



## Short Communication

## Poliovirus returns to Pakistan: A rising concern

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## ABSTRACT

Poliomyelitis is a completely preventable but deadly virus causing paralysis in children and in some cases, death. Pakistan is one of the only two countries where polio is still prevalent despite relentless vaccination drives. In the past two months, four cases of polio have been documented in children no older than two years, condemning them to a life of disability. This commentary explores the reasons for the recent spike in polio cases and what measures can be taken to limit the spread of the disease, especially in high-risk areas where vaccine hesitancy poses a major problem. Unless drastic measures are taken by the healthcare sector, polio will continue to be a burden on the country's economy and countless more children will fall victim to the disease.

## 1. Discussion

Poliomyelitis is a debilitating and potentially fatal disease transmitted by human contact which damages the spinal cord and ultimately causes paralysis. Polio-associated paralysis severely decreases the quality of life and can even lead to death [1]. In recent years, due to the countless efforts of the Global Polio Eradication Program, the virus has been eliminated from almost all over the world by effective immunization except for two countries, Pakistan being one of the two, unfortunately, where the disease is still endemic [2].

In 2021, there was only one case of polio reported at the start of the year followed by 15 months where there were no documented cases of the virus [3]. However, the relief was short-lived since recently there has been a spike in the number of polio cases recorded in Pakistan where the last case was documented a few days ago, making it the fourth polio case reported in Pakistan in 2022. All four victims are children no older than two years and it is extremely distressing to know that they will be paralyzed for life by an easily preventable disease [3,4]. Notably, all four cases have been reported from the district of North Waziristan in KPK which has now been deemed a high-risk area for poliovirus due to the hesitancy of the residents in administering the vaccine to their children [4]. This refusal to immunize their children largely stems from the fact that illiteracy is also endemic in the area and parents simply do not realize that they are putting their children at the risk of disability for a lifetime. The hesitancy toward the polio vaccine can also be attributed to

some of the myths that commonly circulate in Pakistani communities where many people believe that the vaccine is responsible for causing the disease itself; some even see vaccines as a political agenda or consider its administration to be unreligious. Since social media use is not prevalent in such remote areas, debunking these myths can prove to be a hard task.

The COVID-19 pandemic has not helped the polio situation in Pakistan either [5–9] and has instead made polio vaccination drives harder than usual owing to the inability of healthcare workers to travel to rural areas amidst imposed lockdowns which might explain the post-COVID surge in polio cases [10]. The cherry on top is the distrust that most people in rural areas harbor towards healthcare workers which contributes to their reluctance to get their children the vaccine.

While the government has been working tirelessly towards the aim of eradicating polio from Pakistan, more effective means are required to completely rid the country of the disease. Campaigns regarding polio awareness need to be held more frequently, especially in high-risk areas with detailed discussion on the consequences of not getting the vaccine. There needs to be a proper method of documenting that every child has received the vaccine instead of judging a child's vaccination status by a mark on their finger, which can easily be faked. In a unique approach, the government could also provide incentives to the parents for vaccinating their kids against polio. In underprivileged areas such as Waziristan, even small incentives like ration bags could highly motivate the parents to immunize their children against the virus. Moreover, one on

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one counseling should be provided for parents who are not willing to vaccinate their children since personal counseling can have more of an impact on their decision as compared to general awareness campaigns conducted for the masses. The healthcare sector needs to focus on making social media more accessible in these remote areas and use that as an effective tool to debunk myths and change people's perceptions about the vaccine.

Unless the government takes more effective measures to prevent the spread of the virus, the cases will continue to hike considering that polio is a highly infectious disease and already poses a burden on the country's economy. These children are the future of the country and Pakistan cannot afford that its youth fall victim to a disease like polio, which should have already been eradicated long ago, as is the case with 99% of countries around the globe.

#### Ethics statement

The present study includes printed and published information; therefore, the formal ethical clearance was not applicable for this study.

#### Ethical approval

NA.

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#### Author contribution

Syeda Tayyaba Rehan: Conceptualization, Writing – original draft. Laiba Imran: Writing – original draft. Huzaifa Ahmad Cheema: Writing - review & editing. Mohammad Mehedi Hasan: Conceptualization, Writing - review & editing.

#### Registration of research studies

1. Name of the registry: NA
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#### Guarantor

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#### Consent

NA.

#### Declaration of competing interest

The authors declare that there is no conflict of interests.

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Not applicable.

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