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From ground realities to policy: a framework for assessing multipolar health system governance in conflict-affected and high-risk areas

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Abstract

Introduction Understanding and evaluating health system governance is essential for resilient health systems. This study develops a framework to analyse health system governance in conflict-affected and high-risk areas, including fragmented systems.

Methods The methodology adopts a qualitative multi-faceted approach, encompassing five methods: consultations with experts, thematic analysis of existing health system governance frameworks, focus group discussions, interviews with key informants, and reflections from primary authors during fieldwork. The discussion centred on examples primarily drawn from northwest Syria throughout the conflict (2011–2024).

Findings Existing health system governance frameworks are less relevant in conflict-affected and high-risk areas. The authors developed a new institutional framework by adding more dimensions to well-known principle-based frameworks, such as Siddiqi et al., to address the complexities imposed by conflicts. The framework has a descriptive part that includes power dynamics (types and dimensions) and stakeholders' traditional and non-traditional roles and responsibilities. Additionally, it has an evaluative part that includes eleven principles: strategic vision; participation and consensus orientation; rule of law and ethics; intelligence and conflict-sensitive transparency; responsiveness; equity and inclusiveness; effectiveness and efficiency; complex accountability; complementarity; localisation; and legitimacy.

Conclusion The proposed framework can deal with fragmented health systems characterised by multipolar health systems. It is typically applicable in conflict-affected and high-risk areas. It provides policymakers with a structured approach to describing and evaluating health system governance.

Keywords Health system governance, Conflicts, Fragile, Multipolarity, Principles, Legitimacy, Power dynamics, Framework

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Introduction

In recent years, the world has witnessed a significant increase in frequency, intensity, and duration of humanitarian crises caused by prolonged conflicts, the impacts of climate change, and economic instability [1]. These crises have led to the highest number of people in a generation being impacted by conflict and forced displacement, resulting in increasingly complex humanitarian challenges that are difficult to address.

As of April 2025, the United Nations High Commissioner for Refugees reported that 122.1 million people worldwide were forcibly displaced due to war, persecution, violence and human rights violations [2]. In 2024, the International Committee of the Red Cross reported over 120 active armed conflicts worldwide, including both state-based and non-state conflicts [3]. A report by the Uppsala Conflict Data Program in June 2024 demonstrated a significant increase in the number of State-based, non-State, and one-sided violence between 2009 and 2023 (Fig. 1) [4].

In conflict-affected areas, state institutions may collapse or withdraw, resulting in significant gaps in leadership, management and essential services. This exacerbates potentially pre-existing weaknesses in institutional oversight and public accountability. This situation challenges local communities, quasi-governmental institutions, non-state actors, and civil society organisations to fill that void. However, the absence of the often-hierarchical governance by state institutions does not necessarily lead to complete chaos. Effective governance in areas of limited statehood—areas within a country where the central government lacks the capacity or will to enforce rules, provide public services, or maintain order [5]—can be identified through three key factors: (i) the governing actors and institutions' legitimacy and, thus, the "right to govern"; (ii) governance institutions have to be "fit for purpose," adequately resourced, fair, transparent and inclusive; and (iii) social trust among citizens and within local communities [6]. Some effective health governance in areas of limited statehood examples were observed in Somaliland, Syria, and Afghanistan [7–9]. Börzel and Risse, in their book (2021), suggested that "governance research has to take limited statehood into account" and asked how effective and legitimate governance is possible in these areas [6].

In political science, governance refers to structured patterns of political guidance, focusing on the institutionalised relationships among public, private, and civil actors in managing public matters and resolving social issues [10]. Good governance relates to the political and institutional processes and outcomes that are essential to achieve social cohesion, economic growth, and political stability, which serve as the bedrock for inclusive development [10, 11].

The World Health Organization (WHO) defines health system governance (HSG) as "The rules and norms that shape roles and responsibilities, incentives and interactions in the health sector [12]." The health system and its governance are determined by the interaction of four main groups of stakeholders: state and non-governmental organisations (NGOs), private sector entities, healthcare providers, and communities [13].

Some researchers consider the concept of HSG to be too ambiguous [14]. Others find there is confusion over how best to conceptualise the idea and application [15]. However, the ambiguity of the concept of governance is one reason for its popularity. It can be adapted to fit the intellectual preferences of the writer, which may add complexity to its meaning but also enhances overall understanding [16]. Traditionally, governments play a crucial role in setting up governance arrangements in the health sector, which can be mentioned as 'governance by government.' However, other types of governance exist depending on the context, including 'governance with government' that emerged from the cooperation networks of state and non-state actors and 'governance without government' in stateless areas [17].

