

# JOINTLY ADVANCING POLIO ERADICATION

and broader global health goals: successful  
synergies and recommendations

## EXECUTIVE SUMMARY

**While there have been huge strides in eradicating polio, the disease remains a critical health threat.** Polio is extremely contagious, can cause death and paralysis, has no cure, yet is preventable with a simple vaccine. Polio eradication through widespread vaccination is highly cost-effective, resulting in healthy children and reduced poverty. Progress remains fragile, and numerous countries have experienced outbreaks of polio in recent years.

Funding for a polio-free world remains vital. At the same time, the infrastructure to eradicate polio has been used for many global public health goals, as well as for pandemic preparedness and response.

Over 13 examples from Lower-Middle Income Countries (LMICs) countries document how polio eradication has contributed to:

- 1) surveillance and a data-driven approach; and
- 2) public health emergency operation centers.

Recommendations are provided for donors, country governments and global stakeholders to simultaneously eliminate polio while leveraging polio resources to contribute to critical global public health needs and pandemic preparedness.

Effective transition planning is vital to ensure both polio eradication and leveraging polio resources for improved health globally.

## >> INTRODUCTION

Since the launch of the Global Polio Eradication Initiative in 1988, cases of polio worldwide have decreased by over 99%. This achievement has prevented more than 1.5 million childhood deaths and allowed over 20 million people to walk today, who might otherwise have been paralyzed. However, polio continues to circulate in a few areas. If these last reservoirs of the virus are not contained, there could be a global resurgence of the disease. That is why it is vital to eradicate polio completely, once and for all.<sup>1</sup>

Polio can lead to childhood mortality and/or paralysis and is highly contagious. Polio cannot be cured. Vaccination of those under age 5 is critical for prevention.<sup>2</sup> No country is immune from a polio resurgence. In 2022, the first case of polio paralysis was detected in the U.S. in almost a decade and traces of the poliovirus were found in wastewater in the United Kingdom and Israel, providing evidence that polio can be found in places where it was previously eliminated.<sup>3</sup> Populations without ongoing surveillance and a strategy for detection and rapid intervention may have reoccurrence of polio.<sup>4</sup>

Polio eradication efforts contribute to global health goals, such as The UN Sustainable Development Goals, which include ending preventable deaths of newborns and children under five years of age and ensuring availability and sustainable management of water and sanitation for all.<sup>5</sup> Polio eradication additionally has contributed to the global health goals of universal health coverage, pandemic preparedness, health systems strengthening, sustainability and health equity.

Many global health initiatives, including the Global Polio Eradication Initiative, Global Fund<sup>6</sup> and PEPFAR,<sup>7</sup> are grappling with how best to achieve the goals of sustainability and health systems strengthening.<sup>8</sup> As polio is eradicated, how can the global community ensure that countries are able to remain polio-free while leveraging polio infrastructure towards broader health goals? While it is important to note that disease specific programs can in some contexts utilize and/or divert scarce resources towards a single disease or health focus,<sup>9</sup> this paper explores how polio eradication efforts are able to promote a polio-free world - while in some cases, also provide mutual benefit for broader health and security goals. As noted in a peer-reviewed journal article, the vast array of activities that make up Global Polio Eradication Initiative have far-reaching applications in public health programming and health systems strengthening in resource-constrained settings.<sup>10</sup> Surveillance infrastructure and outbreak response through emergency operations centers that jointly benefit polio eradication, broader immunization and pandemic preparedness and response efforts have been key areas for synergies.

## >> COUNTRY CASE STUDIES

Recent country-level examples provide a unique window into how these linkages have been effectively developed in practice.

