JOURNAL OF INTERNATIONAL CRISIS AND RISK COMMUNICATION RESEARCH
ISSN: 2576-0017
2025, VOL 8, NO 4

Challenges To Achieving Sustainable Development Goal 3 In Conflict Zones: Barriers To Health And Well-Being In War-Torn Environments

Abdulaziz S Alotaibi[1], Turki A Jarrah[1] , Mohannad S. Alsuwaidaa[1] , Abdullah M Almanaa[1] , Abdullah M Almanaa[1] , Mohammed F Alghannam[1] , Mohammed F Alghannam[1] , Rakan B Binbusayyis[1] , Ahmed D Alosaimi[1] , Khalid M Alotaibi[2] , Sultan S Alotaibi[3] , Wael Y Almaili[4] , Hamad A. Almajid[4] , Abdulaziz S. Algethami[4] , Sulaiman M. Almutairi[4] , Yazeed M Dhahi[5] , Nawaf M.Alqahtani[6]

[1] Field medicine, Ministry of National Guard, Kingdom of Saudi Arabia.
[2] Ministry of Health, Kingdom of Saudi Arabia.
[3] Prince Sultan Military Medical City, Kingdom of Saudi Arabia.
[4] Molecular Imaging Department, National Guard Health Affairs, Kingdom of Saudi Arabia.
[5] Nursing Department, National Guard Health Affairs, Kingdom of Saudi Arabia.
[6] Medical Physics Department, National Guard Health Affairs, Kingdom of Saudi Arabia.
[1]Alotaibiab45@Mngha.Med.Sa
[1]Jarrahtu@Mngha.Med.Sa
[1]Alsuwaidaamo@Mngha.Med.Sa
[1]Manaaa@Ngha.Med.Sa
[1]Alghannammo1@Ngha.Med.Sa
[1]Busayyisra@Ngha.Med.Sa
[1]Alosaimiah@Mngha.Med.Sa
[2]Kalotaibi64@Moh.Gov.Sa
[3]S-Al-Otaibi@Psmmc.Med.Sa
[4]Almajidha1@Mngha.Med.Sa
[4]Mailiw@Mngha.Med.Sa
[4]Algethamiab2@Mngha.Med.Sa
[4]Almutairisu9@Mngha.Med.Sa
[5]Dhahiya@Mngha.Med.Sa
[6]Alqahtania25@Mngha.Med.Sa

Abstract

Armed conflicts present profound obstacles to achieving Sustainable Development Goal 3 (Good Health and Well-Being) in affected regions. This paper provides a comprehensive review of the humanitarian, logistical, political, and systemic barriers that impede health outcomes in conflict zones. Drawing on a desk-based literature survey and thematic analysis of academic studies, United Nations and World Health Organization reports, and policy analyses, we find that conflict-fragilized settings account for a disproportionate share of global health burdens and lag severely on SDG3 targets. Key challenges include insecurity and access restrictions, destruction of health infrastructure and supply chains, political obstruction and attacks on healthcare, and the collapse of health systems and financing. We discuss the implications for international policy – notably the need to bridge humanitarian and development efforts, protect health services, and invest in resilient community-based care – and offer recommendations to mitigate these barriers. Ensuring health and

well-being in conflict zones will require coordinated, multi-sectoral strategies and a reaffirmation of global commitments to "leave no one behind."

Keywords: Conflict zones; Sustainable Development Goal 3; Global health; Humanitarian crisis; Health systems strengthening.

Introduction

The United Nations' Sustainable Development Goal 3 (SDG3) aims to "ensure healthy lives and promote well-being for all at all ages" by 2030. This ambitious goal encompasses targets such as reducing maternal and child mortality, ending epidemics, and achieving universal health coverage (UHC)[1][2]. While global health indicators have improved in many areas, progress has been uneven and is severely hampered in countries affected by armed conflict[3][4]. Indeed, the world is experiencing more armed conflicts now than at any time since World War II[5], with an estimated one in six children living in or near a conflict zone[5]. These conflicts exact both direct and indirect tolls on health – from injuries and deaths due to violence, to surges in disease, hunger, and mental trauma caused by the breakdown of essential services[6][7].

Conflict-affected regions today shoulder a disproportionate share of the global disease burden and are lagging furthest behind on SDG3 targets. Nearly a quarter of the world's population (over 1.6 billion people) lives in settings of conflict, displacement, and natural disaster[8][9]. As a result, these fragile contexts account for roughly 60% of preventable maternal deaths and over half of under-five child deaths worldwide[10]. A recent analysis found that armed conflicts have measurably slowed progress on all 17 SDGs, with conflict-affected countries seeing more than a 5% slowdown on over half of the goals[3][4]. Good Health and Well-Being (SDG3) is among the goals impacted by conflict synergies, given the interdependence of health with factors like poverty, nutrition, and peace[11][12]. For example, more than 2 million children die each year in conflict-affected and fragile states, representing 48% of all under-five deaths globally[13]. Under such conditions, many conflict-affected countries are not on track to meet SDG3 targets by 2030[14].

Achieving SDG3 in conflict zones is not only a health sector challenge but also fundamentally linked to peace and humanitarian action. The 2030 Agenda explicitly recognizes the reduction of violence and promotion of peace (SDG16) as critical to sustainable development[15]. Conversely, failure to address health needs in conflict threatens global gains; for instance, conflict-related disruptions have been linked to resurgence of polio and other epidemics in war-torn areas[7][16]. The international community has increasingly acknowledged that "business as usual" is insufficient – conflicts drive about 80% of all humanitarian needs worldwide[17], and by 2030 as much as two-thirds of the world's extreme poor could reside in fragile and conflict-affected settings[18]. In these environments, health systems are often in or near collapse, requiring both immediate humanitarian health relief and long-term development support[19][20].

