through the eradication effort.

The GPEI is also working with development agencies and nongovernmental organizations to explore how projects in complementary essential service sectors – such as water, sanitation and hygiene, nutrition, education and primary health care – can be prioritized to meet the basic needs of communities who are also at high risk of polio. As the basic needs of underserved and impoverished children and families are increasingly met, communities will be more likely to welcome the polio vaccine and other health interventions delivered through the GPEI and its partners.

June 2018 G7 Leaders' Statement:

“ We reconfirm our resolve to work with partners to eradicate polio and effectively manage the post-polio transition ”

June 2019 G20 Leaders' Declaration:

“ We reaffirm our commitment to eradicate polio as well as to end the epidemics of AIDS, tuberculosis and malaria ”

GPEI budgetary requirements

In September 2018, the POB approved a multiyear budget that defines the resource requirements of the GPEI from 2019 to 2023. The total cost is US\$ 4.2 billion, including US\$ 3.27 billion in incremental costs beyond what has already been secured for 2013–2019. The new budget makes investments to sustain and intensify key interventions, with costs reducing incrementally over time to reflect anticipated programmatic progress. This will specify target reductions to contain costs.

Without the additional US\$ 3.27 billion, the GPEI cannot proceed with all of the requirements to ensure that it is in the best possible position to eradicate polio. Polio activities that protect non-endemic countries from international spread will be immediately at risk without donor backing. Support to countries that are at higher risk of an outbreak could also see cuts if financial commitments are not secured. While the programme is equipped to make tough decisions by prioritizing essential

³ To download the full strategy (in English) or the executive summary (available in six languages), see the GPEI website. (<http://polioeradication.org/who-we-are/polio-endgame-strategy-2019-2023>).

© UNF / Christine
McNab



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I've visited several islands where no children had been reached with any vaccines for three or four years. No one wanted to take the time and energy to go, ”

says Dr Aluma. She has travelled for up to 12 hours to reach just one of the distant island health centres. The journey is difficult: first by a larger boat; then by pirogue, which are narrow and often leaky; then by foot, at times waist-deep in water; and by motorcycle on the islands or, when there is no motorcycle, walking.

Source: <https://ourworldunited.shorthandstories.com/endpolio/index.html#group-chad-across-the-sands-wGEQ4b6XuN>

Dr Adèle Daleke Lisi Aluma

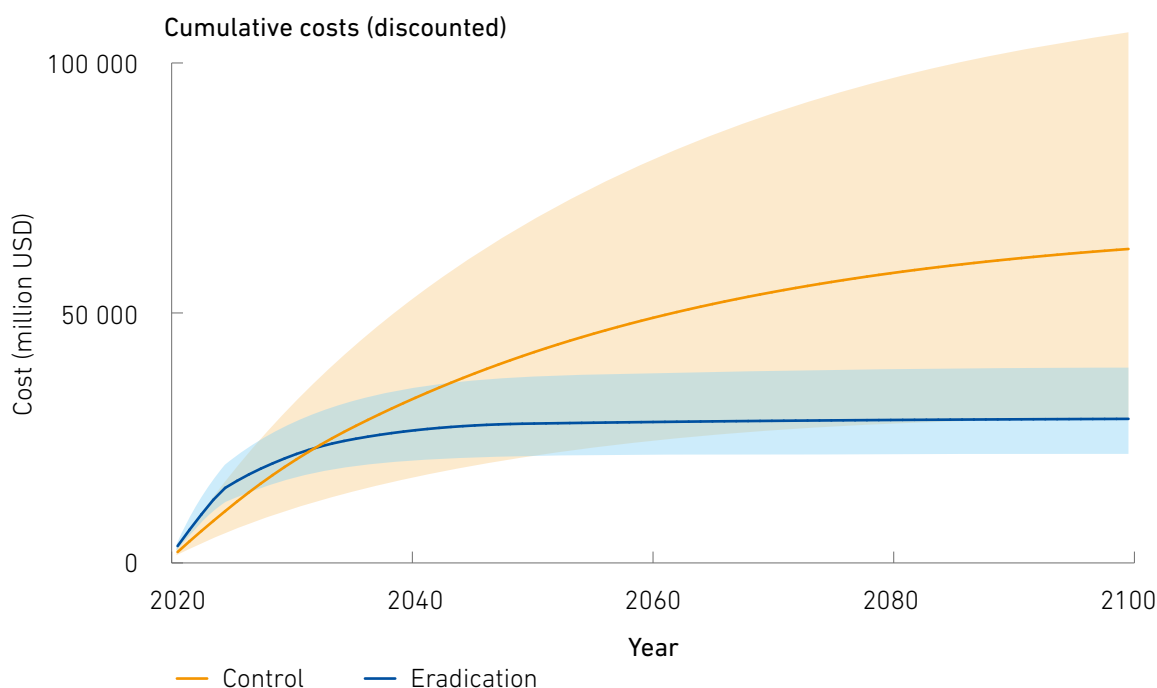
Lake Chad Polio Task Team

activities in endemic countries, its capacity to protect children around the world from a debilitating and deadly disease could be severely impacted without donor funding.

The GPEI's value for money

Substantiating the impact of investing in polio eradication, recent modelling attests that eradicating polio will generate US\$ 14 billion in expected cumulative cost savings by 2050, when compared with the cost countries will incur for controlling the virus indefinitely. In financial terms, the global effort to eradicate polio has already saved more than US\$ 27 billion in health costs since 1988.⁴

The cumulative costs of control versus eradication



Investing in polio eradication is both an entry point and a foundation for investing in broad global health interventions, many of which support the Sustainable Development Goals – most notably universal health coverage and its protection against medical impoverishment through equitable access to safe, affordable, and effective vaccines.

Through its expansive network of community-based workers and volunteers, the GPEI operates in parts of the world that have been previously unreachable by health interventions, which is a unique asset for health service delivery. Female frontline workers have been especially effective at establishing trust with affected communities. The GPEI has also been uniquely placed to deliver more than polio vaccines, including through the delivery of vitamin A, antimalarial bednets, and deworming tablets, and through its on-the-ground support for epidemics and humanitarian crises, notably the Ebola outbreak.

⁴ This covers financial benefits accrued from 1988 to 2012.

The power of vaccines

Eradicating polio will be an achievement that should not be underestimated, but the political will to ensure that efforts continue is also not a given. Bold financial and political commitments from both governments and institutional donors are needed to rid the world of this disease. Ultimately, those efforts will not only protect future children from polio, they will also ensure that the world remains polio-free and that the resources and infrastructure built by the GPEI can be transferred to support other health needs.

Now, as the world faces unforeseen threats to hard-won progress from the spread of misinformation and the rise of vaccine hesitancy,⁵ the GPEI presents a unique opportunity. By reaching this historic goal, polio eradication will send a strong message. It will provide both irrefutable evidence of the transformative power of vaccines and proof of what the world can achieve by joining efforts in support of the global good.



© iStockphoto / Avatar_023

⁵ Ten threats to global health in 2019. Geneva: World Health Organization; 2019 (<https://www.who.int/emergencies/ten-threats-to-global-health-in-2019>, accessed 12 August 2019).



Why eradicate polio

When the world first came together in a commitment to rid the world of this disease, polio presented a clear case for eradication. The method for interrupting transmission – through life-saving vaccines – is highly effective. Providing children with the recommended dosages protects them for life. Diagnostic tools help to detect the virus, which is critical because in addition to being highly contagious, polio spreads silently. As the severity of infection varies, one child who becomes paralysed may indicate as many as 200 children who are asymptomatic for the last remaining type of wild polio (type 1).¹ Detection methods have become more sensitive and more reliable for polio than any other vaccine-preventable disease. As with smallpox, the first human disease to be eradicated, humans are the only reservoir for polio – so neither insects nor animals can reseed the virus in areas that are, through force of human effort and ingenuity, polio-free.

