EQUITY IN CRISIS: ZERO-DOSE CHILDREN IN HUMANITARIAN SETTINGS

AN ADVOCACY BRIEF

INTERNATIONAL VACCINE ACCESS CENTER

Gavi The Vaccine Alliance

APRIL 2022

Introduction

Humanitarian emergencies and fragile settings often exacerbate the spread of infectious diseases while also limiting access to the most basic health services, like immunization. UNICEF estimates that 40% of un- and under-vaccinated children globally live in countries that are either partially or extensively affected by conflict. Fragile or conflict-affected countries accounted for 44% of zero-dose children in 2019[1], while the COVID-19 pandemic has been a fragility multiplier, further exacerbating access-related challenges, and driving humanitarian needs . The crisis conditions caused by fragility and conflict disrupt essential health services, increase the scale of malnutrition and hunger, and threaten economies and livelihoods, ultimately exacerbating health equity gaps and reversing hard-won gains for the well-being of some of the world's most vulnerable children.

To ensure equity for all children, we must ensure that vaccines reach those living amidst humanitarian crises.

Chronic Fragility – Chronic fragility refers to a sustained breakdown of health systems due to factors including prolonged conflict, volatile political situations, macroeconomic instability, persistently low institutional capacity, and significantly higher risks and costs of engagement

Displaced populations - Displaced populations refer to people who have been displaced from their homes or places of habitual residence. It includes cross-border and internal movements of people including refugees and internally displaced people fleeing persecution and conflict, and those caught in vulnerable situations. Displaced populations have different legal statuses, but they are all entitled to protection under international human rights law.

Acute emergencies – Acute emergencies refer to situations that may cause unexpected loss of life, damage to public infrastructure, financial crisis, or heightened risk of morbidity and injury. Acute emergencies can be natural or human-made and are time limited.

Conflict Setting - a context in which violent events have caused protracted destabilization and fragility, resulting in the absence or disruption of a traditional health system.

Fragility and conflict threaten public health, safety, services, and supply of health resources

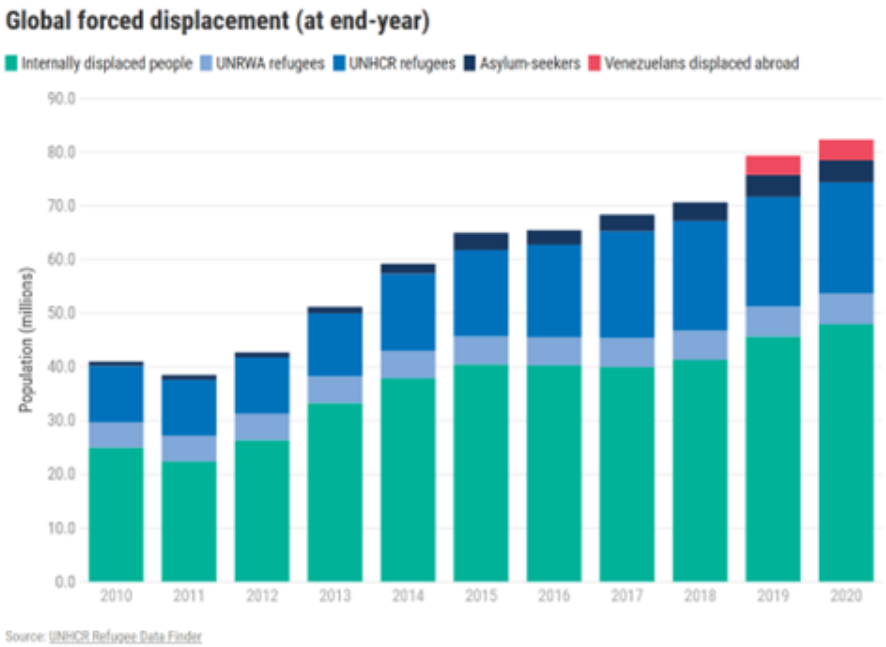
Fragility, conflict, and violence (FCV) present a critical development challenge that threatens efforts to end extreme poverty in both low- and middle-income countries.