This paper examines the general challenges to achieving SDG3 in conflict zones, taking a global perspective rather than focusing on any single region. We first review relevant literature and data on health in conflict-affected contexts, then outline our desk research methodology. In the findings and discussion, we explore four broad categories of barriers – humanitarian, logistical, political, and systemic – that undermine health and well-being in war-torn environments. Finally, we consider policy implications and recommend strategies to help overcome these challenges. The analysis draws on peer-reviewed studies, reports from United Nations agencies (especially the World Health Organization and UNICEF), and policy analyses by humanitarian organizations, aiming to provide an academically rigorous yet practical synthesis suitable for informing both scholarship and crisis health policy.

Literature Review

Extensive research and reports over the past decades have documented the devastating impact of armed conflict on public health and the consequent difficulty of reaching global health goals in these settings. Armed conflict affects health through multiple pathways: direct violence (injuries, deaths, disability), breakdown of health services, damage to water and sanitation infrastructure, population displacement, and deterioration of social determinants of health such as nutrition and income[6][7]. Women and children disproportionately suffer in conflicts – infant and under-five mortality rates in conflict zones far exceed global averages, and indirect infant deaths outnumber deaths from violence by a factor of three in some regions[13]. A Lancet study of conflicts in Africa found that conflict-related disruptions to health systems led to significantly elevated infant and child mortality beyond the immediate battle deaths[13]. Conflicts have also been associated with surges in infectious diseases (for example, cholera, measles and polio outbreaks in war-torn countries) due to the collapse of vaccination and disease surveillance programs[7][21]. Indirect health effects can persist long after fighting ceases, compounding the challenge of achieving sustained health improvements.

From a Sustainable Development Goals perspective, conflict has emerged as a major inhibitor of progress. Wang et al. (2024) quantify this in a longitudinal analysis, concluding that without armed conflicts, many conflict-affected countries would have significantly higher SDG index scores – in some cases moving from "low" to "moderate" performance on goals including health[22][23]. Their study in iScience found that armed conflicts since 2000 have on average slowed SDG progress by over 5%, with particularly large setbacks in infrastructure (SDG9) and education (SDG4)[24][4]. Good Health and Well-Being (SDG3) is among the goals negatively impacted; conflict-affected countries struggle to improve health indicators like maternal mortality, child survival, and disease control amid instability[25][26]. Indeed, many of the countries furthest from reaching health targets are those mired in protracted crises. The World Health Organization and World Bank have noted glaring disparities in UHC – the backbone of SDG3 – with service coverage indices in conflict-affected states (e.g. UHC index ~30 in Somalia, South Sudan, Central African Republic) dramatically below global and even regional averages[27][28]. These gaps underscore the paradigm of "leaving no one behind" in the SDGs: populations in conflict zones are among the most left behind, prompting calls for adaptive strategies or even realistic interim targets for such contexts[29][30].

Humanitarian organizations and scholars have analyzed various barriers that explain why health outcomes remain so poor in war-affected areas. Security and access constraints are a recurrent theme – ongoing violence often makes it dangerous or impossible for both patients and health workers to reach health facilities[31][32]. Attacks on healthcare have been documented at alarming scales in modern conflicts, despite international legal protections: in 2022 alone, over 1,000 attacks on hospitals, clinics, ambulances, and health workers were confirmed in crisis settings[33][34]. WHO's Surveillance System for Attacks on Health Care recorded 1,436 such incidents in 2023, resulting in the killing of at least 741 health workers and patients and over 1,200 injuries[35][36]. This trend of violence against medical missions – described by some as the "weaponization of health care" – not only directly harms health personnel and infrastructure, but also instills fear in the population. Communities may avoid seeking care for fear that hospitals are unsafe or perceived as targets[37][38]. Such loss of trust and access has long-term public health repercussions, from declines in routine immunizations to untreated chronic conditions.

Another body of literature examines the collapse of health systems and financing in conflict environments. Even before conflicts, many affected countries had fragile health systems with insufficient resources[39]. War then exacerbates this by diverting government spending from health to military needs and by devastating the economy (shrinking the revenue available for public services)[40][41]. For example, South Sudan during its civil war allocated only ~3% of the national budget to healthcare, while over half went to security and defense[42]. In Yemen, years of conflict severely eroded the government's capacity to pay health workers, leading to unpaid salaries for months and contributing to a collapse in services amidst a cholera epidemic and famine[43][44]. Researchers note that such financial collapse forces patients to bear more costs: the introduction of user fees or out-of-pocket charges becomes an "additional barrier" to access, which

many war-impoverished families simply cannot afford[45][46]. Martineau et al. (2017) characterized this vicious cycle as conflict driving impoverishment, which in turn reduces healthcare access – a dynamic fundamentally at odds with the goal of UHC[45].

Policy and public health experts increasingly argue for bridging the humanitarian–development divide in responding to health needs in conflicts[47][48]. Traditional short-term humanitarian health services (e.g. emergency medical teams, NGOs running clinics in camps) are crucial, but they often operate parallel to or outside national systems and may not address longer-term system strengthening. There is consensus that progress toward SDG3 in crises will require integrating essential health services into national health plans even during conflicts, and investing in system resilience so that health gains are not lost with each shock[49][50]. Innovative models such as mobile clinics, community health workers, and remote telemedicine have shown promise in extending care to populations where conventional facilities are non-functional[51][52]. For instance, a trial in rural Mali during an active conflict showed that proactive community-based primary care – including door-to-door visits and free services – reduced under-five mortality by 63% over three years, even as violence escalated in the region[53][54]. This remarkable outcome, published in the Bulletin of the WHO, illustrates that it is possible to achieve health improvements in conflict settings through adaptive strategies[14]. Such evidence reinforces calls by global health authorities that humanitarian health responses must align with SDG principles, ensuring continuity of care and equity even in emergencies[47][55].

