eHealth AFRICA

We Need Digital Innovations for the Final Push to End Polio in Nigeria

Leveraging Technology to Reach Every Child and Secure a Polio-Free Future

By Judith Owoicho | October 2024

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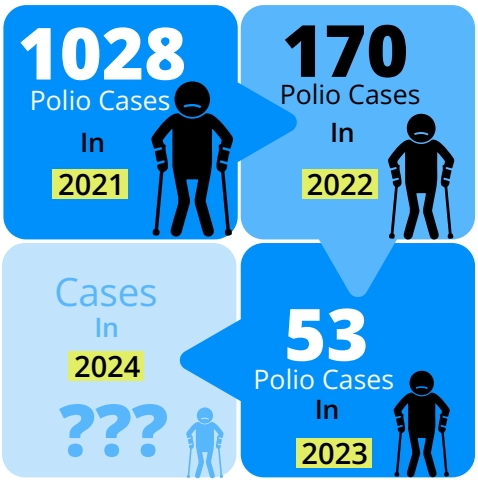
Introduction

Nigeria stands at a critical juncture in its fight against polio. The disease once a widespread and devastating disease, has been reduced significantly in Nigeria due to years of intense immunization efforts and global partnerships. Significant strides have been made in reducing the spread of the disease. Although polio today harms a relatively small number of children worldwide (Global Polio Eradication Initiative 2016), the threat of circulating variant poliovirus (cVPV2) remains, particularly in remote and underserved areas.

In 2021, Nigeria recorded 1028 cases, 170 cases in 2022, and 51 cases in 2023 across six states in North west, Nigeria (World Health Organization [WHO], 2023). As we approach the final frontier in the battle against polio, it is clear that traditional methods alone are no longer sufficient to close the gaps. In a country as vast and diverse as Nigeria, with its unique geographic and socio-economic challenges, digital health solutions are emerging as a critical tool in the fight to reach every last child. From using real-time data to track immunization coverage, to harnessing mobile technology for



education and awareness, digital health offers innovative ways to strengthen the healthcare system and overcome barriers to access.

This final push to end polio is not just about vaccines—it's about leveraging technology to ensure no child is left behind. By integrating digital health into Nigeria's immunization efforts, we can secure a polio-free future, safeguard communities by locating missed settlements, improving vaccination coverage, and guiding Ward Focal Persons on appropriate micro-planning(Gavi, 2020). This will ultimately, rid the world of this disease once and for all. There is a need for the urgent and continued integration of digital health technologies in Nigeria's polio eradication efforts. With real-time data, improved micro planning, and enhanced vaccination coverage, digital health is the key to the final victory over polio in Nigeria.

The Role of Digital Health in Polio Eradication

Polio eradication in Nigeria faces several challenges, including geographic inaccessibility, security concerns, and logistical limitations. Remote communities in conflict-ridden areas are often missed, leaving children vulnerable to the disease. However, digital health solutions are transforming how vaccination campaigns are carried out, making them more efficient, precise, and accountable.

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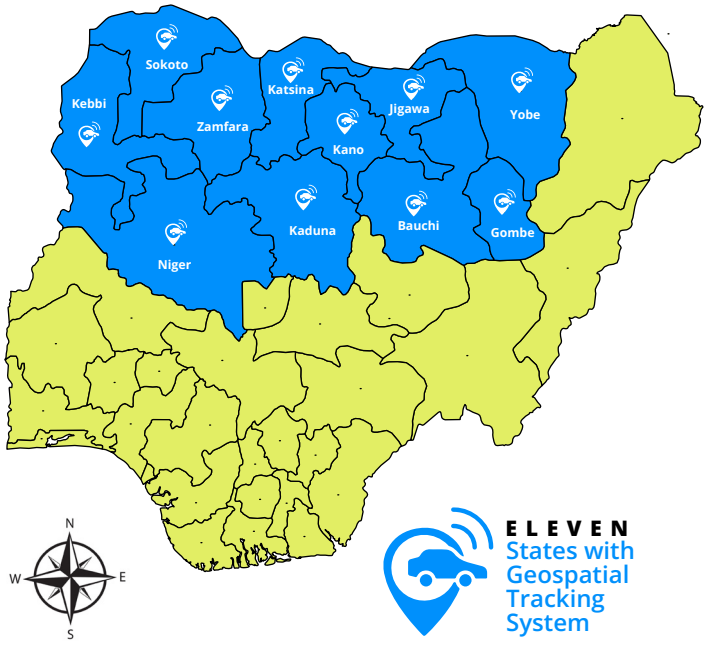
eHealth Africa's Geospatial Tracking System (GTS), is a project that exemplifies how technology can bolster healthcare delivery. It was launched to assist the Nigerian government and Polio Eradication Initiative partners in combating the spread of Circulating Variant Poliovirus Type 2 (cVPV2), targeting eleven (11) priority states -Bauchi, Gombe, Jigawa, Kaduna, Kano, Katsina, Kebbi, Niger, Sokoto, Yobe and Zamfara. The project has been pivotal in mapping settlements, monitoring vaccination campaigns in real-time, and ensuring

comprehensive coverage in hard-to-reach areas particularly in settlements facing security challenges and those difficult to access. Through this system, vaccination teams can now reach previously unmapped or inaccessible communities, ensuring that no child is left behind.



