



POLICY BRIEF

Strengthening Global Health in Conflict Settings: Strategic Insights for Germany and the European Union

A Policy Brief of the Global Health Hub Germany Working Group on Global Health in Conflict Settings

About the Paper

This paper provides an overview of key policy recommendations across various areas of global health in conflict settings, drawing on the collective expertise of the Global Health Hub Germany Communities and supported by evidence-based insights and best-practices from academic research, field reports, and stakeholder consultations to inform strategic decision-making and foster resilient health systems in crisis-affected regions.

About the authors

Written contributions to this policy paper were made by: Sonu Bhaskar (lead author), Ahmet Bekisoglu, Anna Grigoryan, Felix Holl, Franziska Laporte-Uribe, Henna Riemenschneider, Henrik Hülsmann, Johanna Löloff, Katrin Würfel, Sina Winkel, Thea Rawe, Ugbedeojo Sule, Ulrich Koch, Vicky Abenakyo on behalf of the Hub Communities on Global Health & Migration (host), Climate Change and Health, Global Child Health, Global Digital Health Empowerment, Global Mental Health, Global Women's Health, Non-Communicable Diseases, and Snakebite Envenoming.



Executive Summary

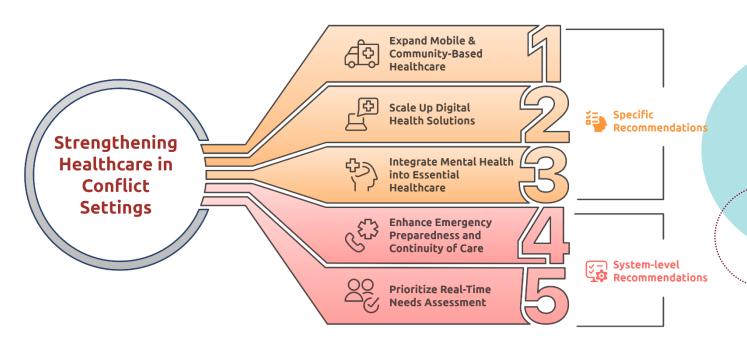
The intersection of conflict and health represents one of the most urgent global health challenges today, with over 120 million forcibly displaced people worldwide and millions more living in fragile conflict zones. These settings lead to healthcare system collapses, soaring maternal and child mortality, infectious disease outbreaks, and mental health crises. Despite these challenges, scalable and cost-

effective solutions exist but remain underfunded and underutilized. This brief presents actionable, evidence-based recommendations to address significant issues and health disparities in conflict settings, urging German and European policymakers to take bold actions to protect vulnerable populations and strengthen healthcare systems in fragile contexts.

Why This Matters for Germany and Europe

- Migration & Security: Health crises in conflict regions contribute to forced migration, affecting Germany's and the EU's asylum systems. Investing in healthcare solutions in countries with conflict settings reduces long-term displacement pressures.
- **Global Responsibility**: As a key supporter of WHO and international health initiatives, Germany can use its influence to enhance financial capacities dedicated for crisis response efforts.
- **Economic Implications**: Epidemics in fragile regions disrupt global supply chains and trade. Investing in resilient health systems in countries with conflict settings, safeguards economic stability and protects Germany's long-term interests.

Policy Recommendations





Key Health Challenges in Conflict Settings

Conflict settings create significant barriers to healthcare, disproportionately affecting vulnerable populations like women, children, and refugees. This section outlines key health challenges faced in conflict-affected areas, describing their causes, and impacts. Supporting evidence is also provided to highlight the urgency of addressing these issues [1, 7, 14].

Healthcare Infrastructure Collapse

Conflicts often destroy healthcare infrastructure, further compounded by budgetary constraints and funding cuts [2, 15, 19].

This limits the availability of essential healthcare services and medications, leading to severe healthcare worker shortages and leaving populations without access to basic care [2, 4, 15]. Navigating health systems and services is a major challenge for individuals in and migrating from conflict settings, partly due to healthcare providers' limited health literacy¹ [3, 7, 11].

Impact

- Millions lose access to essential care in conflict settings, including emergency and primary health services [4, 15, 19].
- This exposes people in conflict settings to higher risks of diseases and mortality [9, 19, 23].

Supporting Data/Evidence

- Over 120 million people are forcibly displaced globally, the highest number on record (UNHCR 2024) [1, 7, 14].
- For example, the ten-year-long crisis in Syria had led to the damage or

destruction of more than 50% of healthcare facilities in 2021 [9].