### 1) Surveillance and a data-driven approach

In 2024, when the Democratic Republic of the Congo faced a significant increase in mpox cases, more than 300 polio surveillance and outbreak response experts were effectively mobilized to curb mpox through identification of at-risk populations, engaging communities in prevention efforts, and implementing rapid response protocols.<sup>11</sup>

Globally, nearly 6,000 polio eradication personnel quickly adapted to address COVID-19 in vulnerable regions worldwide. Their efforts included coordinating outbreak response teams, training laboratory staff in virus detection techniques, conducting COVID-19 surveillance, and educating communities about the virus.<sup>12</sup> Additionally, in 37 Low-Middle Income Countries (LMICs), polio surveillance and immunization activities have been fully integrated into broader public health functions.<sup>13</sup>

Regionally, the AFRO Geographic Information System (GIS) centre, established in 2017, can be used with a mobile device or cloud-based tools, operating in real time, for geospatial data collection, analysis and visualization, which can track polio and other public health diseases and natural disasters, with numbers, locations, worker activities, and can also follow the movements of nomadic populations, thus determining needs for healthcare

deployments. Following Wild Polio Virus (WPV)-free certification achieved in Africa, AFRO GIS was used to address COVID-19. AFRO-GIS has also been used in 2019 to successfully vaccinate children of nomadic groups in the Lake Chad region (**Burkina Faso, Cameroon, Central African Republic, Chad, Mali, Niger and Nigeria**) to close polio surveillance and immunization gaps, vaccinating over 200,000 children who had not been previously vaccinated.<sup>14</sup> During **Uganda's** 2020 Ebola outbreak, GIS surveillance tools enabled early detection and containment, preventing a larger crisis.<sup>15</sup> GIS established for polio eradication in **Nigeria** was then used for surveillance to plan for measles immunization.<sup>16</sup> The polio eradication program in **Liberia** contributed to capacity building of health workers for surveillance.<sup>17</sup>

In **Nepal**, other diseases, including measles, Japanese encephalitis, rubella, rotavirus, and neonatal tetanus, have been added into the initial case-based surveillance for polio.<sup>18</sup>

The National Laboratory of **Bangladesh**, originally established to diagnose polio, now also conducts surveillance on rubella and measles. Moreover, the Bangladeshi surveillance system is now used for national emergencies and disasters, such as cyclones, tsunamis, and floods.<sup>19</sup> The polio program in **Indonesia** has helped to build the surveillance system as well as laboratory network capacity for measles and rubella.<sup>20</sup>

### 2) Emergency Operations Centers

In many countries, polio supported Emergency Operations Centers (EOCs) are being leveraged for broader efforts, helping to ensure that countries remain well positioned to respond to unexpected outbreaks of polio and beyond.