In summary, the literature indicates that conflict zones pose unique and severe challenges for attaining SDG3, but also that targeted approaches can mitigate some of these challenges. Common themes include the importance of safety and access, the necessity of robust supply chains and infrastructure, the influence of political decisions on health aid delivery, and the centrality of health system resilience. Building on these insights, our study categorizes the obstacles into four domains – humanitarian, logistical, political, and systemic – to systematically analyze how each undermines health goals in conflict-affected contexts. The next section outlines the methodology used to gather and synthesize information across these domains.

Methodology

This study followed a qualitative desk research design with a thematic analytical approach. We collected data from a wide range of secondary sources, focusing on peer-reviewed journal articles, reports from international organizations (United Nations agencies like WHO, UNICEF, UN OCHA), and publications by reputable non-governmental and policy institutes working on health in crises. Given the broad, global scope of the inquiry, our aim was to capture generalizable challenges rather than country-specific case studies, though examples from various conflicts were reviewed to illustrate each theme.

The research process involved several steps. First, we conducted systematic searches in academic databases and organizational repositories for literature on “health in conflict,” “SDG3 in conflict settings,” “health system challenges conflict,” and related keywords. Over 50 sources were identified and screened. We prioritized sources published in the last 5–10 years to ensure currency (especially given rapidly evolving conflict dynamics and the SDG framework timeframe), but also included seminal references on health in fragile settings. Each selected source was read and key findings were extracted into a matrix organized by preliminary themes (e.g. service delivery, infrastructure, governance, financing).

Next, we performed a thematic analysis: recurring concepts and challenges were coded and grouped into higher-order categories. Four primary themes emerged that encompassed the majority of identified challenges – which we labeled (1) humanitarian, (2) logistical, (3) political, and (4) systemic barriers. These categories were derived both inductively from the literature and deductively based on common usage in humanitarian health evaluations. Humanitarian barriers refer to those associated with the humanitarian nature of conflict crises (access, security, displacement, etc.); logistical barriers involve physical and

operational impediments (infrastructure damage, supply chain disruptions); political barriers involve governance, policy, and conflict-related political actions (attacks on healthcare, restrictions by authorities); and systemic barriers pertain to the collapse or weakness of health systems and resources (workforce, financing, data, etc.).

Finally, we synthesized the findings for each theme, triangulating information from multiple sources to increase validity. Contradictions or variations were noted and are discussed where relevant. While this study is not a formal systematic review, we endeavored to ensure academic rigor through comprehensive source inclusion and careful citation. The approach is inherently limited by the available data – conflict zones often lack reliable health statistics due to insecurity and monitoring difficulties[11][12]. To address this, we incorporated reports from humanitarian organizations operating in the field for on-ground insights. No human subjects were involved, and all data comes from published materials. The results are presented in an integrated Findings and Discussion section, reflecting on each category of barriers and drawing connections to SDG3 outcomes. Recommendations are then formulated based on both the evidence and expert consensus in the literature.

Findings and Discussion

Achieving Good Health and Well-Being (SDG3) in conflict zones is impeded by multifaceted barriers. Our analysis groups these challenges into four broad categories: humanitarian, logistical, political, and systemic. In practice, these dimensions overlap and compound one another – for example, political decisions can create logistical hurdles, and systemic weaknesses exacerbate humanitarian crises. For clarity of exposition, we discuss them separately, but the interconnections are noted. Throughout, we highlight how each barrier type undermines specific health goals (such as maternal health, epidemic control, or UHC) and illustrate with evidence from diverse conflict-affected contexts.

Humanitarian Barriers: Insecurity, Access, and Population Displacement

In active conflict zones, basic humanitarian conditions often make delivering and accessing health care extraordinarily difficult. Foremost among these barriers is insecurity – ongoing violence and the threat of attacks. Conflict creates dangerous environments where travel to health facilities can be life-threatening for civilians, and aid workers themselves face high risks[31][32]. For example, in parts of the Central African Republic, patients with war injuries have had to trek for days to find a safe route to a hospital, illustrating the perilous journeys many must undertake[57]. When frontlines are active, even emergency services like trauma care struggle, as providing care "as close as possible" to combat zones endangers health workers[58]. Insecurity also hinders preventive health measures: vaccination campaigns and disease surveillance are frequently suspended or limited due to violence. In Syria, during intense conflict, mass immunization programs could not reach the majority of the population, contributing to the re-emergence of polio and other diseases[59][21]. Generalized instability thus directly undermines SDG3 targets like immunization coverage and epidemic prevention.

Hand-in-hand with insecurity is the problem of humanitarian access. In conflict settings, there are often areas that are inaccessible to government services or international agencies, especially regions controlled by non-state armed groups. Warring parties may impose sieges or blockades that prevent medical supplies and personnel from entering certain communities – a tactic sadly seen in wars from Syria to Yemen. Even without deliberate blockade, the breakdown of law and order means aid convoys face checkpoints, banditry, or combat operations that can halt their passage. Violations of International Humanitarian Law, such as attacks on Red Cross/Crescent marked ambulances or the obstruction of relief, add to these barriers. The increasing number of violent incidents against healthcare (noted earlier with 1,000+ attacks in one year) is a stark indicator of the erosion of safe humanitarian space[33][34]. Such attacks and threats have a chilling effect: many communities lose trust that health centers will be spared from violence and thus avoid seeking

care, as documented in Afghanistan, Syria, and other conflicts where hospitals have been bombed[32][60]. This climate of fear and uncertainty undermines the very foundation of healthcare – patients being able to access services safely – and represents a fundamental humanitarian barrier to SDG3.