The United Nations High Commissioner for Refugees (UNHCR) estimates that, in part due to the underlying effects of the COVID-19 pandemic, the number of people affected by forced displacements worldwide is at an all-time high[2]. During conflicts and instability, resources cannot be easily or safely transported, and states can face low levels of administrative capacity, limited provision of rule of law and basic services to the population , leaving people unable to fulfill their basic needs, such as healthcare, nutrition, and clean water. Children and families impacted by fragility and conflict may be forced to flee their homes, potentially crossing borders and staying in overcrowded settings, exacerbating the risk of infectious disease outbreaks.

- By 2030, up to two-thirds of the world's extreme poor could live in FCV settings. Conflicts also drive 80% of all humanitarian needs[3].
- Forcibly displaced populations include refugees, asylum seekers and vulnerable migrants who cross international borders as well as internally displaced persons (IDPs) who stay within the borders of their country of origin[4].
- Forced displacement has been getting worse over time. In 2010 an estimated 41 million people globally was forcibly displaced[2]. By mid-2021 the UNHCR estimated that global forced displacement has surpassed 84 million people – over 1% of the world's population.
- The unique challenges of emergency settings often exacerbate the risk of infectious disease outbreaks while also interfering with routine health services, preventing access to recommended vaccinations[4].

Large Numbers of Zero-Dose Children Live in Areas Affected by Conflict and Fragility

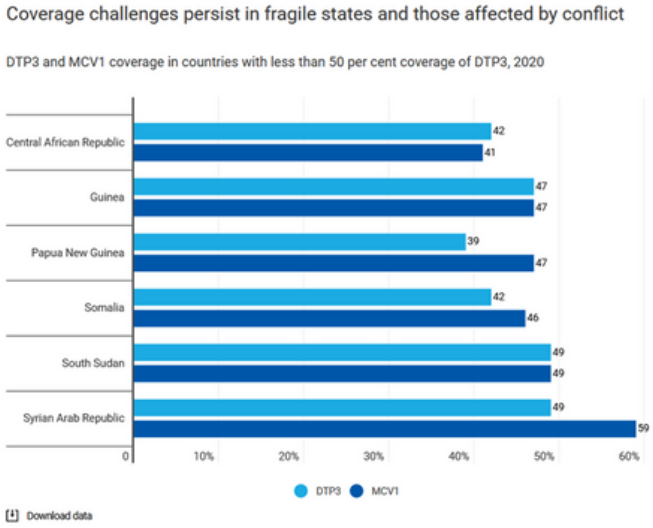
Even before the COVID-19 pandemic, immunization have averted 50 million deaths in 112 countries with the highest burden of pathogens between 2000 and 2019. When conflicts or humanitarian emergencies occur, vaccination rates can fall quickly. Children make up 50% of those affected in humanitarian crises and are disproportionately impacted by conflict and crisis. Key challenges for vulnerable communities missing access to health services may include: disrupted vaccine infrastructure and supply chain; violence targeting health workers and health centers; service interruptions; mistrust between authorities and communities; and displacement and migration[6].



- Of the 17 million zero-dose children worldwide in 2020, approximately 13.7 million live in Gavi-supported countries, accounting for around 80% percent of the total[7].
- An estimated 18% of zero-dose children live in 16 fragile countries[8].
- Approximately 20% of zero-dose children in Gavi-supported countries live in settings affected by conflict[9].
- 27 LICs and LMICs host nearly 90% of people in need of humanitarian assistance globally, and account for almost half of the world's zero-dose children . Specifically, six countries – Afghanistan, DRC, Ethiopia, Nigeria, Pakistan and Somalia account for over one-third of zero-dose children in the world.
- Nigeria has the largest total number of zero-dose children impacted by conflict. According to 2020 revised WHO/UNICEF national immunization coverage estimates (WUENIC), 2,519,000 children under age five were unvaccinated for DPT1[7,8].
- The COVID-19 pandemic has negatively impacted global progress towards reaching zero-dose children [10,11]. Global coverage of the third dose of diphtheria-tetanus-pertussis (DTP3) fell from 86% in 2019 to 83% in 2020[7].

