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Leveraging community insights and navigating logistical challenges: a case study of the 2024 polio vaccination campaign in Gaza, State of Palestine

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ABSTRACT

This case study describes how high vaccination coverage was achieved during the 2024 polio vaccination campaign in Gaza amid an ongoing humanitarian crisis marked by damaged critical infrastructure, an obstruction of the entry of health supplies, mass displacement and security concerns for health workers. Despite the immense challenges, 559 161 children were vaccinated in the first round (94% of the revised target of 591 714) and 556 774 in the second round, exceeding expectations. While this represents an impressive achievement, some areas remained inaccessible, which prevented an estimated 7000–10 000 children from being reached for vaccination.

The campaign's success was underpinned by a multifaceted approach that included:

- Strong coordination and collaboration stewarded by the Gaza Ministry of Health with support from national and international partners.
- Negotiated humanitarian pauses in the form of 'days of tranquillity' agreed to by parties to the conflict enabling safe access for vaccinators, outreach teams and families.
- Prevaccination campaign sociobehavioural research to identify barriers and map information flows.
- Community engagement led by locally recruited volunteers embedded within affected communities, many of whom had themselves experienced displacement, supporting trust and acceptance.
- Culturally responsive communication strategies using multiple channels and feedback mechanisms.
- Adaptive vaccine management strategies and the development of a mobile cold chain.

This case demonstrates that even in complex humanitarian crises, effective, community-centred vaccination strategies are possible. It also highlights how access and availability, not parental reluctance (or vaccine hesitancy), were the primary constraints on coverage. Parents showed strong willingness to vaccinate when services were accessible. Sustained advocacy and diplomacy remain essential to secure access, deliver equitable immunisation and create an enabling environment for

SUMMARY BOX

⇒ Vaccination in conflict settings is complex, often constrained by insecurity, infrastructure damage and disrupted supply chains.
⇒ The 2024 Gaza polio campaign achieved over 90% coverage across two rounds despite mass displacement, insecurity and systematic collapse.
⇒ Success was enabled by humanitarian pauses, a mobile cold chain and extensive coordination and social mobilisation.
⇒ Findings show that caregivers were highly willing to vaccinate, with barriers stemming from access and insecurity rather than hesitancy.
⇒ This case study highlights the need to recognise vaccination as both a public health and political process in conflict zones.
⇒ It shows the value of embedding social science to map information ecosystems and understand trust, while treating caregivers as rational decision makers.
⇒ Despite the campaign's success, the ongoing collapse of Gaza's health, nutrition, shelter and water, sanitation and hygiene (WASH) systems presents a life-threatening situation for children and makes any sustained effort to control polio extraordinarily difficult.
⇒ The campaign's success illustrates an operational achievement, but one that cannot be meaningfully sustained without a lasting ceasefire, the restoration of essential services and unimpeded humanitarian access.
⇒ The outbreak's Egyptian genetic linkage underscores that polio eradication requires cross-border surveillance and coordination, building on historical collaboration precedents in the region.

humanitarian public health responses in conflict settings. However, the gains achieved through this campaign cannot meaningfully be sustained without a lasting ceasefire, the restoration of essential services and ongoing humanitarian access, particularly for infants born after the vaccination campaign who remain at heightened risk.

INTRODUCTION

On 23 August 2024, the WHO confirmed that a 10-month-old child in Deir al-Balah, Gaza, who had developed paralysis, with a date of onset of 25 July 2024, had polio; the first case in Gaza for over 25 years.[1] This followed the detection of circulating variant type 2 poliovirus (cVDPV2) in six out of seven environmental samples collected in June 2024 and reported as positive on 16 July.[2] Genetic analysis indicated that the virus was linked to cVDPV2 strains circulating in Egypt during the second half of 2023.[3] The re-emergence of polio in Gaza, after a decades-long polio-free status, highlights the fragility of public health systems in conflict settings and the potential for outbreaks, even after significant progress towards polio eradication.[4]

