

Resurgence of polio during Gaza conflict

Samer Abuzerr¹, Sammer Marzouk², Dang Nguyen³ and Cameron Sabet⁴

¹Department of Medical Sciences, University College of Science and Technology, Khan Younis, Gaza Strip, State of Palestine. ²Northwestern Feinberg School of Medicine, Chicago, USA. ³Harvard T. H. Chan School of Public Health, Harvard University, Boston, USA (Correspondence to Sammer Marzouk: sammer@northwestern.edu). ⁴Georgetown University Medical Center, Washington DC, USA.

Keywords: polio, vaccination, childhood immunization, healthcare, infant, Gaza

Citation: Abuzerr S, Marzouk S, Nguyen D, Sabe C. Resurgence of polio during Gaza conflict. *East Mediterr Health J.* 2025;31(2):136–137. <https://doi.org/10.26719/2025.31.2.136>.

Copyright © Authors 2025; Licensee: World Health Organization. EMHJ is an open access journal. This paper is available under the Creative Commons Attribution Non-Commercial ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

On 16 August 2024, Palestinian health officials confirmed the first case of polio in Gaza in 25 years in an unvaccinated 10-month-old child from Deir al-Balah (1). The infant, partially paralyzed on the left leg, represents an ominous omen for the worsening public health crisis in the war-torn territory. This diagnosis comes after the detection of poliovirus in wastewater samples from 6 locations across Gaza in July 2024, signaling the potential for more widespread transmission (2).

The re-emergence of polio in Gaza, once declared polio-free in 1999, is a direct consequence of the devastating 10-month war that has crippled the region's healthcare infrastructure (3). This setback directly threatens the "zero polio" target of the WHO Eastern Mediterranean Region (EMR) and demonstrates how conflict can rapidly reverse decades of public health progress. The situation has significant implications not only for Gaza but for the entire EMR, because polio's highly contagious nature poses a risk to neighboring countries and could require substantial regional health resources to contain.

Overcrowded refugee camps, collapsed sanitation systems and reduced access to clean water have coalesced to create ideal conditions for the spread of infectious diseases (4). Before the current conflict, 99% of Gaza's population was vaccinated against polio, but that figure has now decreased to 86%, creating a dangerous immunity gap (5). Almost 50 000 children born since October 2023 are unlikely to have received their scheduled immunizations due to severe disruptions to health care service provision, thus increasing the potential for future outbreaks (6).

The global health community has begun to acknowledge the looming crisis. In August 2024, WHO and UNICEF called for a 7-day ceasefire to carry out mass polio vaccination targeting 640 000 children under the age of 10 years while the United Nations planned to bring 1.6 million doses of polio vaccine into Gaza (7). Israel began coordinating the delivery of 25 100 vials of polio vaccine, enough for 1.25 million people, through the Kerem Shalom Crossing (8). However, the safe and effective distribution of these vaccines, in a war zone where only a third of hospitals and 40% of primary healthcare facilities remain functional, has been a daunting task (5). The first round of the vaccination campaign encountered significant operational challenges. Access to certain areas remained severely restricted due to security concerns and

maintaining proper vaccine cold chain storage was difficult because of the limited electricity supply. Healthcare workers faced substantial risks in reaching displaced populations, particularly in active conflict zones, however, despite these obstacles, vaccination teams demonstrated remarkable resilience in their efforts to reach vulnerable communities.

The reappearance of polio in Gaza is not merely a confined or isolated health concern, it has the potential to threaten global polio eradication efforts. The last wild poliovirus cases in Europe were reported in Turkey in 1999 and the WHO European Region was certified polio-free in 2002 (9). If not contained properly, the outbreak in Gaza could spread, jeopardizing decades of progress and posing a risk to neighboring countries and beyond.

The situation in Gaza demonstrates the linkage between conflict and public health crises. The destruction of health infrastructure, attacks on hospitals and health workers and severe restrictions on the entry of medical supplies have created a "perfect storm" for the resurgence of vaccine-preventable diseases. Without immediate action, an entire generation is at risk of polio infection, with hundreds of children facing the possibility of lifelong paralysis.

Addressing this crisis requires immediate implementation of a ceasefire to allow safe vaccine distribution, coupled with the establishment of humanitarian corridors for medical supplies. The restoration of critical water and sanitation facilities must be prioritized alongside the repair of damaged healthcare facilities. The re-establishment of vaccine cold chain systems is crucial for maintaining vaccine efficacy in the challenging conditions of a conflict zone.

Looking toward long-term solutions, the development of conflict-resilient vaccination programmes has become increasingly vital. Enhanced disease surveillance systems must be implemented to detect and respond to outbreaks rapidly. Local health workers require additional training and support to maintain vaccination efforts during periods of conflict, drawing on experiences from other conflict-affected countries in the EMR.

The confirmation of polio in Gaza after a quarter-century absence is a saddening, but inevitable, consequence of prolonged conflict and a call for immediate action. As

we mobilize to contain this outbreak, we must also reflect on the broader implications of war on public health and redouble our efforts to protect the most vulnerable populations from preventable diseases. The children of Gaza

deserve nothing less than our full commitment to their health and wellbeing, even in the midst of seemingly intractable conflict.

References

1. The Associated Press. First case of polio confirmed in a 10-month-old child in Gaza, Palestinian health officials say. AP News, 16 August 2024. <https://apnews.com/article/gaza-israel-war-polio-first-case-871ee7c69be0424400d2667fee61958>.
2. Polio Global Eradication Initiative. Variant Type 2 poliovirus isolated from sewage samples in Gaza. Geneva: Polio Global Eradication Initiative, 2024. <https://polioeradication.org/news/variant-type-2-poliovirus-isolated-from-sewage-samples-in-gaza/>.
3. Wright J. Gaza's doctors face a new battle: The war on polio. Time, 23 August 2024. <https://time.com/7014075/gaza-polio-outbreak-history-vaccination-campaign/>.
4. Kearney JE, Thiel N, El-Taher A, Akhter S, Townes DA, Trehan I, Pottinger PS. Conflicts in Gaza and around the world create a perfect storm for infectious disease outbreaks. PLOS Glob Public Health 2024;4(2):e0002927. doi: 10.1371/journal.pgph.0002927.
5. The Associated Press. Israel says more polio vaccines are delivered to Gaza, where aid groups seek pause in fighting. AP News, 26 August 2024. <https://apnews.com/article/israel-palestinians-gaza-polio-vaccines-8519f06913a4e875480373b2207c4d56>.
6. United Nations Population Fund. Crisis In Palestine. UNFPA Palestine Situation Report , 13 October 2023. https://www.unfpa.org/sites/default/files/resource-pdf/UNFPA-Situation-Report_Palestine_13Oct2023.pdf.
7. United Nations. Ceasefire in Gaza needed now, special coordinator tells Security Council, as Polio Spreads, Destruction of Palestinian Territory Continues. Meetings Coverage and Press Releases, 22 August 2024. <https://press.un.org/en/2024/sc15797.doc.htm>.
8. The Times of Israel. Israel coordinates delivery of 25,100 polio vaccine vials to Gaza amid fears of outbreak. Times of Israel, 25 August 2024. <https://www.timesofisrael.com/israel-coordinates-delivery-of-25100-polio-vaccine-vials-to-gaza-amid-fears-of-outbreak/>.
9. European Centre for Disease Prevention and Control. Disease factsheet about poliomyelitis. Stockholm: European Centre for Disease Prevention and Control, 2018. <https://www.ecdc.europa.eu/en/about-us/contact-ecdc>.