

Failure of Polio Eradication from Pakistan: Threat to World Health?

Abdul Momin Kazi¹, Muneeb Khalid², Abdul Nafey Kazi²

¹Department of Pediatrics, Aga Khan University, Karachi, Pakistan

²Medical student, Dow Medical College, Karachi, Pakistan

Pakistan has been the major contributor to confirmed polio cases in 2013 as compared to Nigeria and Afghanistan – the only three remaining endemic countries [1]. The polio eradication campaigns in Pakistan have been suffering from continuous setbacks as 27 polio workers have been assassinated since December 2012 during anti-polio immunization campaigns [2, 3]. According to the 2013 World Health Organization report, 74 polio cases have been reported in Pakistan. However, 51 (69%) of the polio confirmed cases are from Federally Administered Tribal Areas (FATA), identifying it as the single major poliovirus reservoir in Pakistan [1]. The Government of Pakistan has highlighted multiple reasons for the growing polio endemic in Pakistan citing primarily militancy and ‘refusal families’. Militancy, especially in the Federally Administered Tribal Authority (FATA) and North Waziristan areas of Pakistan, may have compounded the polio campaign further by putting many children at risk.

In spite of multiple supplementary immunization campaigns, the majority of confirmed polio cases identified in Punjab, Sindh and Khyber Pakhtunkhwa provinces in 2013 were from zones considered as low-violence areas. This observation strongly contradicts the perception of militancy alone as an impediment for polio eradication in Pakistan. Lack of accurate polio vaccination coverage estimates and unaccountability of responsible officials are major reason for new polio cases in areas unaffected by violence [4, 5]. The example of measles epidemic in the southern part of Sind (considered violence free zone) also contradicts the poor security viewpoint and highlights the failure of public health preventive strategies as the primary culprit. The 306 deaths and 14000 reported cases attributable to measles in 2012 highlights the poor immunization infrastructure, fraught with incorrect reporting [6].

These failures in Pakistan’s polio eradication campaigns are now complicating the global scenario for a polio free world. In 2011, 7 polio virus cases were detected in China's western

Xinjiang province, bordering Pakistan. The type 1 polio virus strain was identified to be genetically linked to the strain endemic in Pakistan [7]. In 2012, Egypt health authorities found polio virus strains in two of its sewerage systems [8]. Samples of this polio virus were traced to the environmental samples in Sukkur in Northern Sindh province of Pakistan again a low violence area [8]. In 2013, the same strain from Pakistan found its way both, in the Palestinian and Israeli sewerage system via Egypt [9]. Recently, 17 polio cases detected in four major cities of the war affected country of Syria have also been linked to the wild poliovirus strain from Pakistan [10].

Failure to curtail the polio endemic in Pakistan has a high risk of implementation of international travel ban [11]. Saudi Arabia has already declared polio vaccination mandatory for Pakistani travelers since 2009, and now India will also implement ban on travelers from Pakistan who are not immunized against polio from January 30 2014 [12]. We, therefore, suggest that while security and violence is a major problem for polio eradication in Pakistan, the need to strengthen the vaccination program cannot be overlooked. Introduction of better tools involving information technology like monitoring of immunization campaigns through SMS text and global information system (GIS) based systems needs to be explored and, when possible, implemented to determine accurate coverage during each supplementary immunization campaign [13, 14]. While specific strategies related to anti-polio immunization campaigns in security compromised areas are urgently needed, close monitoring of anti-polio immunization campaigns is essential to ensure accountability and to overcome factors behind poor coverage.

REFERENCES

1. Polio Global Eradication. Available from: <http://www.polioeradication.org/Dataandmonitoring/Poliothisweek.aspx>
2. Riaz H, Rehman A. Polio vaccination workers gunned down in Pakistan. *Lancet* 2013;13(2): 120.
3. Pakistani militants killed 27 polio workers since 2012.

Conflict of Interest:
None declared

This article has been peer reviewed.

Article Submitted on: 10th
September 2013

Article Accepted on: 1st
October 2013

Funding Sources: None
declared

Correspondence to: Abdul
Nafey Kazi

Address: Dow Medical
College, DUHS, Karachi,
Pakistan

Email Address:
abdulnafey@hotmail.com

Cite this article: Kazi AM,
Khalid M, Kazi AN. Failure
of polio eradication from
Pakistan: Threat to world
health. *J Pioneer Med Sci.*
2014; 4(1):8-9

- Available from:
http://centralasiaonline.com/en_GB/articles/caii/newsbriefs/2013/10/24/newsbrief-14
4. Naeem M, Adil M, Abbas SH, Khan MZ, Naz SM, Khan A, Khan MU. Coverage and causes of missed oral polio vaccine in urban and rural areas of Peshawar. *J Ayub Med Coll Abbottabad*. 2011; 23 (4):98-102.
 5. Owais A, Khowaja AR, Ali SA, Zaidi AK. Pakistan's expanded programme on immunization: an overview in the context of polio eradication and strategies for improving coverage. *Vaccine*. 2013; 31(33):3313-9.
 6. Riaz H. Public health failings behind Pakistan's measles surge. *Lancet*. 2013; 381 (9862):189.
 7. Polio strain spreads to China from Pakistan. Available from: <http://beta.dawn.com/news/660366/polio-strain-spreads-to-china-from-pakistan-who>
 8. Polio virus spreads from Pakistan to Egypt. Available from: <http://news.sciencemag.org/people-events/2013/01/polio-virus-spreads-pakistan-egypt>
 9. Does Israel's new polio outbreak threaten global eradication efforts? Available from: <http://news.yahoo.com/does-israel-polio-outbreak-threaten-global-eradication-efforts-204000620.html>
 10. WHO confirms Polio strain in Syria originated in Pakistan. <http://breakingnews.sy/en/article/28850.html>
 11. Travel ban likely if polio threat remains beyond 2013. <http://tribune.com.pk/story/411236/travel-ban-likely-if-polio-threat-remains-beyond-2013/>
 12. Polio scare brings Indian travel restriction. <http://www.dawn.com/news/1061993/polio-scare-brings-indian-travel-restriction>
 13. AM Kazi, A Murtaza, S Khoja, AK Zaidi & SA Ali. Monitoring polio supplementary immunization activities using an automated short text messaging system in Karachi, Pakistan. *Bull World Health Organ*. Published online: http://www.who.int/bulletin/online_first/en/.
 14. GIS Mapping & GPS Tracking for Polio in Nigeria. Available from: <http://mobile.thegatesnotes.com/Topics/Health/GIS-Mapping-GPS-Tracking-for-Polio-in-Nigeria>.