“ We have all the tools, all the policy, all the strategic approaches to achieve success... We have everything in place... Whatever challenges remain, none of these are technical, none of these are biological... With sufficient political and financial will, we will find that last child. ”

Professor Helen Rees

Chair of the Emergency Committee of the International Health Regulations

Most importantly, the case for eradication has been proven time and again as 210 countries and territories have rid themselves of polio.²

Polio eradication is not only feasible, it's also eminently achievable

Founded in 1988 after the Forty-first World Health Assembly declared a commitment to polio eradication, the GPEI was launched by spearheading partners the World Health Organization (WHO) and Rotary International, which were joined by the United States Centers for Disease Control and Prevention (CDC), the United Nations Children's Fund (UNICEF), and later the Bill & Melinda Gates Foundation. In March 2019, a long history of engagement with Gavi, the Vaccine Alliance culminated in the addition of the Gavi CEO to the Polio Oversight Board (POB), as an ideal partner for strengthening immunization and sustaining health gains achieved through the eradication effort.

This unique public/private partnership brings together partner agencies, national governments, international nongovernmental organizations, civil society organizations, frontline health workers, and a multitude of volunteers – all working to alleviate the polio burden of affected countries and provide critical health interventions to the world's most vulnerable.

¹ Expansion of environmental surveillance for poliovirus aiding in regional eradication efforts. Geneva: Global Polio Eradication Initiative; 2017 (<http://polioeradication.org/news-post/expansion-of-environmental-surveillance-for-poliovirus-aiding-in-regional-eradication-efforts/>, accessed 12 August 2019).

² Global Polio Eradication Initiative semi-annual status report, July to December 2018: progress against the polio eradication & endgame strategic plan 2013–2018. Geneva: World Health Organization; 2019 (WHO/Polio/19.02; <http://polioeradication.org/wp-content/uploads/2019/06/GPEI-Semi-Annual-Status-Report-Jul-Dec-2018-1.pdf>, accessed 12 August 2019).

Polio eradication has become a critical means to deliver global health equity

While polio now exists in the smallest geographic area to date, countries that either have polio in circulation or are vulnerable to an importation or outbreak of polio are among the most populous countries in the world. Pakistan (which has not yet interrupted circulation) and Nigeria are ranked as the fifth and seventh most populous countries on earth, respectively – and Indonesia (where an outbreak of the vaccine-derived virus occurred in 2018) ranks fourth.³ Polio-at-risk countries are also amongst the poorest, lacking the health infrastructure and immunization systems that would be necessary to end polio without targeted interventions.

Recent modeling into the economic benefits of immunization has made the case that vaccines deliver greater impact in low-income countries than in high-income countries. The benefits of vaccines – saving lives, improving quality of life, and preventing medical impoverishment – make such a difference among low-income communities precisely because they have the most to gain.⁴ This is what makes vaccines an anti-poverty innovation and a real way to deliver health equity.

Polio eradication presents a unique value proposition for investors in global health

While it is in our collective capacity to pursue a world where no country is left behind to shoulder the burden of polio, and it is within our common interests to achieve and sustain a polio-free world, investing in eradication also generates real value. Indeed, the cost-benefits of eradication make investing in the GPEI a matter of both wealth and welfare.

Recent modelling attests that eradicating polio will generate US\$ 14 billion in expected cumulative cost savings by 2050 when compared with the cost countries will incur for controlling the virus indefinitely.⁵

But if the world steps back from the goal of eradication, the most vulnerable children, families, and communities will continue to bear much of the disease burden, which will compound and exacerbate existing inequities. It would also leave the world at risk of transmission. Every country – polio-affected and polio-free – would incur incredible costs indefinitely just to maintain polio disease control. According to the modelling, the annual costs for a control scenario would

“ Only by fully implementing the new Polio Endgame Strategy, and fully financing it, can we have a real chance of ensuring that no child will ever again be paralysed by polio. ”

Dr Tedros Adhanom Ghebreyesus
Director-General, WHO

³ U.S. and world population clock. Washington (DC): United States Census Bureau; 2019 (<https://www.census.gov/popclock/>, accessed 12 August 2019).

⁴ Ozawa S, Clark S, Portnoy A, Grewel S, Brenzel L, Walker D. Return on investment from childhood immunization in low- and middle-income countries, 2011–20. *Health Aff.* 2016;35(2):199–207. <https://doi.org/10.1377/hlthaff.2015.1086>.

⁵ See forthcoming economic case.



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At work, I apply the 'safety first' approach to every part of my job. I think, I am not only driving but I also act as a guide and security guard for my field officer. Before the commencement of field work I orient my officer about the social norms, customs, and security situation of the area. I also advise them to remain close to the vehicle in case of some emergency situation. I have learned – I am working for the welfare of future generations

Source: <http://polioeradication.org/news-post/life-in-the-drivers-seat/>

Alam Sher Khan

Driver for 17 years

remain over US\$ 1 billion annually through 2042 and over US\$ 500 million through 2066. Cumulative spending, according to this same control scenario, would exceed cumulative spending for an eradication scenario as soon as 2032.

By committing to eradication and achieving this goal, direct savings can be reinvested rather than prolonged through long-term immunization and outbreak response that would be required to control the spread of polio. The cost-benefits also include gains in productivity that otherwise would have been lost to disease, disability and death.

Investing in eradication is an entry point for broad global health impact

Through the effort to reach every last child with polio vaccines, the GPEI's extensive infrastructure has historically been leveraged to deliver other critical health interventions, improving the health of tens of millions of people worldwide and multiplying the impact of money put toward the eradication effort.

In countries affected by or at risk of polio, GPEI staff are the single largest source of expertise on immunization. The same health workers who administer polio vaccines have helped fight Ebola, cholera, meningitis and other disease outbreaks; address malnutrition; provide measles vaccinations, deworming tablets and malaria bednets; register births; improve disease surveillance worldwide; and offer everyday health services where they are needed most. Through their delivery of more than 1.3 billion doses of vitamin A since 1988, polio workers have saved an estimated 1.5 million children's lives.⁶

“ *The correlation is extremely strong between levels of foreign aid for health and decreasing death rates for some of the deadliest diseases. As contributions go up, deaths retreat. The world now has to decide if it wants to continue that remarkable trend.* ”

Bill Gates, Co-Chair
The Bill & Melinda Gates Foundation

Calculating the value of a polio-free world invokes other indirect savings and advancements. There are gains the world has made through resources that might not exist were it not for the goal to eradicate polio. From cold chain technology to vast surveillance systems, from new vaccine development to increased community-based collaboration, polio eradication efforts have spurred innovations in immunization and epidemiology. Indeed, the success of the eradication programme itself in reaching every child will also establish a precedent that demonstrates it can be done for other health and development issues. Added to this value are the intangible benefits that come when children are free to live, thrive, study and pursue their dreams – to which no direct cost can be associated.

⁶ Global Polio Eradication Initiative. Investment case, March 2017. Geneva: World Health Organization; 2017 (<http://polioeradication.org/financing/financial-needs/investment-case/>, accessed 12 August 2019).