The European Union defines conflict-affected and high-risk areas (CAHRAs) as regions experiencing armed conflict, fragile post-conflict conditions, areas with limited or absent governance and security, and those marked by widespread and systematic violations of international law, including human rights abuses [18]. This reality makes these areas far from stable regarding the presence of governmental structures, where weak or illegitimate authorities may exist, or more than one government, and

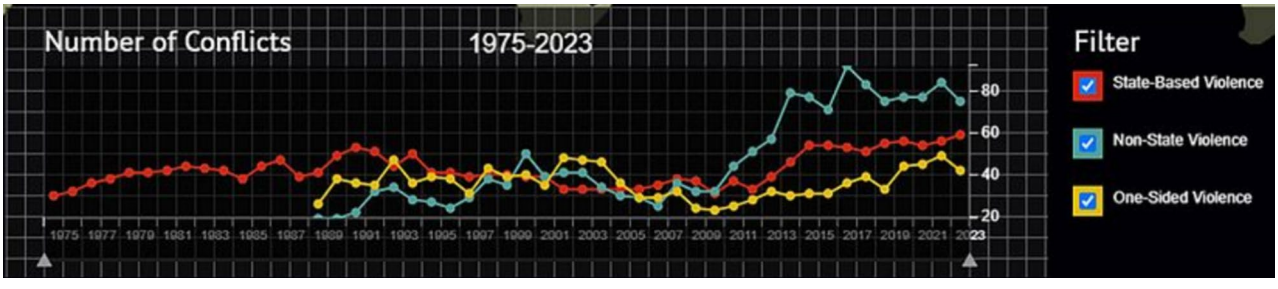

Fig. 1 Record number of armed conflicts in the world (1975–2023). Source: Uppsala Conflict Data Program, Uppsala University [4]

sometimes the government may be absent altogether. Thus, the government's leadership role in the health system may be absent, weak and occasionally harmful. Additionally, new players and newly established bodies may occupy significant roles, sometimes exceeding the local government or health authority's role; this may also include United Nations (UN) institutions, donors, NGOs, quasi-governmental institutions, and military non-state armed groups.

In CAHRAs, speaking on a 'health system' risks importing assumptions of coherence, hierarchy and institutional stability that often do not exist [6, 17, 19]. What exists on the ground is often a makeshift assemblage rather than a designed system. We therefore use 'system' heuristically. Our analysis acknowledges makeshift assemblage characteristics, including temporal instability, overlapping roles, and heterogeneous logics (humanitarian, market, military, religious, professional), while still permitting structured description and evaluation. Practically, we treat a 'system' as the minimum set of interdependent actors and rules that, over time, perform core health functions for a defined population, irrespective of whether coordination is formal, coercive, negotiated, or tacit [6, 17, 20]. Over time, funding cycles, security conditions, or power relations reconfigure these functions again [6, 19, 21]. In this sense, regular patient flows, data exchange, and shared norms can simulate a 'system' without a single centre of authority [22, 23]. However, the lack of control or legitimacy of the central government suggests what we can call a 'multipolar' model, where various power types and dynamics are operated by different actors with diverse roles and responsibilities.

Improvements in HSG based on locally generated evidence play a critical role in improving the delivery of health services and ultimately contribute to better health outcomes for the population. Good HSG enhances people's trust in the health system and, thus, the legitimacy of public health authorities. Grounded in the expectation that providers will demonstrate knowledge, skills, and competence while acting with integrity, fairness, and in the best interest of patients [24], trust shapes patients' willingness to seek care, adhere to medical advice, and believe in the competence of individual providers. Additionally, trust extends to systemic and institutional dimensions, involving public confidence in the healthcare system's organisation, governance oversight and supportive policies that encourage quality care and discourage unethical practices, transparency, and ability to deliver equitable care [25]. However, trust in governance bodies by external actors, including donors can also be challenging in CAHRAs, particularly where they are newly established.

There has been a lack of comprehensive investigations into non-hierarchical HSG in CAHRA environments. Lokot et al. in 2022 highlighted the scarcity of research on this topic, revealing significant conceptual gaps in HSG compared to other health system components. Evidence in this area remains limited [19]. The complexity of HSG emphasises that no single framework can universally assess it due to its multidimensional nature and varying contexts [14]. Each context requires a tailored approach, recognising HSG's unique circumstances and needs.