The environmental samples were confirmed amid ongoing military operations and a humanitarian crisis marked by severely damaged infrastructure, supply disruption and ongoing security concerns for humanitarian responders.[5] More than 1.9 million people have been displaced and pushed into overcrowded shelters with limited access to food, safe water and sanitation, increasing the risk of disease and transmission.[5]

Despite a compromised health system, with only 18% of hospitals and primary health facilities existing prior to the war still operational in late 2024, the Ministry of Health (MoH) in Gaza, with support from Global Polio Eradication Initiative (GPEI) partners and other actors including the United Nations Relief and Works Agency (UNRWA), carried out two rounds of polio vaccination using the novel oral polio vaccine type 2 (nOPV2) from 1 to 12 September and from 14 October to 5 November 2024.[2 6] The campaign targeted 591 714 children under 10.[6] It relied on humanitarian pauses, adaptable and flexible logistics and careful engagement with communities through social mobilisation. 'Social mobilisation' efforts included engaging with community volunteers, local leaders and influencers in two-way communications and delivering culturally sensitive and locally adapted information.[7] These strategies were grounded in research aimed at understanding public perceptions, trust dynamics and local barriers to vaccination.[7]

GPEI divides accountability among its partners (UNICEF, WHO, the Gates Foundation, Centers for Disease Control and Prevention, Rotary International and Gavi, the Vaccine Alliance). For the implementation of supplementary immunisation activities, UNICEF manages vaccine supply, cold chain and social mobilisation; WHO provides technical assistance; and the MoH of Gaza leads the campaign implementation.

The aim of this paper is to describe and reflect on the 2024 polio vaccination campaign in Gaza with particular emphasis on social mobilisation processes and the vaccine and cold chain management strategies used. Drawing on the *Practice* article format, this paper does not follow a traditional research article structure but instead draws on programmatic data and operational experience to offer lessons learnt to inform future outbreak response in conflict settings.

THE CONTEXT FOR POLIO IN GAZA IN 2024

Historically, Gaza has played a notable role in polio eradication efforts. In the late 1970s, a combined oral polio vaccine (OPV) and inactivated polio vaccine strategy, later referred to as the 'Gaza system', was pioneered through collaboration between Palestinian and Israeli public health authorities with technical support from WHO.[3 8] This approach contributed to sustained interruption of poliovirus transmission and subsequently informed international vaccination strategies. Following this period of collaboration, Gaza recorded no cases of polio for approximately 25 years and in 2010 was declared polio free by WHO.[3 8]

Building on this history of sustained polio control, routine childhood vaccination coverage in Gaza had remained consistently high, with over 98% coverage reported across the State of Palestine in 2022 as according to annual *WHO-UNICEF Estimates of National Immunization Coverage* (WUENIC).[9] Polio immunisation (OPV3) specifically reached 99% that year before declining to 89% in 2023 based on WEUNIC data reported for Gaza up to September 2023.[9 10] High baseline vaccination coverage was supported by strong health literacy reflected by general literacy rates above 98% and high community health awareness.[11]

Gaza has experienced long-term sociopolitical instability, including recurring military operations.[12] The 2007 takeover by Hamas led to a stringent blockade by Israel on the movement of goods and people.[13] Since 7 October 2023, protracted conflict has significantly worsened the existing humanitarian situation.[14] Between October 2023 and January 2025, repeated attacks led to a near-total collapse of the healthcare system. WHO reported 654 attacks on health facilities and over 1050 health workers killed, many while on duty.[15] By the end of 2024, only 17 of 36 hospitals remained even partially functional.[16] Health workers also faced violence, including assault, arrest and detention.[17] Bombardment, insecurity and military restrictions have disrupted the flow of medical supplies and fuel.[18] At the time of the polio campaign in September 2024, less than 25% of the cold chain system, critical for maintaining the efficacy of vaccines, was operational.[19]

THE INFORMATION GATHERED FOR THIS CASE STUDY

This case study draws on multiple sources of data collected before, during and after the 2024 polio vaccination

campaign. These include both structured assessments and the embedded experiences of team members involved in the campaign. Together, this information offers insight into how the campaign unfolded and provides lessons for future polio vaccination campaigns in conflict settings.