Insufficient Vaccination Rates Put Already Vulnerable Communities at Risk of Disease Outbreaks

When health services like immunization break down during humanitarian emergencies, it can spark outbreaks of vaccine-preventable diseases. Mass displacement of people during a complex humanitarian emergency can trigger a "cascade" of risk factors for communicable disease outbreaks, including a breakdown in health services (such as disease surveillance and immunization services); over-crowding (increasing disease transmission rates); inadequate water, sanitation and hygiene; and exposure of displaced population to endemic diseases for which they have no immunity[12]. In addition, a recent systematic review suggested migrants are half as often vaccinated compared to non-migrants.



Source of data for chart - UNICEF

This is worrying because in the Danish Refugee Council Displacement 2022 Report, the number of displaced people will have almost doubled since 2014 and increased by more than 35 million people.

- Humanitarian emergencies have been linked to infectious disease outbreaks. One analysis found that between 2005-2014 an estimated 39% of complex emergencies globally were associated with an outbreak of a vaccine-preventable disease; 70% of outbreaks reported in the Africa region were vaccine-preventable[13].
- FCV can lead to outbreaks in vaccine-preventable diseases that were previously controlled or eliminated in a country which can spill over into neighboring countries. Over the course of the civil war in Syria, polio remerged for the first time in over 15 years[4].
- The humanitarian emergency in Venezuela has led to the reemergence of measles and diphtheria, disproportionately affecting vulnerable indigenous populations[14].

Loss of Infrastructure, Insecurity, and Targeting of Health Workers and Facilities Limits Immunization Access

Many public health emergencies today are occurring during or after armed conflicts or humanitarian crises where state fragility is widespread. Attacks against healthcare workers and infrastructures and even patients disrupt health services when they are needed most .

Even if infrastructure and immunization supply remain at full functionality, those who need access to health services may not feel safe enough to travel to receive care or there may not be enough health workers to utilize available resources. When there is instability in a region, health infrastructure may be destroyed, sometimes intentionally, and health workers may be targeted for violence, further eroding access to child health services.

A rising issue in conflict-affected settings that cannot be addressed by immunization resources alone are attacks on health workers and facilities [16]. Despite international humanitarian law that should prohibit such attacks, there has been little accountability for these crimes against humanity. There is no one simple solution to this problem; it will require global and local health agencies to be collectively committed and collaborative with one another to strengthen security in these settings that allow the safe delivery of immunizations without harm to health workers and infrastructure.

- Shortages of health workers due to violence and conflict is a major threat to the provision of childhood immunization, as well as other health services [6,16–19].
- Safeguarding Health in Conflict tracks attacks on health workers and facilities, citing over 1,200 attacks across 20 conflict-affected countries in 2019 that killed 150 health workers and injured at least 500. In 2019, at least 216 health facilities were damaged or destroyed across 19 countries or territories [20].

- Women, who are often responsible for bringing children to immunization sites, may experience particularly severe access and travel challenges in FCV settings. If health facilities or health workers have been targeted, women may feel it is unsafe to seek or provide immunization services[16, 21].

Lessons from the Past

Global health agencies partnered with armed groups to create "zones of peace" around children allowing their right to health through successful immunization campaigns [22].

The provision of healthcare, particularly to the most vulnerable such as children, can be a platform for peacebuilding and development, and acting as a bridge for peace. Ceasefires have for example been negotiated for the provision of health services such as immunisation campaigns, while creating time and space for peace talks. When public and global health agencies achieved smallpox eradication, their focus next turned towards polio . "Days of Tranquility" was a successful 3-day cease-fire negotiated in El Salvador in 1985 while the country was in a civil war between government and guerilla forces. The cease-fire created "zones of peace" and allowed two hundred and fifty thousand children to be immunized with routine vaccines including the oral polio vaccine.

These days of cease-fire that permitted children to receive vaccines continued annually in subsequent years until the civil war ended; 80% of children in El Salvador were successfully immunized .

This success story illustrates how children's health can be a shared value that a foundation for public health initiatives can be built and sustained.