Although there are many frameworks to assess HSG, such as Siddiqi et al. and others, there is a need for a new one that responds to the challenges associated with non-hierarchical HSG in CAHRAs. These challenges relate to the weakness or absence of state institutions, specific health needs of affected populations, the impact of conflict on public health, risks associated with providing healthcare, relationships and conflicts between stakeholders, modality of donors' interventions, and the distribution of power and resources.

This paper aims to present a working framework to assess the non-hierarchical governance of a health system in CAHRAs using the experience derived from the Syrian case and building on Siddiqi et al.'s HSG framework and an introductory paper by Alkhalil et al. (2024) focusing on the legitimacy of health systems in conflict settings [26]. Syria presents an important starting point for developing this framework due to the protracted nature of the conflict, the vacuum left by government actors early in the conflict, and the experience of stakeholders involved, which is not limited to Syria.

Contextual background

Syria endured conflict from 2011 to 2024, resulting in approximately 900,000 deaths, both directly and indirectly [27]. Over the years, the zones of military control have shifted significantly. Broadly, the country was divided into at least three main areas of control: areas controlled by the Government of Syria (GoS), opposition-controlled areas (OCAs), and territories governed by Kurdish-led Syrian Democratic Forces (SDF) [28]. However, in December 2024, the GoS fell, and opposition forces that emerged from northwest Syria (NWS) took control of most of Syria.

Figure 2 illustrates the areas of control as of November 2024. The GoS, supported by Russian and Iranian alliances, dominated the red areas. The SDF-controlled zones, shown in yellow, primarily encompass northeast Syria and operate under the Autonomous Administration of North and East Syria, which emerged in 2013 and functions with United States support. OCAs, highlighted in green, are largely situated in NWS. These areas operated under Turkish influence and featured two distinct administrative entities: the Syrian Interim Government (SIG), established in 2013 under the National Coalition