Community perceptions

Ahead of the first polio campaign, UNICEF and Arab World for Research and Development (AWRAD) conducted a community risk assessment using a mixed methods approach. This included a household survey (n=130) and key informant interviews with community representatives (n=16). Stratified random sampling was applied across 13 neighbourhoods in four governorates: Khan Younis, Deir al-Balah, Gaza and North Gaza. Rafah was excluded from the study due to ongoing ground operations and may therefore introduce some selection bias. These neighbourhoods were selected based on data from the Office for the Coordination of Humanitarian Affairs, indicating that 98% of Gaza's population was residing there at the time.

The household survey explored demographic characteristics, children's vaccination status, barriers to accessing vaccines, perceptions of vaccine safety and effectiveness and trusted sources of information. Within each neighbourhood, households were selected through random approaches implemented by trained AWRAD researchers, adapted to access and security constraints. A screener questionnaire was used to identify caregivers most involved in healthcare decisions in households with children under 10. Data were collected through face-to-face interviews using structured questionnaires. Key informant interviews explored perceptions of the polio campaign, access challenges and suggestions for improving vaccination campaign approaches. Informed verbal consent was obtained from all participants in line with local cultural norms, and all responses were anonymised. Quantitative data were analysed using Excel to generate descriptive statistics, while qualitative data were analysed thematically.[20] In addition to the formal assessment, members of the author team who were directly involved in the campaign contributed reflections and operational insights to contextualise the findings.

Vaccine and cold chain management data

Before the campaign began, a cold chain assessment was conducted across Gaza to inform an adaptive vaccine management strategy. The assessment used a standardised programmatic tool routinely applied by UNICEF in emergency settings to map available infrastructure including walk-in cold rooms, fridges, freezers, vaccine carriers, ice packs and cold boxes. Reporting of assessment has been documented publicly by UNICEF.[19]

During the campaign, data on cold chain functionality, vaccine supply and availability were continuously recorded by the Gaza MoH, UNICEF and independent vaccine accountability monitors. A microdistribution plan was developed and regularly updated. It included target population estimated by location, fixed vaccination sites, daily team deployment and vaccine allocation. It also tracked all vaccine vials and outlined key distribution points for storage and supply.

Programme monitoring data and operational documentation

Intra-campaign and post-campaign monitoring data from the Emergency Operation Centre captured campaign reach, including target population, number of children vaccinated and composition of vaccination and social mobilisation teams.[21] Descriptions of campaign coordination and the negotiation of humanitarian pauses draw on the operational experiences of coauthors involved in campaign delivery, interpreted alongside relevant published literature.

Authorship and interpretation

This paper is coauthored by individuals from UNICEF and AWRAD, who were directly involved in both the delivery of the campaign and the collection of primary data. They worked in collaboration with academic partners from the London School of Hygiene & Tropical Medicine, whose external perspective supported a reflective analysis of the campaign's implementation and community engagement processes. This combination of embedded operational experience and analytical distance aimed to ensure both contextual accuracy and critical insight. As Abimbola[22] reminds us, what becomes visible in global health is often just the 'tip of the iceberg', and that much of the knowledge that shapes system responses lies in the day-to-day practices, adaptations and relationships that remain undocumented. This case study, drawing on the experiences of those who delivered the campaign, attempts to make that everyday operational knowledge more visible. This case study draws on programmatic insight to document how complex humanitarian health interventions are delivered in settings where formal research may be limited.

WHAT WAS FOUND

Community perceptions of the polio outbreak and experiences of vaccination

The household survey, conducted 1 month after the detection of the virus in environmental samples, revealed high awareness of the outbreak: 83% of respondents were aware of it. Nearly all respondents (98%) were concerned about an outbreak—74% were significantly concerned and 24% somewhat concerned. Despite this, access to vaccination services was limited. Only 63% of caregivers with children under 2 reported that they had been able to vaccinate their children against any disease in the prior 3 months. Although vaccines were reportedly available at some health facilities, respondents cited significant barriers including lack of vaccine availability (55%), damaged health facilities (45%) and displacement (21%). Most relied on walking as their main form of transport, and many cited security concerns, including roadblocks and the threat of bombardment, as barriers.