Distrust of Immunization Programs in Conflict-Settings

In many FCV settings, even if health services are available, populations may be weary or reluctant about utilizing health services delivered by foreign agencies due to distrust or disinformation [18, 25, 26]. The International Monetary Fund (IMF) noted that many fragile and conflict-affected states today face deep public grievances against State institutions due to prevalent and rising inequalities across groups. The SAGE Working Group also noted that armed conflict is a contributor to hesitancy [24].

Conversely, when individuals and communities enjoy equitable access to health services, and are empowered to cope with violent conflict, and health actors design neutral and tailored health interventions that promote cooperation and dialogue, communities concerns could be heard and addressed. This in turn would generate trusts in health actors and interventions, and could encourage affected communities to make more meaningful contributions to peace and reconciliation.

Public trust is a cornerstone of effective public health interventions and for prevention of outbreaks escalating in an epidemic. Individuals and communities who trust the healthcare system and providers are more likely to adopt recommended preventive actions, strengthening the ability of governments and public health agencies to respond to public health emergencies. Building trust in immunization is therefore crucial in conflict settings, particularly when routine immunization can be utilized as a platform to provide other basic health services to communities and individuals when their health needs are highest. Distrust in vaccines and the motivations of health workers can lead to violence, as seen in the Ebola immunization efforts in DRC [16].

Global humanitarian response entities and national governments must therefore be committed to protection and integrity of public health programs, especially in conflict-affected settings where the barriers of trust may be the greatest. Community-level engagement is particularly crucial. Immunization program need many sectors, governments at all levels, and other stakeholders to work together to identify the underlying causes, anticipate, sustain political commitment to fostering trust and collaboration, and counter negativity rapidly if it appears, which are all the more important in delicate FCV settings [27-29].

Recommendations

Strategies to reach zero-dose and under-immunized children in FCV settings should not be an afterthought and will require highly differentiated, targeted approaches [4]. Stakeholders across sectors and from all levels – global and local health and humanitarian aid agencies, national and sub-national ministries of health and health workers, civil society organizations, and local and community groups and leaders – need to collaborate together to design community-specific strategic plans to address their barriers to access to healthcare and social determinants of health.

Routine immunisation is often delivered directly at the door-step of communities. Leveraging routine immunization as a platform to reach zero-dose children and their communities with essential PHC services would therefore be a key step in building their health and resilience, as well as foster opportunities to rebuild trust. This has facilitated negotiating access to populations affected by conflict several contexts including corridors of peace, safe corridors, engaging non-traditional change agents (such as religious leaders), and collaboration with non-state actors [30].

But vaccines do not deliver themselves. Reaching zero-dose children is also about the supply chain system, the bravery and professionalism of the health workforce, and of development and humanitarian actors that are totally essential to any health system strengthening efforts to encourage increased and equitable access to routine immunization. Additionally, lack of an official, legal identification can often be a precondition to access to State-provided basic services, and displaced populations may be easily unaccounted for in country-specific strategic planning for health services.

Gavi, the Vaccine Alliance is already finding new ways to improve access to vaccination for the world's poorest infants and young people living under the radar. One solution is to start treating vaccination cards as de facto identity cards. Digital ID technologies are emerging as part of efforts to build on existing vaccination systems to address the identity challenge of displaced people. Affordable digital ID technology can provide a key to authenticate access of displaced people to a portfolio of vital and often life-saving services. Such technologies need to be capable of working in poorly resourced settings – for example, where there is no reliable electricity – and yet able to leapfrog current approaches to reach everyone, whether they are living in remote villages or urban slums.

Timely, accurate, and accessible data is a major hurdle to promoting vaccine equity in humanitarian settings. Investments are needed to support the development and introduction of new and innovative strategies to collect timely, accurate, and accessible data. The urgent need remains for functional data systems to support accurate estimations of vaccination coverage and dose history over time across populations affected by FCV[6].