Maternal and Child Mortality

Fragile settings lead to high maternal and child mortality rates due to lack of prenatal and emergency care [14, 22, 23].

Impact

- Increased risk of maternal death and infant mortality, disproportionately affecting women and children [14, 22, 23].
- Children face interruptions in vaccination programs, malnutrition, and inadequate treatment for preventable diseases, further exacerbating their vulnerability [17, 22, 23].

Supporting Data/Evidence

- Fragile/conflict-affected areas account for 70% of global maternal deaths (UNFPA) [20].
- Maternal mortality rates in South Sudan were alarmingly high reaching 1,150 per 100,000 live births [22].

Infectious Disease Outbreaks and Antimicrobial Resistance (AMR)

Overcrowded living conditions, lack of sanitation, disrupted vaccination programs, and misuse of antibiotics exacerbate outbreaks [9, 19, 23].

Impact

 Rapid spread of diseases such as cholera, malaria, polio, measles, tuberculosis, and AMR continue to threaten global health security [9, 19, 23].

hinder effective patient guidance, especially for vulnerable populations.

¹ Limited healthcare provider literacy – insufficient knowledge or skills in navigating health systems, services, and policies – can



- Conflict zones often become breeding grounds due to disrupted health systems, poor sanitation, and population displacement [9, 19, 23].
- Displacement and migration can contribute to the regional and global spread of infectious diseases and AMR, placing additional strain on already fragile health systems [9, 19, 23].
- Children are particularly vulnerable, facing interruptions in vaccination programs, malnutrition, and limited access to treatment for preventable diseases [17, 22, 23].

Supporting Data/Evidence

- Cholera outbreaks in Yemen have affected over 1 million people since 2016 (WHO) [27].
- AMR is rising due to unregulated antibiotic use in conflict settings [9].

Mental Health Crises and Non-Communicable Diseases (NCDs)

Trauma, violence, and displacement cause widespread psychological distress alongside rising rates of chronic diseases (e.g. diabetes, hypertension) [9, 23, 24].

These conditions often go undetected or are not regularly treated due to disrupted access to care [9, 23, 24].

Impact

- Long-term mental health disorders and untreated NCDs lead to higher mortality and reduced quality of life for conflict-affected populations [9, 23, 24].
- Children, in particular, experience severe psychological trauma, which underscores the need for integrated mental health services [17, 23, 24].

- Conflicts disrupt NCD awareness and the availability of screening and management programs [9, 23, 24].
- Health promotion efforts and adherence to healthy behaviors are adversely affected [9, 23, 24].

Supporting Data/Evidence

- 1 in 5 people in conflict settings suffers from mental health conditions such as Post-Traumatic Stress Disorder (PTSD) and depression, a rate comparable to high-income countries, but with significantly less access to care and greater exposure to trauma. [4, 23, 24].
- NCDs accounted for over 70 % of global deaths (43 million deaths in 2021), disproportionately affecting vulnerable populations. In conflictaffected regions, the risk is further exacerbated by disrupted health systems, limited access to medication, and the breakdown of chronic disease management [9, 20].

Funding Gaps in Conflict Zones

Short-term funding focuses on emergencies, neglecting long-term healthcare system strengthening [2, 15, 19].

Impact

• Lack of sustainable healthcare infrastructure, leading to recurring health crises [2, 15, 19].

Supporting Data/Evidence

Humanitarian funding remains critically inadequate, with only 18% of the \$48.7 billion required to meet global humanitarian needs in 2024 received by mid-year, leaving millions in conflict zones without access to lifesaving aid and health system strengthening, as reported by OCHA and WHO [15, 27].



Best Practices and Innovations

Despite the immense challenges in conflict settings, proven, scalable solutions have emerged, offering hope for improving health outcomes. From mobile clinics reaching underserved populations to telemedicine breaking barriers to care, these innovations demonstrate what is possible with strategic investment and collaboration. Leveraging these successes, Germany and European policymakers can approaches adopt tailored strengthen healthcare systems and protect vulnerable populations in fragile contexts.

Mobile Health Clinics

This intervention addresses key challenges in conflict settings, including healthcare infrastructure collapse, maternal and child mortality, infectious disease outbreaks and AMR, mental health crises and NCDs.