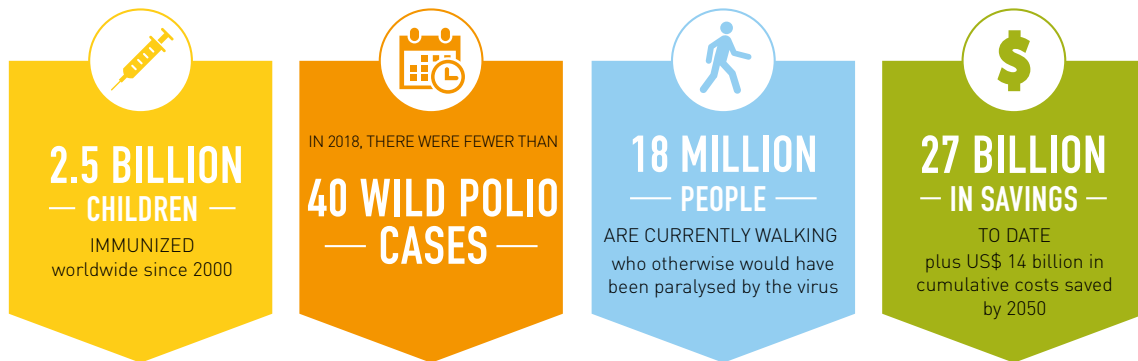
“ We have to help people understand that while [polio vaccination is] about keeping children healthy, it's also about education and their economy. Healthy children can go to school and learn, healthy children don't need costly medicines. ”

Khamphet Chansomphou

Village leader, Vientiane Province, Laos

RESULTS

The polio programme has had a tremendous impact on children's lives and the global economy since 1988.



Nigeria has not detected any wild poliovirus since 2016.



Progress to date



The world's progress toward polio eradication is a result of the collective priority those who champion the effort today have placed on our right to live free from paralysis, suffering and death – and the investments made by previous generations.

When the GPEI was launched in 1988 with the support of 165 countries, there were 350 000 cases of wild polio from 125 countries.¹ Because of national government ownership of the eradication effort – a core tenet of the partnership – the GPEI has achieved remarkable success. The scale-up of the eradication effort created one of the most ambitious global health programmes. To date, the GPEI has enlisted more than 20 million volunteers. Last year alone, the GPEI helped national governments vaccinate 470 million children and more than 2.5 billion children have been vaccinated since the launch of the partnership.² Thanks to this effort, more than 18 million people are currently healthy who would have been paralysed – and more than 900 000 deaths have been prevented.³

The world is now more than 99.99% of the way toward achieving polio eradication⁴

Of the three polio serotypes, type 2 was declared eradicated in 2015 – and the world eagerly awaits a similar declaration of the eradication of type 3, which has not been seen since 2012.

Wild polio type 1 now only circulates in a handful of districts in Afghanistan and Pakistan. Highly sensitive surveillance methods for detecting the virus have revealed why eradication within these two countries has proven elusive. While both Pakistan and Afghanistan have demonstrated commitment at the highest levels, the movement of people, families and communities across the borders of these two countries has prevented significant numbers of children from receiving vaccines during national campaigns – a fundamental challenge that has been compounded by insecurity and conflict.

“ *Our government is fully committed to ending polio in Pakistan... I am confident, together with our people, we will achieve a safer, healthier and polio-free Pakistan for our children.* ”

Imran Khan
Prime Minister of Pakistan

Like Afghanistan and Pakistan, regions of northeastern Nigeria have gone through periods of insecurity that have inhibited the GPEI from reaching children for immunization and other essential health services. However, since September 2016, Nigeria has not detected any wild polio cases

¹ Poliomyelitis (fact sheet). Geneva: World Health Organization; 2019 (<https://www.who.int/news-room/fact-sheets/detail/poliomyelitis>, accessed 12 August 2019).

² Global Polio Eradication Initiative semi-annual status report, July to December 2018: progress against the polio eradication & endgame strategic plan 2013–2018. Geneva: World Health Organization; 2019 (WHO/Polio/19.02; <http://polioeradication.org/wp-content/uploads/2019/06/GPEI-Semi-Annual-Status-Report-Jul-Dec-2018-1.pdf>, accessed 12 August 2019).

³ Global Polio Eradication Initiative semi-annual status report, July to December 2018: progress against the polio eradication & endgame strategic plan 2013–2018. Geneva: World Health Organization; 2019 (WHO/Polio/19.02; <http://polioeradication.org/wp-content/uploads/2019/06/GPEI-Semi-Annual-Status-Report-Jul-Dec-2018-1.pdf>, accessed 12 August 2019).

⁴ Ochmann S, Roser M. Polio. Oxford: Our World in Data; 2017 (<https://ourworldindata.org/polio>, accessed 12 August 2019).

(though due to weak health systems it has seen cases of the vaccine-derived poliovirus). By continuing improvements in access due to its innovative strategy for “Reaching Every Settlement,” Nigeria can reach the required three years without detection of wild poliovirus and the African region may be eligible for polio-free certification by the middle of 2020.

In 2018, 33 cases of wild polio were reported – a dramatic decline from 359 cases reported in 2013. However, in an eradication effort, even a single case is one case too many. A single case exposes underlying gaps and the persistence of challenges – which prompted the GPEI to define a new strategy that meets the challenges of the last mile to achieve the goal of eradication.



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Religious leaders have a critical role in this kind of programme. We can play a role that no-one else can, because of our special place in society... I would say that learned people and the religious leaders are the best people to turn to in places that still have polio. This is why I continue to volunteer my time and my school. This is my family. These are my people. And so it is my responsibility. Others help us, including the international organizations. But these people will come and go. And when they are gone, we will still be here.

Source: <http://everylastchild.polioeradication.org/profile-zubair-ahmed>

Zubair Ahmed

Head of Al Sa'adul Ulum Madrassa in Uttar Pradesh, Polio Volunteer Influencer

Key challenges



The challenges faced by the GPEI are what epidemiologists have anticipated as part of any eradication programme. They are the obstacles to reaching every last child with vaccines: inaccessibility, insecurity and conflict; weak and fragile health systems; and vaccine hesitancy and refusals by caregivers.

Inaccessibility, insecurity and conflict

Polio now hides precisely where the GPEI must work harder than ever to reach. Some areas are geographically isolated, such as the floating islands of Lake Chad or remote regions in Papua New Guinea. Others are beset by conflict, most notably Afghanistan and Pakistan. Conditions of insecurity may motivate families to move to camps for the internally displaced, which can make them accessible to the programme or pose new challenges. For those who remain, ongoing conflict makes it difficult and even dangerous to access health services. In these settings, the programme confronts the need to safeguard health workers who are the human face of the eradication effort.

“ My son is very healthy, and that is how I know the importance of vaccines. (Due to the fighting in our area) there was no one to vaccinate my baby (daughter) Khadija, and I was concerned about her health. Now, I am so happy that she got polio and all other vaccines here in the settlement. ”

Shirbano

Mother of three children, **Afghanistan**

Weak and fragile health systems

Although wild polio is only circulating in Afghanistan and Pakistan, all countries are still at risk despite having eliminated the illness, with 15-20 countries at high risk for a re-emergence or outbreak. In fact, seven of the top 10 countries on the Fund for Peace's 2019 Fragile States Index are countries that have been prioritized for either experiencing transmission or being at risk for a re-emergence of polio.¹

The key challenges in these country contexts are weak or failing health systems, where families lack access to basic services and children receive little or no protection against disease. Poor immunization services, combined with high rates of malnutrition and a lack of safe water and sanitation, create conditions that allow the virus to thrive and paralyse vulnerable children with low immunity.

¹ Fragile States Index. Washington (DC): Fund for Peace; 2019. (<https://fundforpeace.org/2019/04/10/fragile-states-index-2019>, accessed 12 August 2019).

Addressing cVDPVs

Because of subnational immunity gaps, some countries have experienced outbreaks of vaccine-derived polioviruses, mutated strains from the weakened vaccine-virus originally contained in oral polio vaccine. After vaccination, children naturally shed this weakened strain, and in areas of adequate immunity, this helps confer protection to more children through 'passive' immunization. However, in areas with poor immunity levels, this vaccine virus can on rare occasions regain virulence and cause outbreaks of cVDPVs.

Since 2016, the majority of cVDPV outbreaks are due to type 2, but can in fact be caused also by type 1 and type 3. This is why after the global certification of wild polioviruses, the phased removal of OPV will continue, to ensure that in the long-run, no child will ever again be paralysed by any poliovirus – be it wild or vaccine-derived..