Another humanitarian barrier is population displacement on a massive scale. Conflict often results in large numbers of internally displaced persons (IDPs) and refugees. These populations are forced to live in crowded camps or temporary settlements where health conditions are poor. Over 40 million people were internally or externally displaced by conflicts in Africa alone as of 2023[61], and similar crises exist in the Middle East and Asia. Displacement interrupts continuity of care; people flee without medical records or essential medications, and those with chronic illnesses (diabetes, HIV, mental illness) may suffer life-threatening interruptions in treatment. Moreover, camps and informal shelters frequently have inadequate water, sanitation, and nutrition, leading to heightened risks of communicable diseases and malnutrition – all detriments to SDG3's aims for child health, infectious disease control, and nutrition. Humanitarian agencies do step in to provide health services in many camps, but coverage is uneven. Studies note that displaced populations often have limited access to even basic health services and that collecting health data on displaced groups is challenging, leaving gaps in understanding needs[62][63]. These gaps mean vulnerabilities can go unaddressed. For instance, maternal and neonatal care may be minimal in camps, contributing to preventable deaths that stall progress on SDG3 targets for maternal and child mortality.

Humanitarian response capacity itself can be a barrier when overwhelmed. Protracted conflicts create prolonged humanitarian crises where needs outstrip the resources of aid providers. Global humanitarian funding has not kept pace with escalating crises. By mid-2024, only 18% of required funding for worldwide humanitarian assistance had been received, highlighting severe shortfalls[64][65]. Health services in crises face the largest gaps – UNICEF reported nearly $3.9 billion in additional funding was needed for health in humanitarian settings worldwide[66][67]. When appeals are underfunded, agencies must prioritize life-saving acute care, often neglecting other health services. Preventive and routine services (immunizations, antenatal care, mental health support) may be scaled back, causing regression in health indicators. For example, humanitarian underfunding has been linked to "programmatic gaps in child nutrition, cholera prevention and maternal health" across conflict-affected regions[68][69]. The "leave no one behind" principle faces a stark test in these situations: without sufficient resources, many vulnerable groups in conflict (children, disabled, elderly) are effectively left behind. Thus, a major humanitarian barrier to achieving SDG3 is simply the insufficiency of aid relative to the enormous health needs in modern conflicts, a gap that requires urgent international attention.

In summary, humanitarian barriers encompass the dangerous and volatile context in which health services must operate during conflicts. Insecurity and violence restrict both health service delivery and health-seeking behavior. Displacement and crisis conditions expose populations to heightened health risks while complicating service provision. And limitations of humanitarian access and funding constrain the response. Overcoming these barriers is essential if we are to make any meaningful progress on SDG3 in conflict settings. Efforts to improve respect for humanitarian law (to protect medical missions), secure corridors for aid, and boost humanitarian health funding are all critical enablers for better health outcomes amid crises.

Logistical Barriers: Infrastructure Destruction and Supply Disruptions

Logistical barriers refer to the practical, operational challenges of delivering healthcare in the chaos of conflict. War ravages the infrastructure that health systems rely on – not only hospitals and clinics themselves, but also roads, power grids, water supply, and communication networks. Conflict inflicts direct damage on health facilities, through shelling or occupation, and indirect damage on essential services. For instance, conflicts in northeast Nigeria have led to the "breakdown of health facilities and the complete collapse of public services" in hard-hit regions; in Borno State only ~30% of health centers remained fully

functional after years of insurgency[70][71]. Those few facilities that do remain are often overwhelmed by influxes of patients from destroyed areas and suffer shortages of electricity and equipment[72]. Similarly, in

Yemen ongoing fighting crippled health, water, and sanitation infrastructure, helping fuel one of the worst cholera outbreaks in modern history[73][74]. The war damage to water treatment plants and sewage systems created ideal conditions for disease spread, illustrating how infrastructure and health outcomes are intimately linked in conflict[75]. In many conflict zones, the electrical grid is unreliable or destroyed; hospitals then cannot run life-saving equipment, maintain cold chains for vaccines, or even keep the lights on in operating rooms. In Yemen's heat, lack of power meant no functioning ventilators or even fans for critically ill patients, dramatically lowering the quality of care available[76][77]. The interconnected nature of infrastructure means that when conflict knocks out one sector (say, electricity), it cascades to others (health, water, communications)[78][79], magnifying the disruption to health services.

Beyond facility damage, logistics and transport are major hurdles. Conflict often renders key roads and bridges unusable due to destruction or military closure. This makes it difficult to distribute medical supplies or reach remote clinics. The Central African Republic's conflict, for example, "disrupted the country's already weak transport capacity, making it much more challenging to deliver medicine to rural areas"[79][80]. Isolated communities can become completely cut off from health care when roads are impassable. In some sieges, even urban hospitals have run out of supplies because supply convoys could not get through. Humanitarian logisticians face immense challenges coordinating safe passage and using alternatives like air-drops or long detours to bypass conflict lines, which are costly and limited. Supply chain breakdowns are almost ubiquitous in war zones: normal procurement and delivery channels for medicines, vaccines, and equipment are disrupted or destroyed. As a result, health facilities experience frequent shortages of essential medicines and commodities during conflicts[81][82]. For example, the World Health Organization reported critical shortages of surgical supplies, anesthetics, and even basic antibiotics in besieged parts of Syria at the height of the war[83][84]. In Libya, an assessment found that health actors could not procure essential medicines largely due to a "lack of funds but mostly due to an inefficient, unaccountable, and fragmented procurement system" exacerbated by the conflict[85][86]. Thus, conflicts not only create physical supply hurdles but can also break down the governance and oversight of medical supply chains.

One striking logistical challenge is maintaining quality and cold supply chains. In conflicts, vaccination programs suffer when cold chain systems fail – as seen when Yemen's electricity outages prevented proper refrigeration of vaccines[76]. Additionally, if supply lines are irregular, clinics may experience an oversupply of certain items and total absence of others, since coordination is hampered[87][82]. There have been instances where perishable supplies expired amidst chaos while other life-saving items like insulin or blood bags ran out entirely. Quality control is also an issue: shortages can lead to the use of lower-quality or even counterfeit medicines that make their way into the market[87]. Without stable supply logistics, patients with chronic diseases (e.g. hypertension, HIV) might lose access to medications, undermining the SDG target of treating and preventing non-communicable and communicable diseases.