This advocacy brief has attempted to present not only the current status but also spotlight existing gaps in this area. A better understanding of how immunizations are (or are not) prioritized in conflict and humanitarian settings given the competing need for other human essentials such as food, water, shelter, etc. can be gleaned from qualitative studies. Improved methods for data collection which rely upon aggregate data sources should be examined to provide options for robust and reliable monitoring. Lastly, incorporating displaced persons as a priority in national strategic planning for health interventions is needed not only to support improved allocation of resources, including immunization, but long-term success will require the conduct of program implementation research to inform and guide future steps.

References

1. Chard AN. Routine Vaccination Coverage — Worldwide, 2019. *MMWR Morb Mortal Wkly* Rep. 2020;69. doi:10.15585/mmwr.mm6945a7

2. UNHCR. UNHCR Global Trends - Forced displacement in 2020. UNHCR Flagship Reports. Accessed March 8, 2022. https://www.unhcr.org/flagship-reports/globaltrends/

3. World Bank. Fragility, Conflict & Violence. World Bank. Published April 13, 2022. Accessed April 18, 2022. https://www.worldbank.org/en/topic/fragilityconflictviolence/overview

4. Lam E, Diaz M, Maina AGK, Brennan M. Displaced populations due to humanitarian emergencies and its impact on global eradication and elimination of vaccine-preventable diseases. *Conflict and Health.* 2016;10(1):27. doi:10.1186/s13031-016-0094-5

5. World Health Organization. Immunization. Published December 5, 2019. Accessed April 26, 2022. https://www.who.int/news-room/facts-in-pictures/detail/immunization

6. World Health Organization. *Inequality Monitoring in Immunization*: A Step-by-Step Manual. World Health Organization; 2019. Accessed April 26, 2022. https://apps.who.int/iris/handle/10665/329535

7. UNICEF. Vaccination and Immunization Statistics. UNICEF DATA. Published July 2021. Accessed March 8, 2022. https://data.unicef.org/topic/child-health/immunization/

8. Gavi the Vaccine Alliance. The Zero-Dose Child: Explained. Published April 26, 2021. Accessed April 22, 2022. https://www.gavi.org/vaccineswork/zero-dose-child-explained

9. Gavi the Vaccine Alliance. Zero-dose children and missed communities. Published November 4, 2021. Accessed March 8, 2022. https://www.gavi.org/our-alliance/strategy/phase-5-2021-2025/equity-goal/zero-dose-children-missed-communities

10. World Health Organization. WHO Immunization Data portal. Published online 2021. Accessed March 8, 2022. https://immunizationdata.who.int/

11. World Health Organization. COVID-19 pandemic leads to major backsliding on childhood vaccinations, new WHO, UNICEF data shows. Published July 15, 2021. Accessed March 8, 2022. https://www.who.int/news/item/15-07-2021-covid-19-pandemic-leads-to-major-backsliding-on-childhood-vaccinations-new-who-unicef-data-shows

12. Hammer CC, Brainard J, Hunter PR. Risk factors and risk factor cascades for communicable disease outbreaks in complex humanitarian emergencies: a qualitative systematic review. *BMJ Glob Health*. 2018;3(4):e000647. doi:10.1136/bmjgh-2017-000647

13. Culver A, Rochat R, Cookson ST. Public health implications of complex emergencies and natural disasters. *Confl Health*. 2017;11(1):32. doi:10.1186/s13031-017-0135-8

References

14. Paniz-Mondolfi AE, Tami A, Grillet ME, et al. Resurgence of Vaccine-Preventable Diseases in Venezuela as a Regional Public Health Threat in the Americas. *Emerg Infect Dis*. 2019;25(4):625-632. doi:10.3201/eid2504.181305

15. ReliefWeb. Impunity Remains: Attacks on Health Care in 23 Countries in Conflict in 2018 - World. ReliefWeb. Published May 15, 2019. Accessed February 28, 2022. https://reliefweb.int/report/world/impunity-remains-attacks-health-care-23-countries-conflict-2018

16. Okwo-Bele JM, Conner R, McIlvaine B, Rowley E, Bernson J. *Tackling Inequities in Immunization Outcomes in Conflict Contexts*. PATH and Equity Reference Group for Immunization; 2018. Accessed February 8, 2022. https://sites.google.com/view/erg4immunisation/discussion-papers