“ Vaccine-derived polio outbreaks are a sentinel warning of inadequate routine immunization coverage. There is now an opportunity to increase the collaboration between Gavi and GPEI beyond maintaining IPV in routine immunization programmes to address systemic immunization weaknesses, including while responding to poliovirus outbreaks to help achieve a sustainable polio-free world. As CEO of Gavi, I look forward to leveraging my participation in the Polio Oversight Board to help countries to build stronger and more resilient systems. ”

Dr Seth Berkley

CEO of Gavi, the Vaccine Alliance

Increasing vaccine acceptance

The GPEI continues to work with local communities and its leaders to ensure strong commitment and participation by parents, caregivers and the community at large. In this context, targeted social mobilization efforts collaborate closely with communities on addressing any specific concerns about the importance of vaccination, the dangers of the disease and the need for repeated doses administered to children. The programme aims to ensure polio vaccine is delivered in the most culturally appropriate manner possible, and ideally alongside a broader intervention of health delivery. Such approaches have been shown to dramatically increase vaccine uptake and diffuse mistrust. The aim will continue to be to fully identify any remaining pockets of resistance, and address this resistance in the most effective way possible.

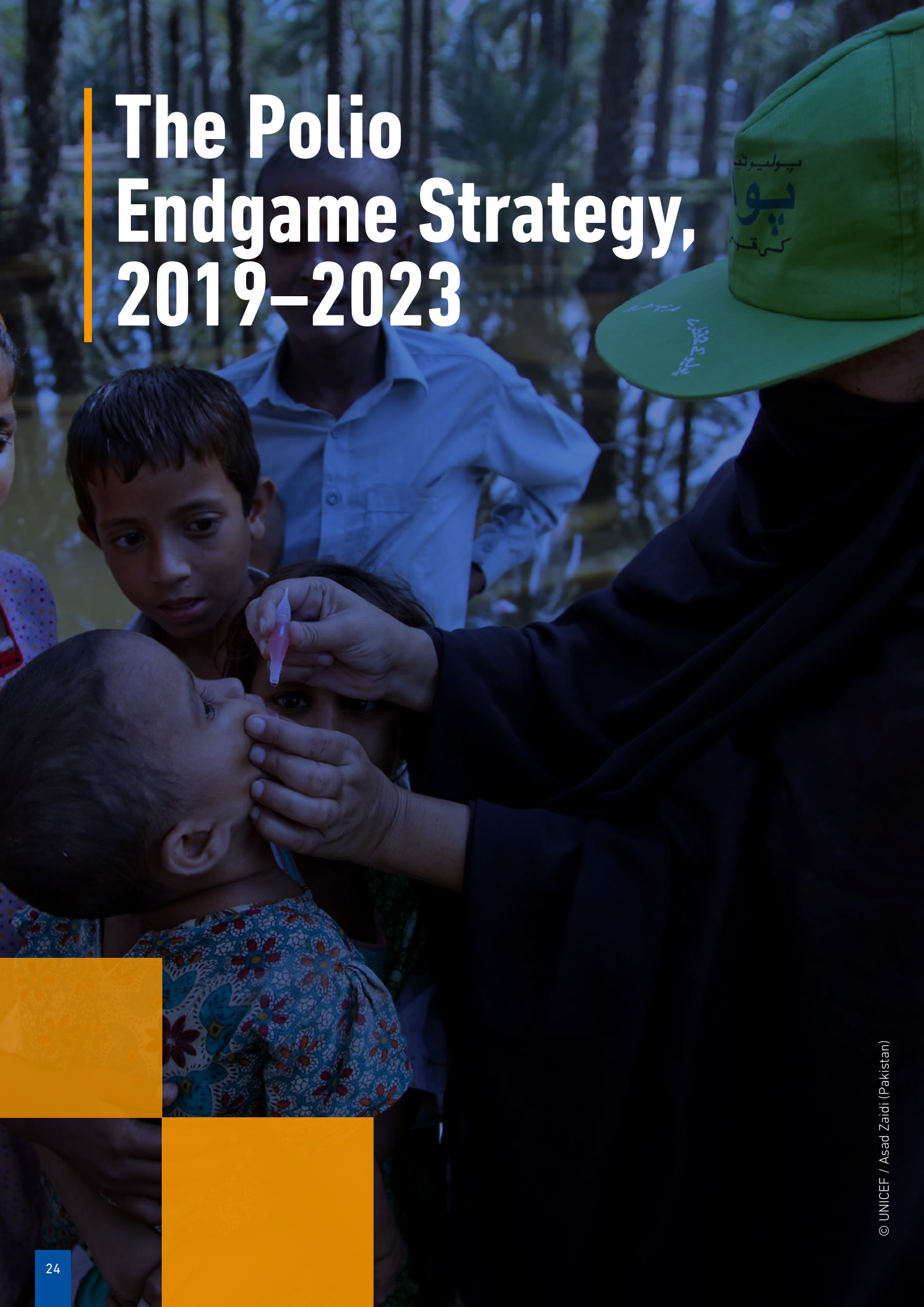
“ I now realize that without vaccinations our children could die and or be disabled. The health mobilizers helped me understand how my children can benefit from vaccinations, and I have taken them all. ”

Hawo Mohamed

A 36-year-old mother from Mogadishu, **Somalia**

She had refused to have her four children vaccinated against polio and other diseases for the past three years.

The Polio Endgame Strategy, 2019–2023



With the Polio Endgame Strategy 2019–2023, the GPEI has reoriented its approach to address challenges that impede the delivery of critical health interventions and has realigned the programme to act with urgency, effectiveness, and efficiency. The strategy adopts innovative approaches with a concentrated geographic focus by individualizing strategies for each at-risk subdistrict, community and street.

The new strategy leverages GPEI infrastructure to address the key challenges while also increasing the impact of donor investments

Under the new strategy, the programme has launched systematic collaboration with other health and humanitarian programmes. Because the same factors that put a community at risk for polio also put them at risk for other emergencies, this new approach represents a win-win. The GPEI will leverage its assets and infrastructure in support of broader impact, while also benefiting from the expertise of other health and humanitarian actors in meeting the final obstacles to eradication.

The GPEI will ensure that country-level eradication programmes align with efforts to strengthen national health systems and achieve universal health coverage – which will also serve to raise immunity and protect children from polio. With other health initiatives, such as measles, the GPEI will integrate service delivery to maximize impact and create cost-efficiencies through joint planning. Collaboration with emergency programmes will help to identify potential synergies, share information for action, increase response capacity, strengthen health systems and meet the broader health and humanitarian needs of communities.

The GPEI is also now working with development agencies and nongovernmental organizations to explore how development projects in essential basic service sectors – such as water, sanitation and hygiene, nutrition, and primary health care – can be prioritized to meet the basic needs of communities at risk for polio in Afghanistan and Pakistan. The importance of such an initiative was highlighted in the Independent Monitoring Board’s 2018 report: “Where there is no water, poor sanitation, no health or other public services and poverty, the poliovirus thrives. It has long been known that communities with nothing are those with the highest risk of polio and the greatest resistance to accepting the vaccine.”¹

As the basic needs of underserved and impoverished children and families are met, caregivers will be more likely to value the polio vaccine and other health interventions delivered through the GPEI and its partners. The initiative has started in the two endemic countries and the GPEI is calling for partners to support the initiative.

New partnerships with other public health actors such as Gavi, the Vaccine Alliance, will enhance collaboration and synergies to improve immunization coverage, leverage the strengths of the broader vaccination community and promote integration – a core pillar of the new strategy.

¹ Independent Monitoring Board of the Global Polio Eradication Initiative. Sixteenth report, October 2018: how to cut a long story short. Geneva; World Health Organization; 2018 (<http://polioeradication.org/wp-content/uploads/2018/11/20181105-16th-IMB-Report-FINAL.pdf>, accessed 12 August 2019).