Relevance to Conflict Settings:

- Mobile clinics provide essential healthcare services, including vaccinations, maternal care, and mental health support, to displaced populations in conflict zones.
- Their mobility ensures access to remote and underserved areas.
- Mobile clinics are supported by onsite staff and virtual doctors to reach displaced and underserved populations effectively.

Evidence and Best Practice

- Mobile units in Syria treated 150,000 displaced children in six months, offering primary care, vaccinations, and mental health support.
- India's "Lifeline Express" mobile hospital train has provided healthcare to over 1.2 million

- people, offering diagnostics, surgeries, and telemedicine.
- Germany's Medibus and Denmark's mobile screening units are bringing services directly to rural and migrant communities.

Transferability for Germany:

- Lessons learned from conflict zones like Syria and healthcare initiatives in India could shape how Germany executes such a solution effectively in partner countries with conflict settings.
- The deployment of mobile clinics in Germany could serve to address healthcare access gaps for vulnerable populations, including refugees, asylum seekers, and underserved rural communities.

Strengthening Local Capacity

Local capacity building addresses critical challenges such as health infrastructure collapse, maternal and child mortality, infectious diseases and AMR, mental health crises and NCDs in conflict settings.

Relevance to Conflict Settings:

- Local partnerships enhance trust and ensure culturally sensitive care in conflict zones [2, 3, 8].
- Training displaced individuals as community health workers creates employment opportunities and fosters resilience² [3, 8].

Evidence and Best Practice

- International and local NGO collaborations in South Sudan increased healthcare access by 35%, benefiting 45,000 displaced women and children [22].
- India's ASHA program trains local women as community health workers, significantly improving

sustain essential services, adapt to disruptions, and recover amid instability.

² Health system resilience: In conflict settings, health system resilience is the ability to



maternal and child health outcomes. According to the 2015–2016 National Family Health Survey-4 (NFHS-4), 5.9% of women received antenatal care (ANC) from ASHAs, leading to a 77% increase in ANC utilization, 6% improvement in quality, 20% rise in early breast-feeding, and 25% lower infant mortality [13].

Transferability for Germany:

 German institutions and NGOs can establish partnerships with local organizations in conflict zones, adapting the ASHA model to train displaced persons and refugees as community health workers, enabling them to provide essential care within their own communities.

Digital Health Solutions

Digital innovations help address critical challenges in conflict settings, including the collapse of health infrastructure, maternal and child mortality, mental health and NCD care, and persistent funding gaps.

Relevance to Conflict Settings:

- Digital health tools like telemedicine and electronic health records improve care continuity in conflict settings, ensuring displaced populations receive consistent care [5, 8, 27].
- Digital tools can help train and educate the healthcare workforce, enhancing their ability to provide effective and timely interventions [5, 27].

Evidence and Best Practice

 The World Health Organization (WHO) has expanded its digital health certification initiative for Hajj pilgrims in collaboration with Saudi Arabia, aiming to support three million pilgrims annually with digital health cards. After a successful pilot with 250,000 pilgrims (from 3 countries, Indonesia, Malaysia, and Oman) who were issued Hajj health cards in 2024, the Global Digital Health Certification Network (GDHCN) and International Patient Summary (IPS) provided standardized records for 1.5 million pilgrims during Hajj 2024, enhancing access to essential medical information [27].

- Platforms like India's eSanjeevani have shown scalability, delivering over 276 million virtual consultations, averaging nearly 300,000 consultations daily, and providing a model for conflict-affected regions significantly enhancing remote healthcare access [5, 8].
- Effective implementation of digital health solutions and virtual wards requires integration with local, easy-to-use point-of-care diagnostics. NHS England highlights this in its guidance on Integrating in vitro point-of-care diagnostics to strengthen urgent community response and virtual ward services, ensuring timely and accurate clinical decision-making closer to the patient [18].

Transferability for Germany:

 Germany can expand telemedicine services for refugees and asylum seekers, ensuring interoperability with international digital health systems like IPS to maintain health records across borders, with the option for native language support.

Integrated Mental Health Programs

This intervention tackles critical issues such as the collapse of healthcare infrastructure, mental health crisis & NCDs, in conflict zones.

Relevance to Conflict Settings:

 Embedding mental health services in primary care in conflict settings reduces stigma and improves access for displaced individuals [26].