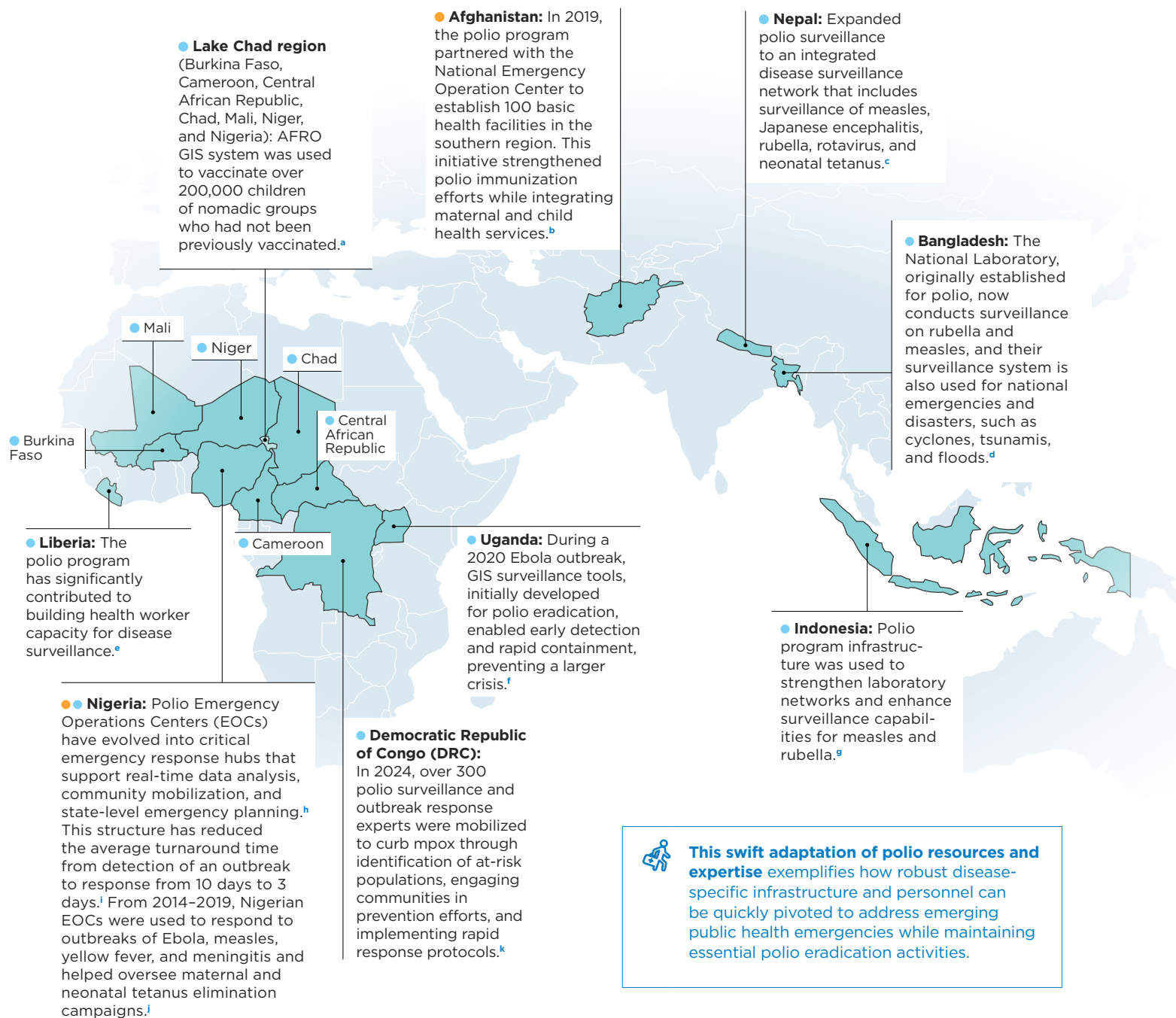
In **Nigeria**, from 2014-2019, the polio EOC structure and staff expertise were used to investigate and respond to outbreaks of Ebola, measles, yellow fever, and meningitis. Nigeria's polio EOC also oversaw maternal and neonatal tetanus elimination campaigns and has coordinated emergency response activities. Nigeria polio EOC staff have also conducted community mobilization and supported data management and analysis.<sup>21</sup> The EOC structure has been used by Nigerian States, reducing the turnaround time from outbreak detection to response initiation from 10 days to three days.<sup>22</sup>

In 2019, the polio program of **Afghanistan** collaborated with the national Emergency Operation Center to establish 100 basic packages for health facilities in the south, which boosted polio immunization as well as maternal and child health.<sup>23</sup>



# COUNTRY CASE STUDIES

- Surveillance and a data-driven approach
- Emergency Operations Centers



<sup>a</sup> Kipterer et al., 2024

<sup>b</sup> GPEI, 2024a

<sup>c</sup> Huang et al., 2021

<sup>d</sup> Anwar et al. 2024

<sup>e</sup> Clarke et al., 2019

<sup>f</sup> Akpan, G.U., et al. (2022)

<sup>g</sup> Rodriguez et al., 2021: 712

<sup>h</sup> Bracka et al., 2023

<sup>i</sup> Oyenbani et al., 2021

<sup>j</sup> Bracka et al., 2023

<sup>k</sup> WHO, 2024b

## >> RECOMMENDATIONS

### Donors:

- Continue to support polio eradication efforts to ensure we can finish the job and sustain a polio-free world.<sup>24</sup>
- Recognize how investments in polio eradication can also contribute to broader health goals.
- Together with partner governments and stakeholders, continue to assess and plan for the wind-down of polio eradication efforts in key countries, including forecasted needs related to sustaining a polio-free world as well as potential impacts on broader health efforts.



As noted in a peer-reviewed journal article with authors from the World Health Organization (WHO), other UN agencies, the World Bank, and other stakeholders, *“In countries transitioning from Global Polio Eradication Initiative, resource needs will be greater in countries that rely heavily on polio infrastructure and funding for key immunization funding. **Reliance on external funding remains a reality in many polio-endemic, outbreak, and at-risk countries.**”*<sup>25</sup>

- Mobilize support for immunization and track government commitments to both routine immunizations and polio vaccinations holding leaders accountable for budgets, policies, and implementation.<sup>26</sup>

### National governments:

- Ensure that immunization and polio eradication are adequately allocated, budgeted, and implemented, as well as included in policies and training.
- Continue efforts to fund polio eradication and broader immunization in alignment with national planning and priorities.
- Together with partners, continue to assess and plan for the wind-down of polio eradication efforts including forecasted needs related to sustaining a country's polio-free status and potential impacts on broader national health efforts.