GPEI and Gavi, the Vaccine Alliance: working together for the well-being of all

As joint advocates for immunization and global health, the GPEI and Gavi, the Vaccine Alliance, have historically worked together – with Gavi lending expertise in supporting 73 countries in their efforts to introduce the inactivated polio vaccine (IPV) used in national immunization programmes. This effort reached fruition in April 2019 as Zimbabwe and Mongolia were the last two countries to introduce the vaccine. This milestone in the fight against polio and the mission to support routine immunization programmes worldwide was achieved at an unprecedented pace only seven years after it began, and it is a testament to the strength of the partnership between Gavi and the GPEI.

The collaboration between the GPEI and Gavi has now entered a new era as both Gavi and the GPEI move into their new strategic periods. In June 2018, the Gavi Board decided to use core resources to support IPV for the period 2019–2020. The Gavi Board also approved support for IPV as part of its next strategic period (for the period 2021–25, also called “Gavi 5.0”), subject to the availability of resources following the Gavi replenishment. And in March 2019, at the invitation of the Polio Oversight Board, the Gavi CEO joined the Polio Oversight Board. Gavi and the GPEI are currently working to define the modalities of this important collaboration. This enhanced collaboration will be at the centre of the integration pillar of the Polio Endgame Strategy, 2019–2023. The unique benefits that this multi-partner collaboration offers has been seen recently in a joint effort in Papua New Guinea, where working together the GPEI and Gavi were able to leverage the surge capacity of the outbreak response to address systemic barriers to routine immunization and optimize the planning and implementation of a nationwide measles-rubella + bOPV vaccination campaign.

This partnership promises to bring the comparative advantages of both organizations into full focus on health system and immunization strengthening. The collaboration is also an example of how health initiatives can work together to align and accelerate impact as part of the Sustainable Development Goals (SDGs), in particular the third goal to ensure healthy lives and promote well-being for all.

The new strategy also recommits and realigns the GPEI as an emergency programme

The Emergency Committee of the International Health Regulations agreed in May 2019 that the risk of international spread of poliovirus remains a public health emergency of international concern (PHEIC). This is unique and is what makes the GPEI an emergency programme.

The operational changes outlined in the Polio Endgame Strategy 2019–2023 aim to provide supportive mechanisms so staff are prepared to innovate everywhere.

One area remains critical for the eradication effort’s success: polio immunization campaign quality. Although the GPEI has a wealth of real-time data to monitor and evaluate campaigns, gaps in campaign quality remain and surface as setbacks. To address this challenge, the new strategy

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Jamil



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Tayyaba Gul runs a Rotary-funded health centre in Nowshera, in the province of Khyber Pakhtunkhwa, where her team of female vaccinators aim to close the cultural gap that pushes up refusal rates. Their aim is to convince mothers that polio immunizations are a normal part of postnatal care.

“ *I’m happy to work in remote areas, especially with women, motivating them to play their role in society.* ”

Source: <https://www.rotary.org/en/new-polio-strategy-working-pakistan>

Tayyaba Gul

Rotary Club, **Afghanistan**

places the programme on emergency footing. Key actions that will be taken to achieve and maintain peak performance include: instituting accountability frameworks, ensuring supportive management and implementing performance plans for all districts that have evidence of circulation.

This emergency posture is reflected in response strategies that will treat every new detection of polio within the environment with the same response as a new case. As early detection is key, the programme will continue to expand its network of collection sites to test for evidence of the virus – and use preemptive campaigns to bolster immunity wherever the virus shows up. Rapid response teams will be deployed within 48 hours of any confirmed case and the GPEI will also expand the roster of individuals in high-risk countries who are trained to respond to their own or a neighbouring country's outbreak. Lastly, to alleviate burnout on the frontlines, the programme will add agency staff and implement a policy of staff rotation – to ensure unrelenting focus where it matters most.

A new regional hub within the Eastern Mediterranean Region has been opened to provide nimble and responsive support in meeting the challenges of the last remaining polio-affected areas. The hub will be staffed with senior experts dedicated to the day-to-day operations within the endemic countries, who will travel regularly to the field. The hub will empower and facilitate informed decisions at the country level, while making overall GPEI management more efficient as well.

The foundational strategies

As the GPEI launches this new strategy, it builds upon best practices that have been integral to its success.

Immunization

Each year, the GPEI draws upon its immense scale to do what seems unthinkable: reach nearly half a billion children in more than 40 countries with life-saving polio vaccines.² To achieve this, the programme procures more than 2 billion dosages of the oral polio vaccine each year that are delivered through polio campaigns. This year, 53 million dosages of inactivated polio vaccine were also secured through Gavi support for 70 national immunization programmes. Credit for the feat of delivering vaccines goes to the programme's most valuable asset. More than 20 million health workers and volunteers work in coordination to reach each child, every time and often within the span of just a few days.

“ *I wish I had the vaccine when I was a child, and so do my friends. But we make the best of our lives and educate others about polio.* ”

Aminmu Ahmed
Polio survivor, **Nigeria**

Aminmu makes tricycles for people with disabilities and is the founding member of the Kano State Polio Victims Trust Association.

² Global Polio Eradication Initiative semi-annual status report, July to December 2018: progress against the polio eradication & endgame strategic plan 2013–2018. Geneva: World Health Organization; 2019 (WHO/Polio/19.02; <http://polioeradication.org/wp-content/uploads/2019/06/GPEI-Semi-Annual-Status-Report-Jul-Dec-2018-1.pdf>, accessed 12 August 2019).

The programme also engages a vast network of influencers – community leaders, elders, and religious clerics – to help inform caregivers about polio and to ensure each knock at the door meets with success. Islamic leaders, key allies in dispelling misinformation and misconceptions about vaccination, have been pivotal to programme gains in increasing community acceptance for polio vaccination.

In 2017, the GPEI initiated the development of a gender strategy to address the role of gender as a determinant of health-seeking behaviours and a critical variable in vaccination outcomes. Among the gender-responsive strategies the programme uses, female frontline workers have been especially effective at establishing trust, addressing the concerns of caregivers and reaching every child with the polio vaccine. In just a few years, the percentage of women among frontline workers have now reached 99% in Nigeria, 68% in Pakistan, and 34% in Afghanistan – with each country seeing the direct benefits of women’s greater participation in polio eradication.³ The GPEI is expanding this focus on female representation across all ranks by looking to middle and senior leadership levels across the partnership with a commitment to reaching parity (50%-50%) in all governance, technical advisory and oversight bodies by 2020.

The GPEI has also prioritized the collection, analysis and use of sex-disaggregated data and gender analysis to discover gender-related barriers to immunization that can then guide programming and communications. The programme has started to put this into action through the use of practical, specific indicators at different levels of the GPEI to strengthen gender-responsive programming, supported by capacity-building and periodic third-party assessment.

Surveillance

Confidence in the GPEI’s progress comes from an extensive disease surveillance network of doctors, community health workers, and social mobilizers who have been sensitized to the symptoms of polio – namely, acute flaccid paralysis, or limpness in the extremities. Each year, they report around 100 000 “suspected cases”, which the programme investigates to rule out polio.⁴ The GPEI has also expanded environmental sewage testing to help target areas where the virus is circulating, even before any child shows symptoms of polio. The programme currently conducts polio environmental surveillance in more than 70 countries. Samples are then sent to one of the 146 state-of-the-art global, regional and national laboratories that comprise the Global Polio Laboratory Network (GPLN) – which tests samples to detect traces of the virus and determines the virus’ genetic makeup.⁵ This provides a fingerprint that traces the virus’s lineage – whether from local transmission or neighboring countries, from recent or past circulation. The GPEI’s environmental surveillance network and the GPLN already work in many countries to support the

³ Global Polio Eradication Initiative. The linchpin of on-ground polio eradication: women health workers and leaders. Geneva: World Health Organization; 2019 (<http://polioeradication.org/news-post/the-linchpin-of-on-ground-polio-eradication-women-health-workers-and-leaders/>, accessed 12 August 2019).