Evidence and Best Practice

- Ethiopia's school-based mental health initiatives have supported children affected by the conflict in Tigray, Amhara, and Afar regions by integrating Mental Health and Psychosocial Support (MHPSS) into schools. A study found that 57.6% of learners experience moderate to severe distress, with notable gender disparities. Teachers reported low job satisfaction, affecting their ability to support students' well-being [19].
- REFUGIUM Freiburg has supported over 2,000 refugees and migrants in Germany since its inception, providing essential services such as language courses, vocational training, and psychological support facilitating their integration into

German society, and reducing stigma and improving mental health outcomes [16].

Transferability for Germany:

- Germany can enhance its refugee health services by incorporating culturally sensitive mental health programs, drawing on successful community-based approaches from Ethiopia and Freiburg (Germany) to effectively address trauma among displaced populations.
- These models effectively address trauma and promote psychosocial resilience among displaced populations, even in high-resource settings.
- Collaborating with local partners, these services could also be implemented in conflict settings.



Policy Recommendations

Building on the key health challenges and best practices discussed, German and European policymakers can strengthen healthcare in conflict settings by adopting proven, scalable solutions [2, 3, 19, 25]. **Figure 1** presents actionable, evidence-based policy

recommendations for improving healthcare access, resilience³, and sustainability in conflict-affected regions. Each recommendation is supported by real-world examples and evidence of success (see section on Best Practices and Innovations) [2, 3, 19, 20, 25].

Policy Recommendations for Strengthening Healthcare in Conflict Settings

Systems Recommendation 1

Enhance Emergency Preparedness and Continuity of Care in Fragile Settings [20, 22, 29]

- Enhance healthcare system preparedness through increased funding, workforce capacity, and emergency stockpiles
- Strengthen rapid response mechanisms to ensure the continuity of healthcare services during crises, minimizing disruptions and safeguarding public health

Specific Recommendation 1

Expand Mobile & Community-Based Healthcare [21, 25]

 Deploy mobile clinics and train local and displaced individuals as community health workers (CHWs) to improve healthcare access in conflict zones

Specific Recommendation 2

Scale Up Digital Health Solutions [5, 8, 27]

 Invest in and expand interoperable telemedicine platforms and integrate them with WHO's global systems (e.g GDHCN and IPS) to ensure cross-border health and vaccinations records for displaced populations

Specific Recommendation 3

Integrate Mental Health into Essential Healthcare During Conflicts
[16, 19]

 Embed mental health and psychosocial support (MHPSS) into primary care to reduce stigma and address trauma in conflict-affected populations

Systems Recommendation 2

Prioritize Real-Time Needs Assessment in Conflict Settings [15, 3]

- Integrate real-time needs assessments into funding frameworks to ensure timely and targeted healthcare interventions in conflict zones
- Move beyond short-term emergency aid by incorporating sustained, long-term healthcare funding into national and EU budgets, ensuring stability and resilience for affected populations

Figure 1: Policy Recommendations for Strengthening Healthcare in Conflict Settings

Conclusion

Conflict settings impact public health with direct consequences for national security and economic stability [2, 15, 19]. These crises pose severe challenges to global health, depriving vulnerable populations of essential care and pushing fragile health systems toward collapse [9, 19, 23]. Now is the time for Germany and European policymakers to lead with bold, evidence-based solutions [2, 3, 29]. Germany and the EU must strengthen their own health systems

to manage the integration of migrants and refugees from conflict settings effectively [3, 11, 29]. They also need to invest in strengthening the health system in fragile and conflict-affected settings to promote global health stability [2, 19, 29]. They can decisively and collaboratively act to address immediate healthcare needs in conflict settings and build "adaptable" systems that pave the way for recovery and stability in fragile settings [19, 29].

sustain essential services, adapt to disruptions, and recover amid instability.

³ Health system resilience: In conflict settings, health system resilience is the ability to



About the Global Health Hub Germany

The Global Health Hub Germany offers all individuals and institutions active in the field of global health the opportunity to connect in an independent network across eight different stakeholder groups: International organisations, youth, politics, foundations, think tanks, business, science, and civil society. The members of the Hub work together on current issues of global health. The interdisciplinary exchange generates themes, issues and solutions that the Hub brings to policymakers to support informed policy-making and advance in global health. Founded in 2019, the Hub now has around 2,000 members. For more information: www.globalhealthhub.de

About the Hub Communities

The Hub Communities are working groups led by the members of the Global Health Hub Germany themselves. They meet regularly to exchange ideas, share expertise and work together on global health issues. If you would like to join a Hub Community or learn more about their work, contact Katrin Lea Würfel, Head of Community Management: katrin.wuerfel@globalhealthhub.de.