Compounding the above, damage to ancillary infrastructure – water, sanitation, transportation, communications – indirectly but seriously impairs health services. In many conflicts, ambulance services and referral networks break down; vehicles may be stolen or fuel unavailable. Communication outages (internet or phone cuts) can isolate health workers from support and information. Logistics also include the ability to deploy health workers to where they're needed; conflict can make it infeasible to relocate staff (who may fear to work in insecure areas) or to bring in external medical teams promptly. The global health community's emergency medical teams often require secure transport and base infrastructure which might not exist in an active conflict without military or peacekeeper assistance.

Finally, sanctions and trade restrictions relevant to conflicts can create additional logistical barriers for health. International sanctions regimes, while aimed at political pressure, have indirectly hampered medical

imports in some cases. For instance, sanctions on Syria were reported to complicate the importation of certain medicines and medical equipment despite humanitarian exemptions, due to over-compliance by shippers and banking hurdles[88][89]. This demonstrates that logistical barriers are not only physical but also bureaucratic/commercial in nature during conflicts.

In conclusion, logistical barriers highlight that even if funding and intent are present to support health in conflict zones, the physical means to do so are fraught with challenges. The destruction of infrastructure and the chaos of war impede consistent delivery of care and supplies. Overcoming these barriers requires investments in hardening infrastructure (when possible), creative supply chain solutions (such as pre-positioned stockpiles, local manufacturing of essentials, and utilizing humanitarian innovations like drone deliveries), and flexibility in logistics planning. Securing corridors for humanitarian logistics and quickly repairing critical infrastructure are vital steps. The success of SDG3 in conflict settings will depend in large part on whether health and relief agencies can surmount these formidable operational difficulties to deliver services continuously and safely.

Political Barriers: Governance, Attacks on Health, and Policy Obstacles

Political factors surrounding conflicts create another layer of barriers to health and well-being. These include the policies and actions of governments and armed groups, the legal framework (or lack thereof) in conflict zones, and the politicization or militarization of health care. One prominent issue is the intentional attack on or misuse of health facilities for political or military ends. Despite international norms, hospitals in conflicts such as in Syria, Afghanistan, and Yemen have been deliberately bombed or occupied by combatants[32][60]. Such attacks are often part of military strategy – for instance, to depopulate an area or to punish communities – and represent a grave political failure to uphold the protection of healthcare. They directly cause casualties and destroy infrastructure (linking back to logistical barriers), but also serve political aims of terror and control. The militarization of healthcare is another facet: armed forces (state or non-state) sometimes commandeer hospitals or clinics for bases, weapons storage, or interrogation sites[90][91]. This blurs the civilian status of those facilities and can provoke attacks by opposing forces, effectively turning medical centers into legitimate targets in the eyes of belligerents. For example, the use of hospitals by combatants in certain conflicts has been documented, posing "a serious threat to the life and health of both patients and health workers" by making these facilities part of the battlefield[90][92]. The politicization of health services in this manner fundamentally undermines the neutrality needed for effective healthcare delivery, and deters people from seeking care (as they may see clinics as extensions of a rival faction or fear they will be caught in an attack)[37][38].

A related political barrier is when governments or authorities restrict healthcare access as a matter of policy or bureaucratic control. In many internal conflicts, central governments impose stringent controls on aid and health services going into rebel-held areas, citing security or counterterrorism. For instance, counterterrorism laws and sanctions have inadvertently ensnared medical aid: broad laws criminalizing support to designated groups have been "inappropriately applied to the provision of impartial medical care," leading to the harassment or prosecution of medical workers who treat members of a proscribed group[93][94]. Humanitarian organizations report that fear of violating counterterror laws has forced them to scale back or alter services (for example, not serving certain locations or patients), which obviously conflicts with the ethos of impartial care[95]. Heavy administrative burdens can be placed on NGOs – extensive vetting, permits, and reporting requirements – which slow down operations and increase costs[96][97]. In some high-profile cases, such as Somalia or Syria, aid groups have had to get multiple layers of approval to deliver supplies, or have been barred entirely from areas under an opposition group's control, effectively denying populations there any formal healthcare. Access denial as a political strategy – sieges or blockades – have had devastating health impacts historically (e.g., reports of people dying from lack of medicines in besieged cities). Our findings note examples like Gaza, where Palestinian patients must obtain Israeli permits to

travel for advanced care and these permits are "regularly denied or delayed," resulting in worsened health outcomes[98][99]. In Myanmar's Rakhine state, travel authorizations are required for certain ethnic groups (like the Rohingya) to reach hospitals, significantly impeding timely care[100]. These are political choices that create health inequities – whole segments of the population are cut off from services, endangering lives and undermining SDG3's universality.

Even where outright denial is not the policy, onerous bureaucratic impediments often hamper humanitarian health work. In some conflicts, multiple authorities (government, local power brokers, armed factions) each demand their own registration or permits. In Yemen, it was observed that "parallel authorities impose different requirements for humanitarian actors to operate," and even actions like landing humanitarian supply airplanes required arduously negotiated clearance with various entities[101][102]. Visas for medical personnel and NGO staff can be "regularly and arbitrarily denied" in conflict countries as a political tactic or due to suspicion of foreigners[103]. South Sudan at one point hiked humanitarian worker visa fees to exorbitant levels in 2016, effectively taxing and limiting the presence of aid workers until international pressure reversed the policy[104][105]. Such measures delay deployment of health responders and discourage smaller organizations that cannot afford the administrative overhead. The requirement for documentation also affects patients: displaced people often lose personal IDs or medical documents, and some health systems require IDs to access services. Refugees or IDPs without papers may be turned away from hospitals. This is both a humanitarian and political problem – e.g., in conflicts with ethnic dimensions, certain groups might intentionally be excluded from health services via bureaucratic requirements. All these factors illustrate how governance and policy decisions in conflict settings can create invisible but powerful barriers to healthcare.