Key informant interviews underscored how the conflict shifted priorities towards daily survival. As one participant described, "*ongoing displacement and preoccupation with survival have diverted attention from healthcare needs.*"

Trust was shaped by systemic collapse and political dynamics. One respondent stated concerns *"because of the war, and the vaccinations might be poor quality."* Another noted: "*there is a lack of trust in the current medical staff, particularly after the departure of many experienced doctors.*" Others questioned the integrity of the vaccine: "*because of the current situation and the mistakes that could happen during vaccine administration.*" And as another reflected, it *"hasn't been tested, and there is no knowledge about the source of the vaccine."*

Several questioned why a government enforcing a blockade would now permit the distribution of a vaccine purportedly aimed at safeguarding public health. One participant stated: "*It might come through the Israelis, and they might put viruses in it for us."*

Still, most caregivers were willing to vaccinate their children if access could be secured. Around 75% expressed strong confidence in the vaccine, identifying it as *very effective*. Another 18% considered it *somewhat effective,* and 6% were unsure. While this suggests broad acceptance, the brief statements captured in the qualitative data revealed underlying anxieties that extend beyond simple informational gaps.

The information ecosystem

The concept of 'information ecosystems' refers to the network of sources and channels through which information is created, shared and consumed.[23] These ecosystems are shaped by social norms and personal experience.[23 24] In conflict settings, they evolve as institutions break down and daily life is disrupted.

In Gaza, the household survey found that 26% of respondents relied on social media and the internet for information, though 35% reported limited online access. Word of mouth from neighbours, friends and family was a significant means of exchanging information (26%). SMS messaging was identified as the primary channel for information about the polio campaign (39%) (which was eventually delivered as messages from 'the MoH' through various SMS networks). However, many respondents noted a lack of communication from official health channels.

Respondents described a communication gap that had emerged since the war began, where parents no longer received clinic reminders for childhood vaccinations. This gap was reflected in the household survey data, where 21% of respondents cited a lack of information as a barrier to vaccination and 24% said they did not know where to go. Pharmacies were perceived as more accessible and responsive than overwhelmed hospitals and health centres. One participant explained: "*it's the closest source here I can get advice or information…the pharmacy saves me time and effort."* Another stated: "*hospitals are far away…pharmacies in the areas provided information."*

Within this communication gap, the information ecosystem was still in motion as communities tried to make sense of the outbreak. Qualitative responses revealed a mix of accurate information and partial information passed along between people. Two respondents suggested that the disease was spreading primarily among displaced populations residing in shelters and makeshift camps due to poor living conditions, while another said they had "*heard about its spread from our relatives in the north, and they told us to take care of our children.*"

Social mobilisation approaches

Social mobilisation was a massive component of the campaign, intended to bridge the gap where formal healthcare systems had broken down. Over 700 community mobilisers were trained using a cascade approach, meaning a network of trainers helped reach mobilisers throughout Gaza. These mobilisers, recruited from diverse professions including engineering, students and health workers, had deep community ties and were trusted by residents. They were trained to engage with families directly, moving tent to tent or in informal shelters to distribute information and collect community feedback.

In the absence of functioning mass media, social mobilisation became the primary channel for delivering vaccine messages. A multichannel approach was employed using social media, SMS, WhatsApp and even megaphones to spread key messages. Eight social media influencers with a combined reach of over 2 million followers helped amplify campaign messages. An interagency hotline, established by partners early in the war, provided a channel for community feedback, with reported queries focusing on vaccination timing, side effects, access difficulties and the process.[18] Building on the existing culture of vaccine acceptance and insights from the community risk assessment, messaging to families focused primarily on practical information about where and how to get the polio vaccination.