Author Contributions

The authorship of this policy brief reflects the collaborative efforts of the Working Group on "Global Health in Conflict Settings," consisting of members from the Global Health Hub Germany. Sonu Bhaskar served as the lead author, responsible for drafting the manuscript, coordinating the working group, organizing meetings, designing the schematic, and ensuring the document's final approval. Katrin Würfel played crucial roles in facilitating working group meetings and discussions, as well as reviewing the manuscript. Contributions from Ahmet Bekisoglu, Anna Grigoryan, Felix Holl, Franziska Laporte-Uribe, Henna Riemenschneider, Henrik Hülsmann, Johanna Löloff, Sina Winkel, Thea Rawe, Ugbedeojo Sule, Ulrich Koch, and Vicky Abenakyo, on behalf of the Global Health Hub Germany's communities of practice, included active participation in discussions and thorough manuscript review. All authors have reviewed and approved the final draft of the policy brief.

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References

- 1. Al Jazeera. Forcibly displaced population doubles to 120 million over the past ten years. Published June 13, 2024. Accessed March 16, 2025. https://www.aljazeera.com/news/2024/6/13/forcibly-displaced-population-doubles-to-120-million-over-the-past-10-years
- 2. Bhaskar S. G20 Policy for Health Systems: Promoting Holistic Outcomes and Addressing Vulnerabilities in Healthcare. Task Force 6: Accelerating SDGs: Exploring New Pathways to the 2030 Agenda. Observer Research Foundation; July 2023. http://dx.doi.org/10.13140/RG.2.2.23912.65288
- Bhaskar S, et al. Prioritising Migrants and Refugees in the Global Health Discourse: A Policy Brief of the Global Health Hub Germany Community on Global Health and Migration. Published February 20, 2024. Accessed March 16, 2025. doi:10.13140/RG.2.2.19053.77284. https://www.glob-alhealth-and-migration
- Charlson F, van Ommeren M, Flaxman A, Cornett J, Whiteford H, Saxena S. New WHO prevalence estimates of mental disorders in conflict settings: a systematic review and meta-analysis. Lancet. 2019;394(10194):240-248. https://doi.org/10.1016/s0140-6736(19)30934-1
- Dastidar BG, Jani AR, Suri S, Nagaraja VH. Reimagining India's National Telemedicine Service to improve access to care. Lancet Reg Health Southeast Asia. 2024;30:100480. https://doi.org/10.1016/j.lansea.2024.100480
- Deployment of field hospitals to disaster regions: Insights from ten medical relief operations spanning three decades. Am J Disaster Med. 2017. https://doi.org/10.5055/ajdm.2017.0277
- 7. DW. Record 120 million people displaced globally—UN report. Published 2024. Accessed March 16, 2025. https://www.dw.com/en/record-120-million-people-displaced-globally-in-2024-un-report/a-69348370
- 8. eSanjeevani—National Telemedicine Service of India. Ministry of Health and Family Welfare (MoHFW), Government of India. Accessed March 16, 2025. https://esanjeevani.mohfw.gov.in/#/
- GBD 2021 Causes of Death Collaborators. Global burden of 288 causes of death and life expectancy decomposition in 204 countries and territories and 811 subnational locations, 1990-2021: a systematic analysis for the Global Burden of Disease Study 2021. Lancet. 2024;403(10440):2100-2132. https://doi.org/10.1016/S0140-6736(24)00367-2
- 10. Global Health Hub Germany. A Kaleidoscope of Migrant Experiences within the German Healthcare System. Published September 4, 2023. Accessed March 16, 2025. https://www.globalhealthhub.de/en/news/detail/a-kaleido-scope-of-migrant-experiences-within-the-german-healthcare-system



