

Re-Emergence of Polio in Pakistan: Another Public Health Failure?

Shizra Jawed¹, Muhammad Bilal Islam¹, Muhammad Hammad Butt^{2,3}  and Irfan Ullah^{4,5}

Letter to the Editor

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Corresponding author:

Muhammad Hammad Butt,
Email: muhammad-hammad.butt.7587@student.uu.se

¹Department of Internal Medicine, Dow Medical College, Dow University of Health Sciences, Karachi, Pakistan; ²Department of Medicinal Chemistry, Faculty of Pharmacy, Uppsala University, Uppsala, 75123, Sweden; ³Faculty of Pharmacy, University of Central Punjab, Lahore, Pakistan; ⁴Kabir Medical College, Gandhara University, Peshawar, Pakistan and ⁵Institute of Public Health and Social Science (IPH&SS), Khyber Medical University, Peshawar, Pakistan

Poliomyelitis is one of the most reported endemic diseases in Pakistan caused by a poliovirus (enterovirus), which transmits via the fecal-oral route. The most characteristic symptom is muscle weakness, progressively resulting in paralysis. According to available data, around 2–5% of children and 15–30% of adults die due to respiratory arrest; thereby, it remains one of the leading threats to public health and economic prosperity in developing countries.¹ To this day, Pakistan continues to combat this deadly virus. A record low of 8 cases was reported in 2017; however, this was followed by an increase in later years, with 12 cases in 2018, 147 cases in 2019, 84 cases in 2020, and 1 and 13 cases found in 2021 and 2022, respectively.^{2,3}

Pakistan, impeding a polio-free world, is still one of the only countries where the poliovirus is considered endemic. The emergence of 13 new polio cases in the country in the first half of 2022 has led to calls for vigorous measures to cope with the situation in the upcoming future. Even more alarming is the fact that all cases were identified from the North Waziristan area of Khyber Pakhtunkhwa (KPK) Province of Pakistan. The health ministry reported that the southern districts of Khyber Pakhtunkhwa Province, which include North and South Waziristan, Dera Ismail Khan, Bannu, Tank, and Lakki Marwat, are at the highest risk of wild poliovirus transmission.⁴ The cataclysmic impacts of coronavirus disease (COVID-19) on health care in Pakistan are exacerbated by the halt in routine immunization against a myriad of vaccine-preventable diseases. In the middle of 2020, all immunization operations in Pakistan were disrupted owing to the lockdown, depriving 40 million children of the polio vaccine. This resulted in a decrease of door-to-door immunization campaigns against polio, as the country was battling the pandemic with resources being diverted and prioritized toward it.⁵

With COVID-19 still at large, this sudden resurgence of poliovirus cases depicts that Pakistan is amidst its worst public health crisis in history. Among endemic countries, Pakistan is thought to be the hub of endemic transmission of wild poliovirus (WPV).¹ The story of Pakistan's polio dilemma raises questions about the ongoing polio eradication plan across the country and the negligence of the government and local health bodies in curbing the spread of this virus. A tragedy for the infected infants and their families, health authorities in Pakistan confirm that the poliovirus transmission is not just related to North Waziristan, as positive environmental samples have been reported from the Bannu region as well.⁴ Despite signs of significant improvement for a brief period, it now seems that there is a high possibility of a resurgence unless strict measures are taken to rectify Pakistan's forsaken public health system.

Mainly reported determinants of polio transmission include inadequate health and sanitation facilities, illiteracy, and misconstrued religious beliefs. Controversies regarding the content of the vaccine, that it is made up of pig fat, which is haram, and therefore prohibited in Islam, are being widely circulated, leading to vaccine hesitancy among the community.⁶ A considerable reluctance for vaccinations amongst the parents has been noticed over the years. First, they have reservations about the rumored side effects of the vaccines and their mishandling during transference and storage. Second, the lack of awareness regarding booster doses and the misbelief that children are given more doses than the number approved by the World Health Organization (WHO) further fuel their mistrust.⁷ Hence, increasing the awareness and understanding of the people is imperative to reduce polio vaccine refusals and eventually expand its coverage.

Additionally, the government has made efforts to incorporate new and improved strategies directed at eliminating polio. However, it still lags in complete eradication and has faced queer challenges. To overcome the hurdles, the country's health administration should take full authority to ameliorate its malfunctioned system. New plans of action need to be addressed concerning ethical fundamentals and dimensions. If the state becomes more vigilant toward examining epidemiological data of infectious diseases and establishes vast disease surveillance

policies, strategic and timely management will then be possible. All that is required is greater concentration and steps toward the right direction.

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