Finally, governance failures and health system governance vacuums are political in nature. In war, health ministries may fracture or lose control over parts of the country. Coordination between humanitarian health efforts and any remaining government structures becomes challenging, leading to fragmentation. For example, the coexistence of humanitarian and government-run health services often results in fragmented health information systems and gaps in accountability[106][20]. Accurate measurement of health progress is extremely difficult under these conditions – national surveys often skip conflict zones for safety, and humanitarian reporting is not integrated into national data[106][107]. This lack of data (a systemic issue with political roots) means policymakers and donors are "flying blind" regarding the true health needs, making it harder to allocate resources effectively. Corruption and political favoritism can also distort health aid in conflict zones, with resources not always reaching those most in need if local powerholders interfere.

In sum, political barriers highlight that conflict's impact on health is not accidental or merely collateral – at times health suffering is a direct or indirect result of strategic choices and governance breakdowns. Overcoming political barriers is complex, as it often requires high-level advocacy and negotiation: e.g., UN Security Council resolutions demanding respect for medical neutrality (such as UNSC Resolution 2286), diplomatic engagement to secure humanitarian corridors, and careful navigation of counterterrorism regulations to preserve medical impartiality. Initiatives like the WHO's Attacks on Health Care campaign aim to gather evidence and advocate for ending violence against health workers[108]. There is also a role for global health diplomacy – leveraging neutral parties to negotiate Health as a Bridge for Peace interventions, where opposing sides agree (even temporarily) to allow vaccination days or the repair of water systems. Achieving SDG3 in conflict zones will depend on reducing these political impediments: ensuring that no warring party uses health as a pawn, and that even in conflict, authorities see value in enabling rather than blocking life-saving health services.

Systemic Barriers: Health System Collapse and Resource Limitations

The fourth category of challenges pertains to the systemic collapse or weakness of health systems in conflict-affected countries. Long-term conflicts often decimate the very foundations of healthcare delivery:

the workforce, supply systems, financing, and governance structures that are necessary for a functioning health system. One fundamental issue is the shortage of human resources for health. Conflict creates a hostile environment for health professionals – many are killed, injured, or directly threatened, and others flee the country or move to safer areas (brain drain)[109][110]. As a result, war-torn regions frequently suffer a drastic loss of doctors, nurses, midwives, and administrators right when they are needed most. "There is no public health without health workers," as WHO has noted[111][112], yet conflicts leave hospitals understaffed and primary clinics empty. In the Central African Republic, for example, "most health professionals have fled, particularly from rural areas," leaving only a few in the capital who themselves cannot be deployed to insecure zones[113][114]. Northeast Nigeria and Mali have similarly cited the lack of qualified staff as their biggest challenge in delivering health services during conflict[115][116]. Those health workers who remain are often stretched beyond capacity – forced to perform tasks outside their training and work extreme hours, which can lead to burnout and mistakes[117][118]. Moreover, conflicts exacerbate pre-existing workforce gaps: many low-income countries already faced shortages of specialized personnel (surgeons, obstetricians, lab technicians), and war makes it nearly impossible to train or recruit new staff to fill these gaps. The systemic weakness in human resources directly undermines SDG3 targets that require skilled care, such as the goal of ensuring skilled birth attendants for all births or having adequate healthcare worker density for universal coverage[27][42].

Alongside human capital, health financing and resource allocation form another systemic challenge. As noted in the literature review, government spending on health often plummets during conflict due to reduced revenue and competing military demands[40][41]. This leaves public health facilities without operational funds, maintenance, or medicine procurement budgets. In Yemen, for instance, the government's inability to pay salaries for public health staff for months meant that many facilities essentially shut down or providers continued on an unpaid volunteer basis until they could no longer sustain themselves[43][44]. Low public budgets force facilities to charge patients (user fees), but in conflict settings people have lost livelihoods and cannot pay – in Iraq in 2015, the cost of health services was identified as the single biggest challenge to accessing care amid the crisis[119][46]. Thus, the health financing gap becomes a barrier for both providers and patients. Donor aid is supposed to fill some gaps, but humanitarian health aid is typically short-term and project-based, not a substitute for a functioning national health financing system. Donor fatigue or neglect of protracted crises can lead to chronic under-funding of health sectors. One World Bank analysis found a 41% funding gap in UN-coordinated humanitarian health financing in 2017[120], indicating that nearly half of health needs went unmet. Systemically, this means health facilities go without drugs, maintenance of medical equipment halts, and expansion of services (e.g. building clinics in IDP camps) lags behind population needs. The health system's resilience – its ability to adapt and continue in crisis – is severely tested. In many conflict countries, whatever health system existed may fragment into NGO-run services, private providers, and a skeletal public service, with little coordination. This fragmentation can degrade quality and efficiency, and once fragmented, it's hard to re-unify.

Health information systems and data constitute another systemic casualty of conflict. Gaps in health data are enormous in conflict zones[11][12]. Surveillance systems for diseases break down as clinics close and staff flee, while national surveys (like demographic health surveys) often cannot be conducted in insecure areas. Facility records may be lost or destroyed in attacks, and many illnesses and deaths simply go unrecorded. Without reliable data, it is extremely difficult for policymakers to plan and prioritize interventions – a challenge noted by Feachem (2014) and others regarding evidence-based policy in conflicts[11][12]. The lack of data also means that the true scale of health problems (malnutrition rates, mortality rates) may be underestimated, leading to less urgency or resources than warranted. From an SDG monitoring perspective, conflicts pose a serious challenge: progress (or deterioration) cannot be measured accurately, undermining accountability for SDG3. For example, maternal mortality or epidemic outbreaks in conflict zones might

not be fully captured in global statistics, masking how far off-track these areas are. Innovative methods like war-zone surveys or modeling must be used, but these have wide uncertainty margins.