17. Safeguarding Health in Conflict Coalition. *Impunity Remains: Attacks on Health Care in 23 Countries in Conflict in 2018 - World*.; 2019. Accessed February 8, 2022. https://reliefweb.int/report/world/impunity-remains-attacks-health-care-23-countries-conflict-2018

18. Meteke S, Stefopulos M, Als D, et al. Delivering infectious disease interventions to women and children in conflict settings: a systematic review. *BMJ Global Health*. 2020;5(Suppl 1):e001967. doi:10.1136/bmjgh-2019-001967

19. Fouad FM, Sparrow A, Tarakji A, et al. Health workers and the weaponisation of health care in Syria: a preliminary inquiry for The Lancet–American University of Beirut Commission on Syria. *The Lancet*. 2017;390(10111):2516-2526. doi:10.1016/S0140-6736(17)30741-9

20. Safeguarding Health in Conflict Coalition. *Health Workers at Risk: Violence against Health Care. Safeguarding Health in Conflict*; 2020. Accessed April 26, 2022. https://reliefweb.int/report/world/health-workers-risk-violence-against-health-care

21. Haar RJ, Read R, Fast L, et al. Violence against healthcare in conflict: a systematic review of the literature and agenda for future research. *Conflict and Health*. 2021;15(1):37. doi:10.1186/s13031-021-00372-7

22. UNICEF USA. Negotiating Ceasefires to Save Children's Lives. UNICEF USA. Published September 21, 2012. Accessed February 11, 2022. https://www.unicefusa.org/stories/negotiating-ceasefires-save-children%E2%80%99s-lives/7272

23. World Health Organization. Ten threats to global health in 2019. Published 2019. Accessed February 8, 2022. https://www.who.int/news-room/spotlight/ten-threats-to-global-health-in-2019

24. SAGE Working Group. *Report of the SAGE Working Group on Vaccine Hesitancy*. Strategic Advisory Group of Experts (SAGE) on Immunization; 2014. https://cdn.who.int/media/docs/default-source/immunization/sage/2014/october/sage-working-group-revised-report-vaccine-hesitancy.pdf?sfvrsn=240a7c1c_4

References

.25 World Health Organization. *Attacks on Health Care: Three-Year Analysis of SSA Data (2018-2020)*. WHO Surveillance System for Attacks on Health Care; 2021. Accessed April 26, 2022. https://www.who.int/data/stories/attacks-on-health-care-three-year-analysis-of-ssa-data-(2018-2020).

26. Kass N, Kahn J, Buckland A, Paul A. *Ethics Guidance for the Public Health Containment of Serious Infectious Disease Outbreaks in Low Income Settings: Lessons from Ebola*. Johns Hopkins Berman Institute of Bioethics; 2019. Accessed April 26, 2022. https://bioethics.jhu.edu/research-and-outreach/projects/ethics-guidance-lessons-from-ebola/

27. Ozawa S, Paina L, Qiu M. Exploring pathways for building trust in vaccination and strengthening health system resilience. *BMC Health Services Research*. 2016;16(7):639. doi:10.1186/s12913-016-1867-7

28. Coghlan R. Not Immune: Children in Conflict. Save the Children Australia; 2020. Accessed February 10, 2022. https://resourcecentre.savethechildren.net/document/not-immune-children-conflict/

29. Nnadi C, Etsano A, Uba B, et al. Approaches to Vaccination among Populations in Areas of Conflict. *Journal of Infectious Diseases*. 2017;216:S368-S372. doi:10.1093/infdis/jix175

30. Dadari I, Higgins-Steele A, Sharkey A, et al. Pro-equity immunization and health systems strengthening strategies in select Gavi-supported countries. Vaccine. 2021;39(17):2434-2444. doi:10.1016/j.vaccine.2021.03.044

31. Safeguarding Health in Conflict Coalition. 2018 a Year of Dangerous Attacks on Health Workers, Facilities. Published May 15, 2019. Accessed February 26, 2022. https://www.safeguardinghealth.org/press-release-2018-year-dangerous-attacks-health-workers-facilities