### Global health stakeholders:

- Continue to advocate for political and financial support for both polio eradication and leveraging polio eradication efforts to improve broader national, regional, and global health goals, including improved health and pandemic preparedness.

- Continue to streamline partnerships and efficiently work together for the common goals of polio eradication and improved health.
- Mobilize support for immunization, with accountability for budgets, policies, and implementation, tracking government commitments for both routine immunizations and polio vaccinations to hold leaders accountable.<sup>27</sup>
- Continue to follow the 2024 Independent Monitoring Board's recommendations.<sup>28</sup>

## >> CONCLUSION

Strengthening linkages between Pandemic Preparedness and Response (PPR) efforts and long-established infectious disease infrastructure, such as immunization programs, can provide mutual benefit. Disease-specific programs, like polio eradication, can strengthen health security in specific areas. For example, polio surveillance infrastructure and laboratory capacity have been widely used for surveillance of other diseases, and several countries, particularly those at high-risk of outbreaks, have referenced immunization infrastructure as a key asset in national action plans for health security. The winddown of programs, like the Global Polio Eradication Initiative, in some countries, combined with a range of efforts to strengthen systems, provides an important opportunity to ensure that processes are holistic and mutually re-enforcing. Without sufficient investment and attention, the loss of critical infectious disease infrastructure that has been built up for decades, could contribute to inadequate surveillance and outbreak response capabilities, putting communities at risk. Other key synergies include the ability to leverage long-standing networks of front-line health workers that can access hard-to-reach communities, sophisticated outbreak response capacities that serve multiple goals and the ability to provide broader family health services and introduce new vaccines.

***The global community must continue to invest in polio eradication as well as leveraging polio infrastructure for global health goals.***



*Image: Lorah Gasy, influencer and supporter of children's rights for UNICEF giving an oral vaccine to a schoolboy during the last day of the polio campaign. Tanjombato Primary Public School, Analamanga Region, Madagascar*

@UNICEF/Rindra Ramasomanana



## >> ENDNOTES:

<sup>1</sup> <https://www.who.int/news-room/fact-sheets/detail/poliomyelitis>

<sup>2</sup> UK Health Security Agency/NHS cited in Kasstan-Dabush et al., 2024.

<sup>3</sup> Bandyopadhyay, 2022; Kasstan-Dabush et al., 2024

<sup>4</sup> Caplan and Mamo, 2024: 2

<sup>5</sup> <https://sdgs.un.org/goals>

<sup>6</sup> <https://www.theglobalfund.org/en/>

<sup>7</sup> <https://www.state.gov/pepfar/>

<sup>8</sup> <https://nam.edu/wp-content/uploads/2024/09/Sept.-18-NAM-Workshop-Briefing-Materials-1.pdf>

<sup>9</sup> Rodriguez et al., 2021; Tediosi et al. 2024; Alonge et al., 2022; Deressa et al., 2020; Akinyemi et al., 2022.

<sup>10</sup> Alonge et al., 2022: 2

<sup>11</sup> WHO, 2024b

<sup>12</sup> WHO, 2020

<sup>13</sup> Tediosi et al., 2024

<sup>14</sup> Kipterer et al., 2024

<sup>15</sup> Akpan, G.U., et a. (2022)

<sup>16</sup> Oteri et al., 2021

<sup>17</sup> Clarke et al., 2019

<sup>18</sup> Huang et al., 2021

<sup>19</sup> Anwar et al. 2024

<sup>20</sup> Rodriguez et al., 2021: 712

<sup>21</sup> Bracka et al., 2023

<sup>22</sup> Oyenbani et al., 2021

<sup>23</sup> GPEI, 2024a

<sup>24</sup> Tediosi et al., 2024

<sup>25</sup> Saxenian et al., 2024: S79

<sup>26</sup> UNF, 2023

<sup>27</sup> UNF, 2023

<sup>28</sup> IMB, 2024

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