⁴ Global Polio Eradication Initiative. The polio surveillance system [video]. Geneva: World Health Organization; 2017 (<http://polioeradication.org/news-post/the-polio-surveillance-system-2/>).

⁵ Global Polio Eradication Initiative. The Global Polio Laboratory Network. Geneva: World Health Organization (<http://polioeradication.org/polio-today/polio-now/surveillance-indicators/the-global-polio-laboratory-network-gpln/>, accessed 12 August 2019).

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McNab



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As a ‘change agent’, Zulaihatu Abdullahi goes door to door, counselling parents about the importance of the polio vaccine. In the words of a mother Zulaihatu visits:

“ Before [Zulaihatu] came here I was rejecting all vaccines, but because of this woman, I decided to accept. She told me the usefulness and I was convinced to do it. ”

Source: <http://polioeradication.org/news-post/ending-polio-in-nigeria-one-home-at-a-time/>

Zulaihatu Abdullahi

Volunteer Community Mobilizer, **Kaduna State, Nigeria**

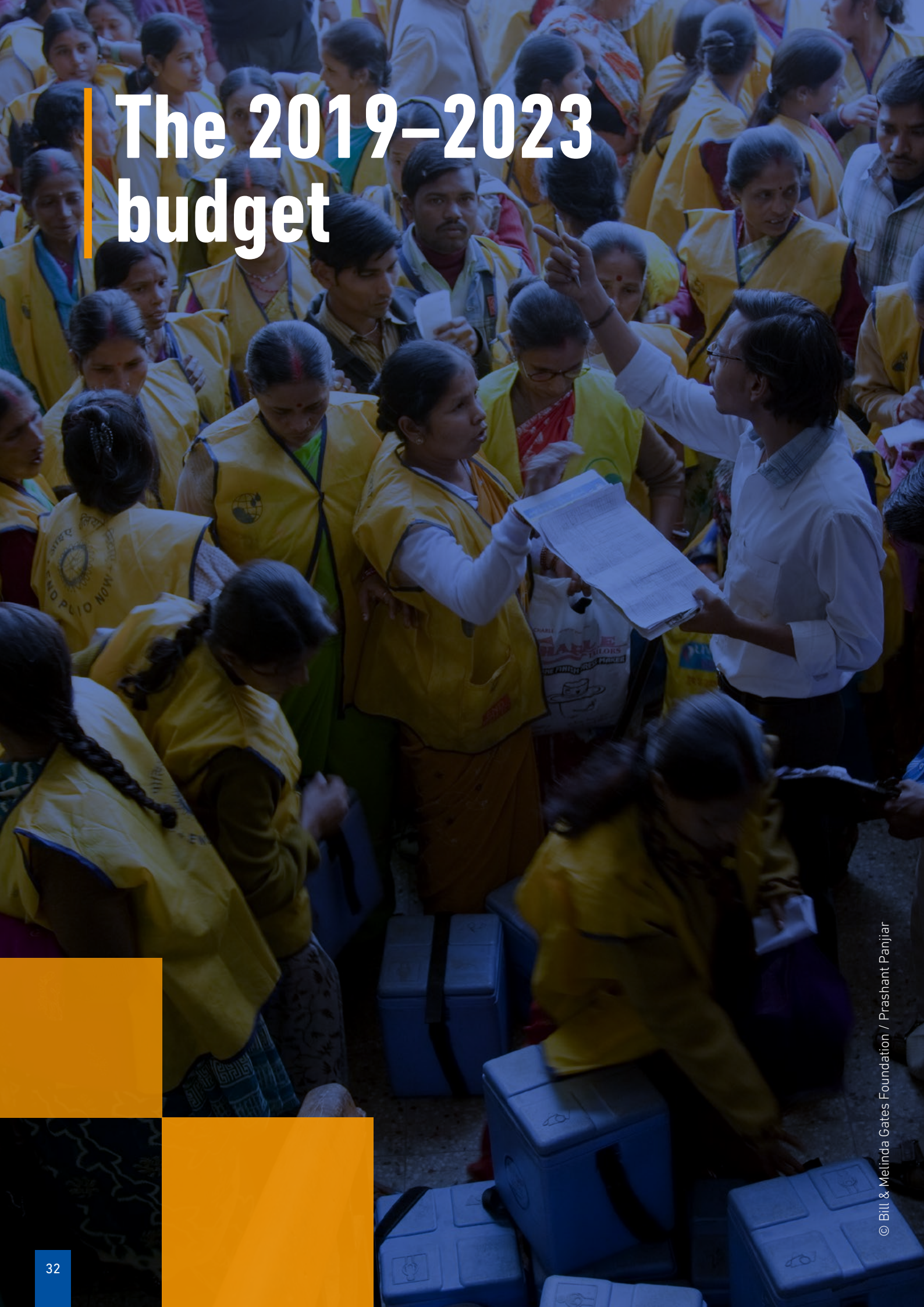
detection of other vaccine-preventable diseases – and present a model for the kind of integration into health systems that will be critical for maintaining the functions required to sustain eradication in a polio-free world.

Containment

In addition to working to eradicate polio as a disease, the GPEI must also maintain vigilance against polio as a pathogen. Polioviruses will be kept after eradication for a number of important uses, in a limited number of laboratory, manufacturing and biomedical facilities worldwide. Polio vaccine will be needed for some years to come and the virus will also be used to perform diagnostics or quality control for medical products, and for critical research. Because facilities retaining the virus often operate in places where the GPEI has no regulatory control, the programme advocates for global health policies to define biosafety standards and containment safeguards that are needed to prevent a breach and protect the gains of polio eradication. As the world nears the interruption of wild poliovirus transmission and national eradication programmes ramp down, containment programmes will correspondingly ramp up to monitor facility compliance with containment requirements. Importantly, through resolution WHA71.16 on poliovirus containment adopted in 2018 at the Seventy-first World Health Assembly, countries around the world have committed to reducing to a minimum the number of places designated to retain the virus, and to accelerating containment action.



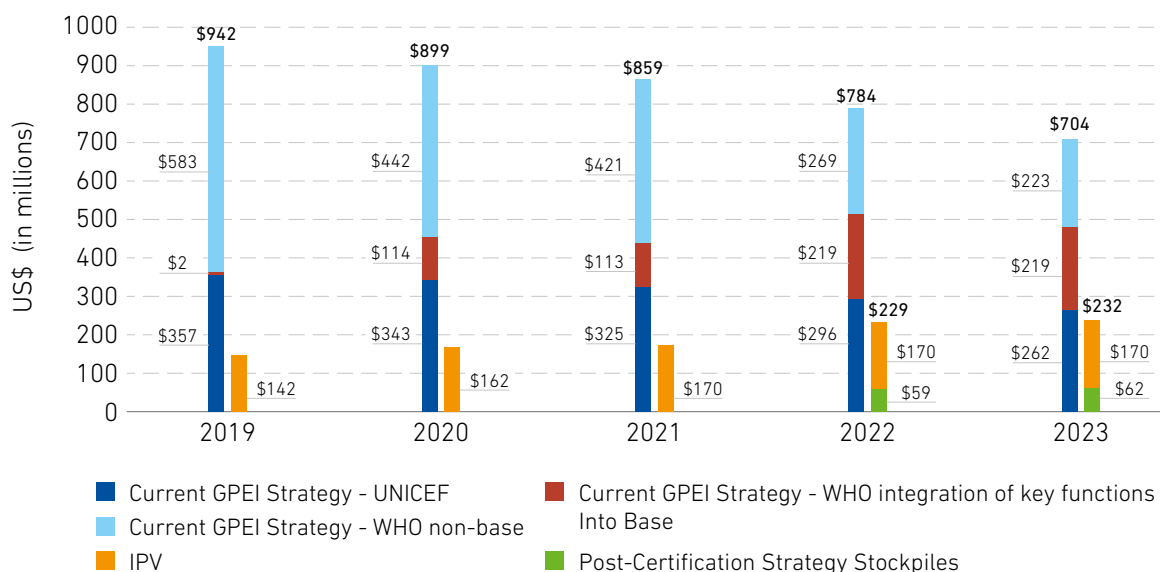
The 2019–2023 budget



In September 2018, the Polio Oversight Board (POB) approved a multiyear budget that defines the resource requirements of the GPEI from 2019–2023. The total cost is US\$ 4.2 billion – including US\$ 3.27 billion in incremental costs beyond what has already been secured for 2013–2019 – that will need to be mobilized to fully finance the Endgame Strategy 2019–2023.