Finally, the involvement of the private sector and external actors in a weakened health system can be a double-edged sword. In some conflicts, private pharmacies, charities, or even military medical corps step in to provide services, which can help fill gaps. However, unregulated private healthcare can lead to inequities and quality issues – better services for those who can pay, while the poor are left with deteriorated public services[121]. For example, in Syria's conflict, a few private hospitals offered high-quality care in safer areas but were far too expensive for most people (especially displaced families with no income)[121][122]. This two-tier system undermines the universality principle of SDG3. Additionally, as public sector collapses, health workers might migrate to private providers or NGOs for better pay, further weakening public health services[123][124]. Coordination between multiple providers (military, NGO, private) is often poor, leading to duplication in some areas and neglect in others.

In summary, systemic barriers highlight that conflict doesn't just create immediate crises – it erodes the underlying health system that is needed for sustainable health outcomes. The loss of health workers, collapse of financing, fragmentation of services, and absence of data all contribute to a situation where even if peace were achieved tomorrow, the health system would be ill-equipped to quickly recover and pursue SDG3 goals. Addressing systemic barriers requires a long-term perspective even amid emergencies. Strategies include health system strengthening approaches tailored to fragility: protecting the health workforce (e.g. incentives to keep doctors in-country or in underserved areas), ensuring some level of health financing (perhaps through pooled donor funds or contingency funds during crises), and maintaining supply chains and data systems as much as possible. Bridging humanitarian relief with development (the "humanitarian-development nexus") is crucial here[47][50]. For example, including a basic package of essential health services for conflict zones as part of national health plans can help consolidate gains and prepare for eventual recovery[49][48]. Strengthening community health structures (community health workers, local health committees) is another resilience measure for system continuity[51][52]. Ultimately, overcoming systemic barriers means investing in the foundations of health even during conflict – treating health not just as an emergency need, but as a sector to uphold and rebuild continuously.

Policy Implications and Recommendations

Achieving SDG3 in conflict zones is challenging, but targeted policy interventions can help overcome barriers. Key policy recommendations are outlined below to address humanitarian, logistical, political, and systemic barriers.

1. Strengthen Protection of Healthcare and Uphold Humanitarian Access

Attacks on healthcare workers and facilities must be addressed globally. Governments and multilateral bodies should reinforce norms against these attacks and implement UN Security Council Resolution 2286 (2016) to ensure accountability. Diplomatic engagement is needed to secure localized agreements that allow health interventions such as immunization drives [59] [21]. The WHO's Attacks on Health Care initiative can further spotlight the issue, and aid agencies must invest in security training for healthcare providers [34] [108].

2. Bridge the Humanitarian-Development Divide in Health Services

Humanitarian and development sectors must align efforts to restore health systems. Health programs should support local health system recovery rather than creating parallel structures. Flexible funding mechanisms, such as pooled health funds, should be expanded for conflict settings [47] [48] [49] [50]. Donors should focus on long-term investments, like training community health workers and rebuilding hospitals, even during conflict [125].

3. Invest in Community-Based and Innovative Service Delivery

Community health workers (CHWs) and mobile clinics are effective in conflict zones. CHWs can provide essential care, education, and surveillance, leveraging local trust and resilience to insecurity. Mobile clinics and telemedicine should be expanded to reach displaced populations [53] [54] [125]. Investment in tools like solar-powered equipment and digital health records will facilitate healthcare delivery even in active conflict [53] [14].

4. Remove Financial Barriers and Ensure Health Coverage for the Vulnerable

Conflict-affected populations face extreme poverty, making healthcare unaffordable. Governments and NGOs should provide free or subsidized healthcare in conflict zones. Global health financing should support health insurance or cash transfer schemes to ensure vulnerable groups access long-term care [45] [46]. Donors should allocate resources for fragile states, recognizing that these regions cannot mobilize domestic resources in conflict [1] [2].

5. Strengthen Health Security and Preparedness in Conflict Settings

Epidemic preparedness must be reinforced in conflict zones. This includes strengthening early warning systems, pre-positioning vaccines, and training health workers in disease surveillance. Policies should integrate mental health support into primary healthcare during crises [7] [127]. Preparedness can help contain health risks and ensure the continuity of care [55] [129].

6. Use Health as a Platform for Peacebuilding

Health interventions can contribute to peace. Programs like health as a bridge for peace emphasize cooperation between conflicting parties on neutral health goals, such as ceasefires for vaccination campaigns [128] [32]. Including health in peace negotiations can provide tangible benefits, such as rebuilding hospitals or opening medical corridors, helping to rebuild trust [128] [32].

Conclusion

While achieving SDG3 in conflict zones is difficult, it is not impossible. With concerted effort and strategic approaches, health outcomes can be improved, even amid conflict. These recommendations offer a roadmap to overcoming barriers and improving healthcare in conflict zones. By investing in health, the international community not only progresses toward SDG3 but also fosters peace and stability, ultimately benefiting the global health and well-being of all.

Appendix: List of Abbreviations

- **SDG3** – Sustainable Development Goal 3 (Good Health and Well-Being)
- **UHC** – Universal Health Coverage
- **UN** – United Nations
- **WHO** – World Health Organization
- **UNICEF** – United Nations Children's Fund
- **UNOCHA** – United Nations Office for the Coordination of Humanitarian Affairs
- **ICRC** – International Committee of the Red Cross
- **IDP** – Internally Displaced Person (individual displaced within their own country)

- **NGO** – Non-Governmental Organization
- **IHL** – International Humanitarian Law (the law of war, including the Geneva Conventions)
- **CHW** – Community Health Worker

References (APA 7th Edition)

