



## Letter to the Editor

## Last fight of wild polio in Africa: Nigeria's battle

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## Dear Editor

Polio is an incurable deadly disease caused by a virus which constitutes major public health threat in Africa for many years. The virus usually afflicts children under-five and can cause paralysis or even death if the breathing muscles are affected [1]. The poliovirus is frequently transmitted by person-to-person spread through the faecal-oral route, common vehicle such as contaminated food or water and virus multiplies in the intestine [1]. In August 2019, the African Region became eligible to be declared free of wild poliovirus, after Nigeria, being the last country to be certified polio free, recorded no new cases in three years (the requisite period) [2]. The Africa Regional Certification Commission, an independent body, had already accepted the documentation of the other countries in the WHO African region [2]. By 2020, all the three strains of the wild poliovirus (type 1, type 2, and type 3) have been eradicated in Africa.

In Nigeria, there has been steady progress toward controlling the transmission of the virus [Fig. 1]. In 2009, there were 388 cases of wild poliovirus, with only 21 cases in 2010. However, there was a new surge in the number of cases in 2011 with 63 cases. In 2012, there were 122 cases of wild poliovirus in 60 districts and 53 cases in 30 districts in 2013 [3]. A turning point towards eradicating wild poliovirus in Nigeria was in 2013 and this progress was maintained in 2014 with a significant decrease in the case count of wild poliovirus cases. Since 3 September 2013, indigenous wild poliovirus circulation has been restricted to Northern part of Nigeria [3]. On 25 August 2020, Nigeria became last country in Africa to be certified free from wild polio, after the continent's last case was reported in Borno, north-eastern Nigeria four years ago [4]. This implies that only Afghanistan and Pakistan remain endemic with polio and thus make the African continent to be free of wild polio [5]. Human resources, capacity built, knowledge, skills and experience gained in the fight against polio epidemic will leave behind a legacy in public health response to diseases outbreak on the continent and that with solidarity, resilience and commitment, reaching the marginalized population with healthcare services is a possibility.

The Global Polio Eradication Initiative, spearheaded by national governments, the World Health Organization, Rotary International, the United States Centers for Disease Control, the Global Alliance for

Vaccines and Immunizations and Prevention, the Gates Foundation and United Nations Children's Fund, played a key role in putting an end to the wild poliovirus epidemic in Africa. The hard-won achievement of immunizing more than 95% of Africa's population is an important milestone and comes with many lessons for Africa's public health systems, importantly the benefits vaccination, public-private partnerships, cooperation and collaboration and increase in political will and effective leaderships can reap for diseases prevention and control. However, this major achievement has not come without challenges in Nigeria. The country has overcome several unique challenges over the past several decades to finally eliminate polio. Insecurity caused by Islamist militant group Boko Haram in Northern Nigeria, myths about negative effects of immunization, parent vaccine refusal and other health issues, like malaria, tuberculosis, Lassa fever and HIV taking priority in an already stressed health environment are some of the challenges that faced polio response in Nigeria [3,6].

Even though the continent is certified free of wild poliovirus, efforts need to be intensified to prevent future outbreak. The virus is still endemic in Pakistan and Afghanistan and due to international travel, wild poliovirus can easily be imported into countries that are polio free and can spread among under-immunised populations. In addition, there is a form of vaccine-derived polio, a mutated form of the attenuated live virus contained in the oral polio vaccine, that is yet to be eradicated in

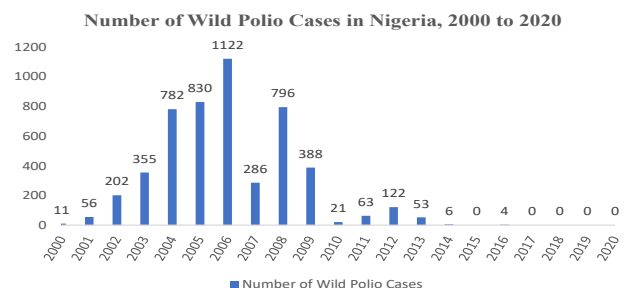


Fig. 1. Wild polio cases in Nigeria, 2000 to 2020; Source: Federal ministry of health of Nigeria.

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many African countries including Nigeria. There are 18 vaccine-derived poliovirus cases reported in 2019 and two cases as of 19 August 2020 in Nigeria [7]. Surge in polio cases happened in Angola in 2005, after polio was defeated in the country in 2001 [4]. It was thought that the virus was brought in from outside the country. With the emergence of COVID-19, it is therefore important that African countries including Nigeria remain vigilant and ensure vaccination and effective surveillance for a strong vigil towards early detection and effective response to any re-emergence of the virus. It is also important that Nigeria and other African countries take the lessons learned and best practices from eradicating wild polio virus to put an end to other vaccine-preventable diseases like measles, hepatitis, pneumonia, and rotavirus diarrhoea on the continent. The lessons learned should also be leveraged to improve public health systems on the continent and importantly in the fight against COVID-19 pandemic.

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### Authors contribution

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### Declaration of competing interest

None.

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