

The Scourge of Poliomyelitis in Pakistan: Barrier towards its eradication

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Poliomyelitis is an extremely disabling disease caused by the polio virus, a virus belonging to Picornaviridae family. Humans are the only natural host. The virus principally involves the motor neurons resulting in permanent asymmetrical lifelong paralysis. Effective vaccines are available for its eradication. Unfortunately despite vaccine availability the disease cannot be eradicated from earth yet. Pakistan and Afghanistan are the only two nations harbouring the polio virus. Lately sporadic cases of Poliomyelitis have also been reported from countries like Mozambique, which had an outbreak following importing of wild poliovirus (WPV1) from Pakistan.¹ As long as a single child remains infected, children in all countries are at risk of contracting polio.²

Expanded Programme for Immunization (EPI) was initiated in Pakistan in 1978. Polio vaccine was included along with five other vaccines against life threatening diseases like Tuberculosis, Diphtheria, Pertussis, Tetanus, and Measles. The journey that took off smoothly with over 50% vaccine coverage by 1990 raised to 80% coverage by 2007, has taken a sharp dip in the ensuing decades. Pakistan unfortunately never recovered from the scourge of polio disease. In 1988 Global Polio Eradication Initiative (GPEI) was started, that resulted in a decline to 99% cases of polio in the world, but Pakistan continued to face challenges which has prevented total eradication of polio.³

From 2005 to 2016, Pakistan suffered from worst violent militancy,⁴ the religious extremist mindset, especially in northern areas of Pakistan, which coupled with the conspiracy theory resulted in damage to the polio campaign. Because of the vaccine hesitancy, refusal to take polio drops, killing of large numbers of polio workers and their protecting policemen, resulted in temporary suspension of the polio campaign. This caused thousands of children to remain unvaccinated. The prompt military action taken to control the insurgencies, the militancy waned off and polio campaign resumed. The number of polio cases began to decline.⁵

Despite continuing challenges, Pakistan was succeeding and a time came when eradication of polio in Pakistan

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seemed hopeful, with no Wild Polio Virus (WPV1) reported from January 2017 to mid-2018.

Unfortunately, a great set back to the polio campaign occurred during Covid-19.⁶ The Supplementary Immunization Activities (SIAs) which entailed door to door polio campaign was halted, because of the highly contagious nature of Corona virus. This resulted in spread of polio virus to other areas of Pakistan. Pakistan again witnessed a surge in polio cases with resultant rise in disabilities in children contracting this disease. However with continuing efforts in 2021 Pakistan had only one reported case of WVP1 and eight cases of circulating vaccine-derived poliovirus type 2 cases (cVDPV2)

The vaccination efforts were again hampered during the floods of summer 2022.⁵ The large influx of people from flood affected areas and damage to health centres, disrupted the routine immunization programme. The polio immunization team could not reach the affected areas during Supplementary Immunization Activities (SIAs), leading to further spread of the virus.⁷

Interestingly, Polio and AFP cases showed a rise in the days following general elections in Pakistan e.g. in 2013 following general elections, the number of reported polio cases rose to 306 followed by a drop in subsequent years to only eight polio cases in 2017. The number of polio cases rose to 12 in 2018 soon after the year following elections again.⁸ A number of explanations were offered, change in political environment, frequent transfer of officials and staff involved in polio eradication programme and their replacement by persons inexperienced in preventive health and polio eradication programme tasks, together with ever expanding population of Pakistan and lack of community engagement.

Pakistan unfortunately is still facing a number of challenges that is acting as a barrier towards complete eradication of the Polio Virus transmission from the country. The current economic crises, change of often repeated political situation, lack of effective health care delivery system, compounded with governance issues, low routine EPI coverage are few to be named. Continuing security threat to polio workers,⁹ cross border refugees movement and continuous prevalence of polio reservoirs in difficult to reach areas in some identified cities like Karachi, Lahore and Islamabad, poses further threat towards the

eradication of the polio virus.^{9,10}

Nine WPV1-positive environmental samples were reported this year, 2024.);⁹ three from Balochistan, four from Sindh and one each from Khyber Pakhtunkhwa and Punjab.⁷

This is rather alarming! It calls for an alert.

Identifying gaps in acute flaccid paralysis (AFP) surveillance sensitivity, increasing the number of environmental surveillance sites, particularly in areas already identified and mapped as potential reservoirs of Wild polio viruses like KPK, North Waziristan, Lakki Marwat and other urban sites at Karachi and Lahore is an initial mandatory step,

The Way Forward: A collective and comprehensive planning is needed at both federal and provincial level, which should address the key barriers towards eradication of poliomyelitis. Utilizing our own resources, less dependency on foreign fundings and generating and searching for local funding resources, should be a key step towards strategic planning. If Pakistan wants to eradicate this crippling disease, strict measures will have to be adopted. These include, improving the deteriorating law and order situation, combatting continuing unchecked cross border movement of largely unimmunized population from Afghanistan, strengthening of polio drive in areas identified as hub of polio virus reservoirs and more collaborative planning with the neighbouring country Afghanistan. These are some measures to be taken on a war footing, if Pakistan wishes to eradicate this crippling disease. If not then our country should be prepared to face isolation from the global community.

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