The 2019–2023 budget declines year-on-year from 4% to 9%, which amounts to a total of 25% over five years from US\$ 942 million in 2019 to US\$ 704 million in 2023.

Overall cost to achieve eradication, 2019–2023



GPEI: Global Eradication Initiative; IPV: Inactivated polio vaccine.
Source: WHO.

The new budget strikes a balance between making investments to sustain and intensify key interventions and making targeted reductions to contain costs. For example, the share of the budget for surveillance increases as the overall budget declines. While in 2016 surveillance was only 6% of the budget, by 2023 it will represent 25% of the total budget. Highly sensitive surveillance will be essential to ultimately provide confidence in eradication through closing in on zero cases and isolates in the environment. Reductions begin in 2020 in polio-free and lower-risk countries, where country transition plans build towards taking greater responsibility for sustaining core functions as GPEI support declines. In some countries, national contributions are expected to fully compensate for the withdrawal of GPEI funding; other countries with limited resources and capacities may need plans that attract non-GPEI sources of support.

Snapshot of endemic and high-risk country costs (USD)

US\$ 100 million	Supports a full schedule of immunization days across Pakistan, targeting all 39 million children under 5 in a year.
US\$ 6 million	Funds one National immunization Day in Afghanistan, including the purchase of vaccines and information campaigns, for 10 million children under 5.
US\$ 2.3 million	Funds all OPV for a whole year of polio campaigns in Afghanistan for 10 million children under 5.
US\$ 1 million	Funds social mobilization and awareness activities in Pakistan for a National Immunization Day, including community-based volunteers who aim to reach all 39 million children under 5.
US\$ 300 000	Covers one year of polio immunization in Gabon for all 360 000 children under five.
US\$ 230 000	Funds social mobilization, information and awareness activities for a National Immunization Day in Niger, helping to reach 6.5 million children under 5.

Any new costs that arise from the materialization of risks to eradication will be incorporated into a prioritization scheme that ensures the most impactful and cost-effective interventions are funded first. Essential activities in endemic countries will be prioritized before support to polio-free countries that are at higher risk of an outbreak. Polio activities that protect polio-free countries from international spread are at risk without financial resources.

Additionally, while some of the projects and partnerships that complement and enhance the effectiveness of polio eradication activities are not costed in the budget, many of these initiatives are already underway and will be financed outside the GPEI budget through other mechanisms, initiatives and collaborations.

GPEI's upcoming pledging event in November 2019 does not include funds for IPV. Those funds will be raised as part of the Gavi replenishment for their 2021-25 cycle. The GPEI and Gavi will though closely coordinate and align their fundraising efforts to maximize opportunities to fund the US\$ 3.27 billion shortfall and IPV costs.

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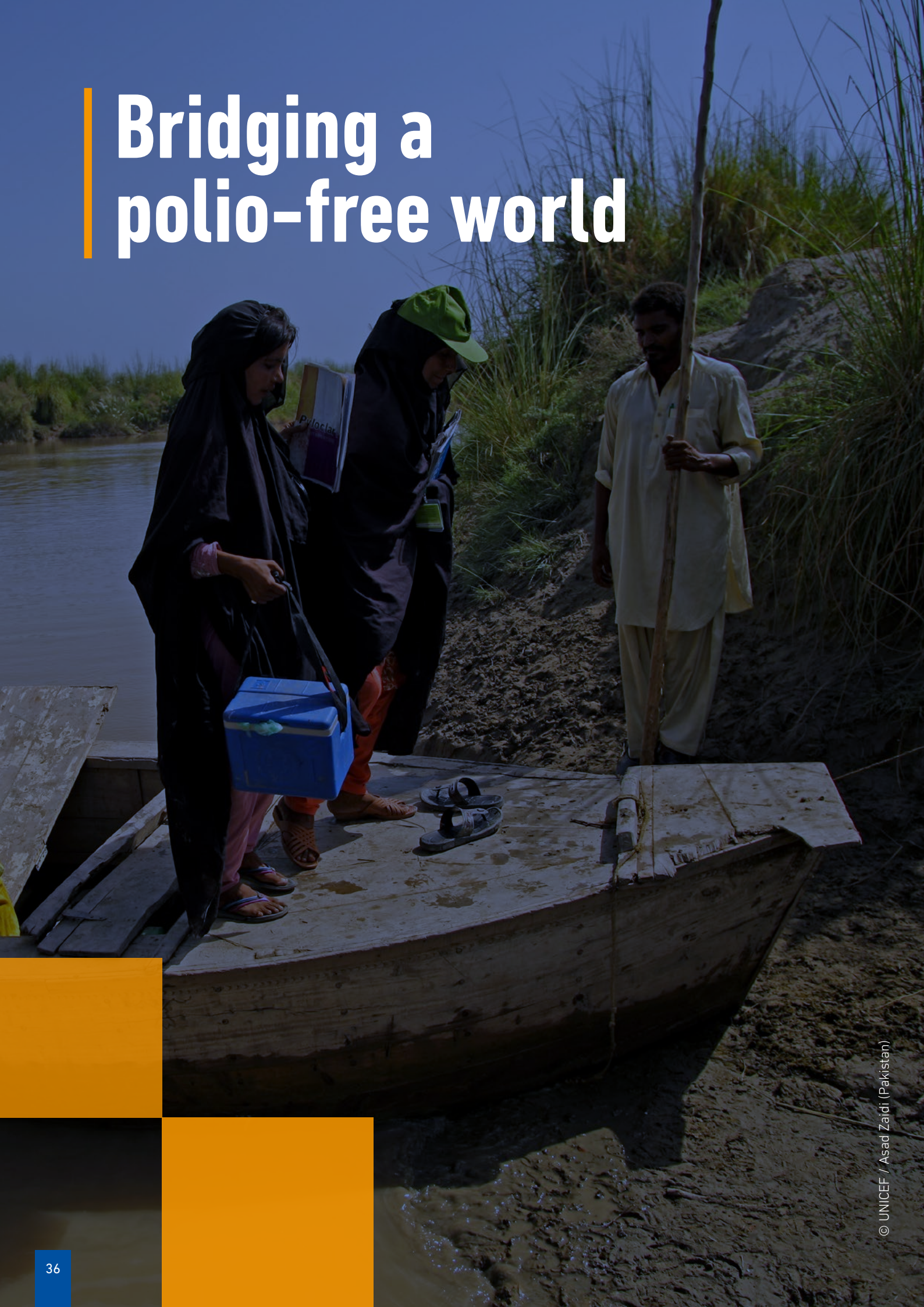
Immunization is everyone's responsibility and it is a right. No child should ever be denied to live because of choices made by others. If there is any child out there that lacks vaccination, I want to be the person to bridge that gap.