ELEVEN States with Geospatial Tracking System

Increased GIS coverage of vaccination activities during polio outbreak responses: 386 enumerators were deployed to collect geo-coordinate of settlements in 53 Local Government Areas across the 5 states (Kaduna, Kano, Kebbi, Katsina and Niger). With this, 70% of settlements without geo-coordinates have been updated with the accurate geo-coordinates for improved Polio campaign planning and vaccination outcomes.

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11
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Kano
Katsina
Kebbi
Niger
Sokoto
Yobe
Zamfara

In Q2, the geo-coverage rate (89%) of settlements tracked for accountability increased by 6% when compared with Q1 (83%). On average, the geo-coverage rate for H1 was 85%. Under GIS Special Intervention, training was conducted for vaccination teams across five states: Katsina, Zamfara, Kebbi, Niger, and Sokoto. A total of 107 individuals were trained to enhance the effectiveness and reach of the vaccination efforts. During the April round, implementation was conducted in a total of 12,791 settlements across 56 Local Government Areas (LGAs) in four states: Katsina, Niger, Sokoto, and Zamfara. 81% of the settlements planned were successfully tracked. In May, the polio eradication campaign focused on reaching 4,861 settlements across various states. An overall coverage rate of 87% was achieved.

83% Q1 Geo-coverage → **89%** Q2 Geo-coverage

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Coverage

The implication of achieving the geo-coverage rate is the opopportunity to have more unreached children identified and reached with life-saving vaccines. In H1, a total of 1,400,148 children were reached across the settlements tracked.

The Polio GIS Special Intervention project represents a pivotal advancement in utilizing technology to enhance the effectiveness of vaccination campaigns, particularly in challenging and inaccessible areas. Its success lays a robust foundation for not only continuing the fight against polio but also for addressing other public health challenges with similar logistical complexities.

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Why Digital Innovation is Crucial for the Final Push

- Digital innovations like GIS ensure that vaccination teams can accurately track and reach remote settlements which is crucial to eradicate polio. By mapping over 70% of previously unmapped settlements in states like Kaduna, Kano, Kebbi, and Niger, it has significantly improved vaccination coverage. For example, in 2023, the geo-coverage rate of settlements tracked rose to 89%, up from 83% earlier in the year. This data-driven approach ensures that the most marginalized communities receive life-saving vaccines.

- Through digital health systems, vaccination teams can be monitored as they move from one settlement to another. This real-time tracking has proven invaluable in ensuring that vaccination campaigns are on target and that resources are used efficiently. During the April 2023 vaccination campaign, the GIS system was used to track over 12,791 settlements across 56 Local Government Areas (LGAs), achieving an impressive 81% coverage of planned areas. By May, the campaign reached 87% of targeted settlements, showcasing the power of real-time accountability in the fight against polio.

- Accurate data and advanced planning tools are critical in vaccination campaigns, especially when working in areas with difficult terrain or security concerns. The GIS system's ability to update the Master List of Settlements (MLoS) has drastically improved micro planning and resource allocation. This ensures that even the smallest or most isolated communities are included in vaccination efforts. The success of these planning effort is evident in the 1.4 million children vaccinated during the first half of 2023 across the settlements tracked by GIS.

A Scalable Model for Future Public Health Challenges

The digital innovation being used in polio eradication campaigns offers a scalable solution for other public health challenges in Nigeria. Whether tackling measles, COVID-19, or yellow fever, the infrastructure built through digital innovation can be expanded to address future health crises. The ability to monitor, track, and analyze data in real-time creates a foundation for a stronger healthcare system capable of responding to future outbreaks and vaccine-preventable diseases.

Securing a Polio-Free Future Through Digital Health

We must recognize that the fight is not yet over. While progress has been remarkable, we cannot afford to lose momentum in these critical final stages. The key to a polio-free Nigeria lies in our ability to harness the full potential of digital technologies.

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Key Recommendations:

- **Increased Investment in Digital Health**
  The government, international health bodies, and private stakeholders must prioritize and increase funding for digital health initiatives, ensuring that technology continues to drive the final stages of polio eradication.
- **Capacity Building and Training**
  Expanding digital health training programs for vaccination teams and healthcare workers will ensure the continued effectiveness of digital tools and campaigns.
- **Sustained Commitment**
  We must maintain long-term commitment to integrating digital health into public health programs, using these digital innovation as the foundation for tackling other vaccine-preventable diseases and public health challenges.

We call on all relevant stakeholders to harness the power of digital health to secure a polio-free future for Nigeria. The time to act is now.

We are now closer than ever to victory. Digital health technologies, like GIS have proven to be critical in this final push, ensuring that no child is left behind, no matter how remote their community may be. With continued investment and commitment, we can ensure that Nigeria not only achieves a polio-free status but also builds a stronger, more resilient healthcare system for future generations.

We call on all relevant stakeholders to harness the power of digital health to secure a polio-free future for Nigeria. The time to act is now.

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