Nonetheless, face-to-face engagement remained irreplaceable. Social mobilisers facilitated critical social connection and two-way dialogue, helping sustain trust. This direct connection was critical for providing a means for parents to feel heard and be informed.

A monitoring structure was established in which coordinators supervised social mobilisation supervisors, each overseeing around 10 mobilisers. This system enabled supportive supervision, ongoing feedback and consistent data collection. Mobilisers recorded their activities, including community dialogues, tent-to-tent visits and meetings with traditional leaders, youth groups and shelter committees, providing a daily picture of mobilisation coverage and outreach. Between September and November 2024 (the two rounds of the campaign), social mobilisation activities resulted in over 750 000 house and tent visits, 1.237 million community-level outreach engagements and 584 000 interactions in high-density areas. These figures include both unique and repeated

mobilisation visits, reflecting follow-up in case of initial refusal, access constraints or repeated displacement. While these figures reflect the scale and intensity of mobilisation efforts, it is important to note that individuals may have been reached multiple times through different approaches. As such, these figures represent total exposures to social mobilisation rather than the number of unique individuals reached.

During the same period, social mobilisers identified 89 cases of suspected acute flaccid paralysis and referred them for investigation. Based on social mobilisation administrative data and intra-campaign monitoring, approximately 115 refusals were documented. Refusals are defined as instances when a person declines to receive the polio vaccine. Most refusals were resolved through continued dialogue and follow-up with social mobilisers, with children being vaccinated.

Vaccine management strategies

nOPV2 requires strict temperature control throughout the supply chain to ensure potency. Freezer capacity is also critical to support daily replenishment of ice packs for vaccinators and campaign operations.[25]

Prior to the campaign, a cold chain assessment revealed that the cold chain infrastructure was severely compromised.[19] The central cold chain system in Gaza city was inaccessible; only 10 service delivery points remained functional, down from 52 across MoH and UNRWA facilities prior to the conflict. There were no cold boxes or vaccine carriers, internal transportation was severely limited, fuel shortages were widespread and there was high staff turnover.

In response, a mobile cold chain system was developed. This included the procurement and deployment of 20 refrigerators, 10 freezers, 800 vaccine carriers, nearly 6000 ice packs, 150 cold boxes and 2 refrigerated trucks (UNICEF, 2024d).[26] Additional cold rooms were rehabilitated and generators secured to maintain cold chain integrity. To support vaccine management, a team of 11 local cold chain officers, 2 supervisors and 24 independent vaccine accountability monitors were trained and deployed. Over 700 vaccination teams were deployed with daily supplies; the large number of teams ensured that families did not have to travel far to access the vaccines.

UNICEF delivered 1.6 million doses of nOPV2 from the global stockpile.[18] Vaccines and cold chain equipment were imported through Ben Gurion Airport, a process that required diplomatic engagement and security guarantees.

A detailed microplan was developed and regularly updated to reflect shifting population movement and access constraints; this was supplemented with a day-by-day implementation plan. The plan aligned daily vaccine needs with deployment of teams and equipment at each distribution point, ensuring temperature control was maintained.

Humanitarian pauses, coordination and implementation

A senior steering committee of United Nations representatives met daily with Israeli coordinating bodies, including Coordinator of the Government Activities in the Territories, to negotiate humanitarian pauses (temporary suspensions of active hostilities for specific humanitarian purposes).[27] These agreements enabled vaccination teams to operate relatively safely, reducing risks to health workers and caregivers. Negotiations for humanitarian pauses took place within a broader context of regional and public health advocacy highlighting the shared risks posed by poliovirus transmission. Public statements by Israeli public health professionals and academics emphasised the cross-border implications of polio virus transmission and called for a ceasefire or humanitarian pause to protect both Palestinian and Israeli children.[28]

In parallel, efforts by the MoH of Gaza, UNRWA, UNICEF and WHO, supported by indirect negotiations through humanitarian channels, were critical in facilitating access and the movement of supplies. A technical coordination committee in Gaza convened daily in the lead-up to the campaign, while a regional technical steering group of subject matter experts convened weekly to review surveillance data and guide decisions.