Source: https://www.unicef.org/kenya/reallives_17264.html

Harold Kipchumba

Kenya's Polio and Immunization Ambassador, 2015 winner of the UN Kenya Person of the Year

Bridging a polio-free world



Transition planning

As the GPEI advances towards eradication, the eventual closure of the programme must be carefully planned so core functions and capacities can be sustained after certification.

Polio transition is the process of transferring the necessary functions and funding from the GPEI to maintain a polio-free world and, where feasible and appropriate, to help achieve other health priorities.

Since 2016, the GPEI has provided tools, guidance, technical assistance and advocacy support to 16 countries that represent the largest GPEI footprint to help these countries develop national plans to gradually mainstream GPEI assets, capacities and infrastructure into their national health system. The majority of these transition plans have been approved by national authorities and are in the execution phase.

The process is complex, requiring tailored support and continuous dialogue with country governments. It has also given visibility into direct health interventions that GPEI staff have delivered that extend beyond polio eradication. Oversight of this process lies with WHO and UNICEF, which are best placed to provide support through their country and regional offices. In tandem, all five GPEI partner agencies are developing agency-specific transition plans to ensure the smooth transfer of functions before the closure of the GPEI.

Key among the activities the GPEI engages in to support polio transition is the stakeholder consultation process, launched in November 2018, to reach agreement on the future governance, financing and oversight of polio functions that must be sustained after eradication – as well as collecting and disseminating the history and lessons learned from polio eradication.

Because the transition process involves many countries – far beyond endemic and high-risk countries – it has also received exceptional spotlight and commendation on the world stage. Global leaders within the G7 and the G20 have expressed their resolve to effectively manage the post-polio transition.

“ We see a great opportunity to adapt this vaccine architecture even further. The service-delivery pathways we’ve developed for polio can also help us as we pursue our vision of primary health care for all. ”

Henrietta Fore
Executive Director, UNICEF

Post-certification planning

Today, four of the six WHO regions have been certified as polio-free – with only the African and Eastern Mediterranean regions yet to reach regional certification. In October 2018 and in review of the epidemiology, the Global Commission for the Certification of the Eradication of Poliomyelitis (GCC) recommended that global certification adopt a sequential approach. In 2015, the GCC declared the global eradication of wild polio type 2. Given that the last case of wild polio type 3 was reported in 2012, the GCC will next consider when it can certify eradication of this virus. Subsequently,

the GCC will consider wild polio type 1 certification three years after the last reported isolate – at which point, the world will be eligible to be certified wild poliovirus-free. This will also mark the launching point for the withdrawal of all OPV use, to eliminate the long-term risks of vaccine-derived polioviruses, thus ensuring a lasting world where no child will ever again be paralysed by any poliovirus – be it wild or vaccine-derived.

In preparation for the activities that will be required to sustain a polio-free world, the GPEI developed the Post-Certification Strategy (PCS) which was presented to the Seventy-first World Health Assembly in May 2018.

While the implementation of the PCS will not begin until after certification, critical areas of work are already underway to minimize post-certification risks. These include: bridging activities to support containment within facilities designated to retain poliovirus materials, including guidance for a potential breach; preparation for the eventual global withdrawal of the oral polio vaccine to eliminate the possibility of vaccine-derived outbreaks; vaccine stockpiles for outbreak response, which must be committed to now so the vaccine industry produces an adequate supply; and continued engagement with research and industry to develop new vaccines and ensure a healthy market for the inactivated polio vaccine which will maintain a polio-free world by building up immunity to all three types of wild polio.





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I have been working to eradicate polio for seven years. I am only 19 years old, and yet I manage a team of four women. In my community, there are many families that do not allow their daughters to work. I am an exception. Working to eradicate polio has encouraged me to stay in the health sector. My dream is to become a midwife.

Source: <https://www.unicef.org/stories/women-mission-eradicating-polio-afghanistan>

Afia

Female health worker, **Southern Afghanistan**

A final call to action



Eradicating polio will be an incredible achievement, but the global commitment to ensure that efforts continue is not a given. Bold financial and political commitments from both governments and institutional donors are needed to finish the job.

If the world steps back from the goal of eradication and the promise of a polio-free world, it could lead to a global resurgence of the disease with as many as 200 000 new cases expected every year within 10 years, all over the world. This resurgence would also then require large amounts of annual polio funding to indefinitely control polio through routine immunization and rehabilitation. This is not a baseless projection. We have seen it play out on a smaller scale – just before the world intensified its efforts to rid the planet of polio.

In the early 2000s, following the suspension of polio immunization activities in one country, polio spread to more than 20 polio-free countries across three continents. More than 1500 children were left permanently paralysed, and over US\$ 500 million was needed in international outbreak response. This is just a shadow of what could occur if we are unable to ensure political and financial commitments to eradication.

Experience has shown us that gains against polio are precarious and until global interruption is certified, the world remains at risk. The risks are real: from undetected transmission and resurgence due to declining immunity and vaccine hesitancy, to the risks inherent in managing the intensification of activities in some countries while also protecting the gains in polio-free countries as these other national programmes wind down. These risks are known to the GPEI and the broader immunization community. Some have materialized over the past five years, as with increased outbreaks due to weakened health systems or the containment breach that occurred at a vaccine facility.

“ This is the moment for the best and most respected polio leaders and managers to be confronting the poliovirus wherever it is making its last stand. ”

The Independent Monitoring Board

Yet while everything the GPEI does is designed to prevent or mitigate these risks, what makes the 2019–2023 Strategy distinct is that the programme has initiated a new integrated model that responds to vaccine hesitancy and polio fatigue, that addresses development indicators that are often linked to the persistence of polio, and that reinvigorates the programme overall to push forward and act decisively to end polio.

In their 16th report submitted in 2018, the Independent Monitoring Board called for a “fully committed and resourced Polio Programme,” noting that the best country offices were noted for a “willingness to question the validity of data, encourage innovation, consider flexibility in strategy and delegate authority from the national to the sub-national levels”. The GPEI is prepared to fully commit and fully resource the frontlines – with full backing from donors.

Polio eradication has a unique role to play for the next decade in global health. Alongside broader gains in routine immunization and health system strengthening, the successful eradication of

polio will deliver tangible results in support of the SDGs. It will rally the global community to bring full focus to the SDGs, most notably universal health coverage and its protection against medical impoverishment through equitable access to safe, affordable and effective vaccines.

It will also deliver a powerful message to the world. As country programmes around the world reel from the spread of misinformation and the deleterious impact of vaccine hesitancy on hard-won progress in public health, the GPEI presents a unique opportunity. By reaching this historic goal, polio eradication will provide both irrefutable evidence of the transformative power of vaccines and proof of what the world can achieve by joining efforts in support of the global good.

Join us in the fight to turn the tide, close the gap – and end polio forever.

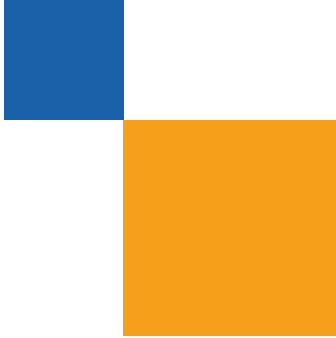


Historical contributions

The GPEI is financed by a wide range of public and private donors, who help meet the costs of the programme's eradication activities. The GPEI has a diverse funding base, underscoring the truly global nature of the effort to eradicate polio worldwide. In addition to contributions by national governments to their own polio eradication efforts, 100 public and private donors have given to the global programme, with a total of over US\$ 16 billion mobilized between 1988 and 2018.

The longstanding support by the international development community is critical to eradicate polio once and for all. The GPEI is grateful for the extraordinary commitment to polio eradication by generous donors across the world.

For more information on donor-specific and historical contributions to polio eradication, please visit: <http://polioeradication.org/financing/donors/historical-contributions/>



www.polioeradication.org