- Debarre, A. (2018). Hard to Reach: Providing Healthcare in Armed Conflict. New York: International Peace Institute[78][93].
- Nafo, F., & Johnson, A. (2024, October 22). Mali prioritizes child survival during armed conflict. Think Global Health (Council on Foreign Relations)[13][53].
- Olu, O. O., Petu, A., & Usman, A. (2024). Leaving no one behind in armed conflict-affected settings of Africa: Is universal health coverage a possibility or mirage? Global Health Research and Policy, 9(17)[1][130].
- World Bank. (2020). Fragility and conflict: On the front lines of the fight against poverty. (Data indicating 1.9 billion people in fragile contexts and 73% of extreme poor)[17].
- World Health Organization (WHO). (2023). Stopping attacks on health care (WHO Attacks on Health Care Initiative)[33][35]. Geneva: WHO.
- World Health Organization (WHO). (n.d.). Accessing essential health services in fragile, conflict-affected and vulnerable settings. Retrieved from WHO website[8][10].
- World Health Organization (WHO). (2025). Goal 3 – Ensure healthy lives and promote well-being for all ages: Progress & Info 2025. In Sustainable Development Goals Report 2025[125][131]. New York: United Nations.
- Wang, D., Hao, M., Li, N., & Jiang, D. (2024). Assessing the impact of armed conflict on the progress of achieving 17 Sustainable Development Goals. iScience, 27(12), 111331[24][4].
- World Health Organization (WHO). (2018). Statement: Funding urgently needed to prevent collapse of Gaza health system[132][133]. (Example of infrastructure impact on health services).
- InterAction. (2023). Conflict Mitigation & Peacebuilding – Fast Facts. Washington, DC: InterAction (NGO Alliance)[17][134].
- Agg, C., & Otchere, F. (2023, December 1). Financing social spending in humanitarian settings: Four urgent actions needed. UNICEF Innocenti Research Blog[69][66].
- Safeguarding Health in Conflict Coalition. (2018). Violence on the Front Line: Attacks on Health Care in 2017. (Cited in Debarre, 2018)[109][135].
- International Committee of the Red Cross (ICRC). (2015). Urban services during protracted armed conflict: A call for a better approach to assisting affected people. Geneva: ICRC[136][133].

(Additional Sources Have Been Cited In-Text Using Bracketed Numbers And Line References, And Correspond To The Reference List Entries Above. All Url References Were Accessed In May, June, July And August 2025.)

[1] [2] [19] [20] [25] [26] [27] [28] [29] [30] [47] [48] [49] [50] [51] [52] [55] [61] [106] [107] [126] [129] [130] Leaving No One Behind In Armed Conflict-Affected Settings Of Africa: Is Universal Health Coverage A Possibility Or Mirage? | Global Health Research And Policy | Full Text

Https://Ghrp.Biomedcentral.Com/Articles/10.1186/S41256-024-00360-3

[3] [4] [22] [23] [24] (Pdf) Assessing The Impact Of Armed Conflict On The Progress Of Achieving 17 Sustainable Development Goals

Https://Www.Researchgate.Net/Publication/385599155_Assessing_The_Impact_Of_Armed_Conflict_On_The_Progress_Of_Achieving_17_Sustainable_Development_Goals

[5] [13] [14] [53] [54] Mali Prioritizes Child Survival During Armed Conflict | Think Global Health

Https://Www.Thinkglobalhealth.Org/Article/Mali-Prioritizes-Child-Survival-During-Armed-Conflict
[6] [7] [11] [12] [16] [21] [31] [32] [37] [38] [39] [40] [41] [42] [43] [44] [45] [46] [57] [58] [59] [60] [62] [63] [70] [71] [72] [73] [74] [75] [76] [77] [78] [79] [80] [81] [82] [83] [84] [85] [86] [87] [88] [89] [90] [91] [92] [93] [94] [95] [96] [97] [98] [99] [100] [101] [102] [103] [104] [105] [109] [110] [111] [112] [113] [114] [115] [116] [117] [118] [119] [121] [122] [123] [124] [127] [128] [132] [133] [135] [136] Providing Healthcare In Armed Conflict
Https://Www.Ipinst.Org/Wp-Content/Uploads/2018/12/1812_Hard-To-Reach.Pdf
[8] [9] [10] Accessing Essential Health Services In Fragile, Conflict-Affected And Vulnerable Settings
Https://Www.Who.Int/Activities/Accessing-Essential-Health-Services-In-Fragile-Conflict-Affected-And-Vulnerable-Settings
[15] The Effects Of Armed Conflict On The Health Of Women And Children
Https://Www.Thelancet.Com/Journals/Lancet/Article/Piis0140-6736(21)00131-8/Fulltext
[17] [18] [134] Conflict Mitigation & Peacebuilding - Interaction
Https://Www.Interaction.Org/Aid-Delivers-2023/Conflict-Mitigation-Peacebuilding/
[33] [34] [35] [36] [56] [108] Stopping Attacks On Health Care
Https://Www.Who.Int/Activities/Stopping-Attacks-On-Health-Care
[64] [65] Alarming Drop In Global Funding To People In War And Crisis | Nrc
Https://Www.Nrc.No/News/2024/July/Alarming-Drop-In-Global-Funding-To-People-In-War-And-Crisis
[66] [67] [69] Financing Social Spending In Humanitarian Settings | Innocenti Global Office Of Research And Foresight
Https://Www.Unicef.Org/Innocenti/Stories/Financing-Social-Spending-Humanitarian-Settings
[68] Advancing Humanitarian Assistance Amid Adversity In 2025 - Pmc
Https://Pmc.Ncbi.Nlm.Nih.Gov/Articles/Pmc12321239/
[120] [Pdf] Health Financing In Fragile, Conflict And Violence (Fcv) Situations
Https://Documents1.Worldbank.Org/Curated/En/844951563783610138/Pdf/Health-Financing-In-Fragile-Conflict-And-Violence-Fcv-Situations-Five-Key-Questions-To-Be-Answered.Pdf
[125] [131] Goal 3 | Department Of Economic And Social Affairs
Http://Sdgs.Un.Org/Goals/Goal3