Coordination also secured timely importation of vaccines, cold chain equipment and other supplies. Staff, including surge staff from the MoH, UNRWA, WHO and UNICEF, provided operational support on the ground. At regional and global levels, coordination guaranteed rapid budget releases and exceptional procurement procedures to expedite vaccines and cold chain provision.

Of the initial revised target of 591 714 children, 559 161 aged under 10 were vaccinated during the first round of the campaign; 94% of the revised target population.[21] The second round saw 556 774 children vaccinated.[21] Although the ongoing conflict and repeated evacuation and displacement of communities in Gaza meant plans had to regularly be revised, the campaign proved to be more successful than expected.[29]

WHAT THIS MEANS

This section offers a reflective analysis of the findings, drawing on empirical programmatic data and operational insights of those involved in the campaign. Given the constraints of active conflict, the available evidence was inevitably incomplete. These reflections, however, seek to surface aspects of vaccination practice that may have otherwise been obscured by insecurity, disruption and restricted access.

The framing of parental health decision-making

The high vaccination rates counter dominant narratives about declining vaccine confidence.[30 31] These narratives, often repeated in biomedical literature and the media, frame the public as misinformed, fearful or ignorant.[31–35]

In contrast, caregivers in Gaza demonstrated a high willingness to vaccinate their children, even amid

insecurity and unimaginable hardship. This reflects a form of *health citizenship*, where individuals actively engage with the health system to claim their rights and fulfil their responsibilities for their families' well-being.[36] Parents made rational choices within the constraints of their environment. Concerns about vaccine quality, safety and origins were not signs of ignorance, but contextual and politically informed responses to systemic failure and prolonged violence. They occurred within a culture of vaccination acceptance prior to the conflict.

While high coverage suggests community-level trust in the campaign, this *can* be understood as pragmatic trust in frontline actors, rather than blanket confidence in institutions. This aligns with broader findings on trust in crisis settings: it is contextual, often conditional and deeply relational, shaped by who delivers services and how.[24 37 38] The work of local mobilisers, coupled with direct access and communication, was more influential in building trust than formal messaging alone.

A health-literate population also contributed to this success. Survey data and interviews suggest a strong culture of immunisation persists in Gaza, grounded in prior routine vaccination coverage rates. The actions of caregivers reflect agency, challenging tropes that portray those in crisis as passive recipients of aid.[39 40] This finding aligns with research from other humanitarian settings, which emphasises that individuals navigating crisis often engage actively and strategically with health systems, making informed decisions based on lived experience and shifting risk.[41]

The campaign design, targeting specific areas on designated dates, combined with limited humanitarian pauses, likely placed additional pressure on caregivers. Many may have seized what they saw as a rare temporary opportunity to vaccinate their children, especially where movement and infrastructure challenges made access precarious.

Finally, underlying these decisions was a shared sense of insecurity. Just as people fear for their safety, access to water and food, similar anxieties extended to vaccinations. The act of receiving a vaccine became entangled with broader uncertainties about institutional failure and exposure to harm. For the minority who expressed scepticism, this was less about vaccine hesitancy and more a reflection of existential and political insecurity. In this way, concerns about the vaccine were not merely gaps in health knowledge, but products of the broader security, sociopolitical and humanitarian context.

The centrality of trust

Decisions to vaccinate are shaped by everyday realities.[42 43] In Gaza, as in many conflict settings, daily life is marked by uncertainty, displacement and the collapse of institutions.[44] The vaccination campaign, through its deep embeddedness via community mobilisers and flexible vaccine delivery, helped counteract these systemic failures. Vaccination sites extended beyond formal health centres to community-based locations including schools, shelters, non-governmental organisation premises, municipal buildings and mosques. In low-information or uncertain environments, trust can serve as a 'heuristic for competence'.[45 46] Broadened equitable access, visibility and local presence (ie, competence) may therefore have reinforced trust processes.