- 11. Global Health and Migration Hub Community, Global Health Hub Germany. Statement on Workforce and Migration in the Health Sector to the Subcommittee on Global Health of the German Bundestag. Published June 30, 2023. Accessed March 16, 2025. https://globalhealthhub.de/fileadmin/State-ment GHHG Community on Global Health and Migration Health work-force Final 1.pdf
- 12. Lukasz Szarpak, Michal Pruc, Klaudiusz Nadolny, Jacek Smereka, Jerzy Robert Ladny. Role of a field hospital in COVID-19 pandemic. Disaster Emerg Med J. 2020;5(4):221-223. http://dx.doi.org/10.5603/DEMJ.a2020.0046
- 13. Nadella P, Subramanian SV, Roman-Urrestarazu A. The impact of community health workers on antenatal and infant health in India: A cross-sectional study. SSM Popul Health. 2021;15:100872. https://doi.org/10.1016/j.ssmph.2021.100872
- 14. Norwegian Refugee Council. Global displacement figures 2024. Published 2024. Accessed March 16, 2025. https://www.nrc.no/global-figures/
- 15. Norwegian Refugee Council. Alarming drop in global funding to people in war and crisis. Published July 2, 2024. Accessed March 16, 2025. https://www.nrc.no/news/2024/july/alarming-drop-in-global-funding-to-people-in-war-and-crisis
- 16. REFUGIUM Freiburg. Accessed March 16, 2025. https://www.refugium-freiburg.de
- 17. Save the Children. 5 Ways That Conflict Impacts Children's Mental Health. Published 2024. Accessed March 16, 2025. https://www.savethechildren.org/us/what-we-do/protection/mental-health/
- 18. NHS England. Integrating in vitro point of care diagnostics: Guidance for urgent community response and virtual ward services. Published 2023. Accessed April 7, 2025. https://www.england.nhs.uk/long-read/integrating-in-vitro-point-of-care-diagnostics-guidance-for-urgent-community-response-and-virtual-ward-services/
- 19. Sauerhammer L, Schillinger J, Bolte P, Peters L. Navigating Fragility, Conflict and Violence to strengthen community resilience: A handbook for DRR practitioners. Geneva: International Federation of Red Cross and Red Crescent Societies, International Committee of the Red Cross, German Red Cross, Red Cross Red Crescent Climate Centre. Published 2024. Accessed March 16, 2025. https://preparecenter.org/resource/navigating-fcv-drr-handbook/
- 20. Shah S, Munyuzangabo M, Gaffey MF, et al. Delivering non-communicable disease interventions to women and children in conflict settings: a systematic review. BMJ Glob Health. 2020;5(Suppl 1):e002047. https://doi.org/10.1136/bmjgh-2019-002047



- 21. UNICEF. Mobile clinics bridge a gap to provide health care in remote communities. Published 2022. Accessed March 16, 2025.

 https://www.unicef.org/syria/stories/mobile-clinics-bridge-gap-provide-health-care-remote-communities
- 22. UNICEF South Sudan. The Situation of Children and Women in South Sudan 2018–2020. United Nations Children's Fund, Juba. Published 2021. Accessed March 16, 2025. https://www.unicef.org/southsudan/me-dia/8191/file/UNICEF-South-Sudan-Situation-Analysis-2021.pdf
- 23. United States Institute of Peace. Mental Health and Violent Conflict: A Vicious Cycle. Published 2024. Accessed March 16, 2025. https://www.usip.org/publications/2024/04/mental-health-and-violent-conflict-vicious-cycle
- 24. University of Utah Health. The Mental Health Effects of War: Backed by Science. Published 2022. Accessed March 16, 2025. https://healthcare.utah.edu/hmhi/news/2022/03/mental-health-effects-of-war-backed-science
- 25. Ahmed JU, Siddiqui S, Ahmed A, Mim KP. Lifeline Express: Hospital Train in Rural India. Emerg Econ Cases J. 2021;2(2):87-97. https://doi.org/10.1177/2516604220977243
- 26. Akoury-Dirani L, Sahakian TS, Hassan FY, Hajjar RV, Asmar KE. Psychological first aid training for Lebanese field workers in the emergency context of the Syrian refugees in Lebanon. Psychol Trauma. 2015;7(6):533-538. https://doi.org/10.1037/tra0000028
- 27. WHO. WHO global network expands digital health certification for Hajj pilgrims. Published October 21, 2024. Accessed March 16, 2025. https://www.who.int/news/item/21-10-2024-who-global-network-expands-digital-health-certification-for-hajj-pilgrims
- 28. WHO. World Refugee Day 2024: In solidarity with refugees and their specific health needs. Published June 20, 2024. Accessed March 16, 2025. https://www.who.int/italy/events/item/2024/06/20/default-calendar/world-refugee-day-2024--in-solidarity-with-refugees-and-their-specific-health-needs
- 29. Bhaskar S, Tan J, Bogers MLAM, et al. At the Epicenter of COVID-19-the Tragic Failure of the Global Supply Chain for Medical Supplies. *Front Public Health*. 2020;8:562882. Published 2020 Nov 24. https://doi.org/10.3389/fpubh.2020.562882