When asked, *"Would you be willing to get your children vaccinated?"*, 94% of survey respondents said they would, 5% were unsure and only 1% said they would not. Notably, this level of willingness surpassed the proportion of respondents who reported prior awareness or detailed knowledge about the vaccine. This suggests that acceptance was driven more by trust in the campaign and potential communal norms than by individual understanding. This aligns with wider research, showing that in humanitarian settings, people often rely on relational trust; trust in people or processes, rather than institutional trust in the system itself.[47 48]

Vaccination campaigns are a political process

Political diplomacy is a critical component of successful vaccination campaigns in conflict settings. This approach has helped facilitate humanitarian pauses or 'days of tranquillity' in other conflict settings including in the Democratic Republic of Congo, South Sudan, Angola and Afghanistan.[49] Diplomatic measures were also critical in ending the polio vaccine boycott in Nigeria.[50]

The campaign in Gaza illustrates again how vaccination delivery in active conflict is inseparable from political processes. Advocacy for humanitarian pauses unfolded within broader regional public health discourse that emphasised cross-border risks. Israeli public health professionals and academics publicly warned that continued hostilities would place both Palestinian and Israeli children at risk, calling for a ceasefire to enable vaccination and prevent wider regional spread.[28] The backdrop of the 'Gaza system' in the late 1970s provided a historical precedent for cross-border collaboration on polio control.[3 8]

As argued by Sabahelzain and colleagues, polio vaccination campaigns are among the few humanitarian interventions capable of securing humanitarian pauses because they are brief, vertically organised and time limited, with clearly defined objectives and measurable outcomes.[51] The child-focused and neutral nature of polio vaccination campaigns,[51] reinforced alongside appeals to the humanitarian principles of humanity, neutrality, impartiality and independence, may make them more politically acceptable and therefore programmatically viable.

Implications for practice

Vaccination in conflict settings is complex. Exploring the case of the polio campaign in Gaza has uncovered the following considerations:

Coordination, humanitarian pauses and vaccine management strategies

- Recognise that vaccination campaigns in conflict settings unfold within a significant political context, where securing humanitarian pauses is a critical political and diplomatic step.
- Adapt vaccine management strategies to the context. This includes investment in a mobile cold chain to overcome infrastructure damage and logistical limitations.
- Prioritise coordination across political, humanitarian and technical actors and across borders to enable safe access and timely delivery of supplies.

Data and local knowledge for responsive programming

- Map the information ecosystem and use diverse information channels (both online and offline) especially where connectivity, displacement or institutional breakdown obstruct access.
- Embed social science research into humanitarian response, including longitudinally, to reflect evolving community life, social networks and behaviours.
- Draw on community-based mobilisers as sources of local knowledge and facilitators of access, while acknowledging their role complements broader structural drivers of vaccination coverage.

Understanding trust processes and respecting parents as decision makers

- Trust is central. It can be cultivated through transparency, clear communication and equitable access to vaccines.
- Engage with vaccinating parents in conflict settings as rational, protective and active decision makers.
- Recognise and build on pre-existing vaccine acceptance cultures rather than assuming low uptake is driven by hesitancy or misinformation.

CONCLUSION

The polio vaccination campaign in Gaza demonstrated that despite the immense challenges of ongoing conflict, a rapid and coordinated public health response can achieve high coverage by enabling caregivers to act on their intrinsic interests in protecting their children. This success underscores the value of approaches that are sensitive to political dynamics and community experiences.

Yet these gains remain fragile. The ongoing collapse of Gaza's health, nutrition and WASH systems presents a life-threatening situation for children and makes any sustained effort to control polio extraordinarily difficult. The campaign's success illustrates an operational achievement, but one that cannot be meaningfully sustained without a lasting ceasefire, the restoration of essential services and unimpeded humanitarian access. Rebuilding Gaza's health system, reinstating routine childhood vaccination and protecting child rights must be urgent international priorities.

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