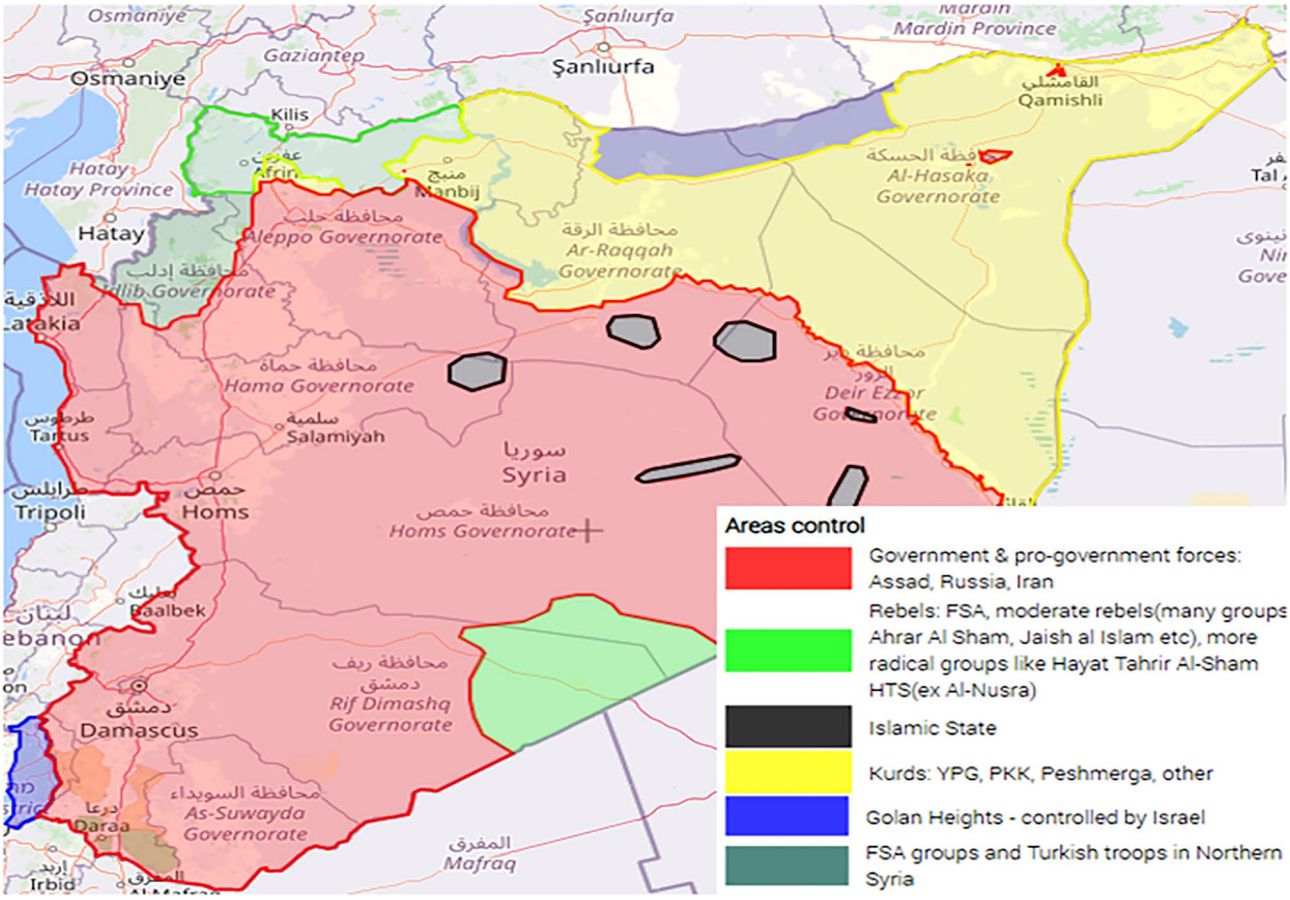

Fig. 2 Areas of control in Syria as of November 2024. Source: Live Universal Awareness Map [33]

of Syrian Revolutionary and Opposition Forces, governed parts of northern Aleppo [29, 30], and the Syrian Salvation Government (SSG), formed in 2017 by a military group called Hayat Tahrir al-Sham, administered the Idlib governorate [31, 32].

This study primarily draws on examples from NWS, reflecting the extensive field experience of three contributing authors in these areas.

Throughout the conflict, state institutions in Syria gradually collapsed or withdrew from OCAs. To fill the governance void, local health leaders rapidly mobilised to establish alternative quasi-governmental organisations. This effort began in 2011 with the creation of rudimentary medical offices constrained by limited human and financial resources. These offices prioritised emergency life-saving interventions, particularly for individuals injured in peaceful demonstrations, often targeted by security forces. Health services in OCAs during this period were provided through minor medical points and field hospitals. However, by 2012, the expansion of its staffing with health professionals transformed these offices into structured health management bodies. These evolved entities expanded their focus beyond emergency care to include maternity services and paediatric clinics.

The diaspora's Syrian-led NGOs began collaborating with these health bodies, implementing small-scale health projects. In March 2013, local health personnel in Idlib formalised their efforts by establishing the 'Free Idlib Health Directorate.' This quasi-governmental model inspired the formation of health directorates in other governorates, including Aleppo and Hama. By 2014, SIG began supporting these emerging health directorates (HDs), which operated in OCAs. Consequently, the number of HDs grew to encompass regions such as Idlib, Aleppo, Hama, Latakia, Homs, Daraa, Quneitra, and Ghouta. This marked a pivotal step in decentralising health governance and delivering essential services in OCAs.

The role of the HDs was more than just coordinating and providing health services; it also aimed to include efforts to gain legitimacy and trust from local and international communities. Many Syrians in OCAs at that time challenged the legitimacy of the GoS; there was a shift across all sectors to establish institutions capable of drawing legitimacy away from the GoS beyond their conventional roles in service delivery.

During this period, in parallel but closely linked, was the mobilisation of the Syrian diaspora, mostly physicians

in the US, Europe and other countries including in the Gulf to support their colleagues and respond to humanitarian needs in Syria. In part, this took the form of direct donations and support (mainly cross-border), whether formally or informally, to cover the health and humanitarian needs, supplementing international humanitarian donor funding. However, some of the diaspora also formalised their efforts either as newly established or transformed entities, which continue to be key players in the humanitarian response in Syria, even after the fall of the regime. However, they also added complexity to the health system, particularly where they weakened the legitimacy of locally formed entities such as the HDs.

In 2014, UN Security Council Resolution 2165 was issued to allow actors to provide humanitarian aid through four border crossings due to the restrictions placed by the GoS on equitable aid provision to areas outside of its control. These were Bab al-Salam, Bab al-Hawa, Al-Yarubiyah, and Al-Ramtha. Subsequently, the humanitarian clustering model, led by the Office for the Coordination of Humanitarian Affairs, was established in 2014 in Turkey for the humanitarian response in Syria across the border. The health cluster (HC) coordinated humanitarian interventions through three leading platforms: Syria hub, Turkey Cross-border and Jordan Cross-border. The three platforms worked together through the Whole of Syria approach established in 2015 to strengthen the overall coordination. However, by 2020, with the GoS regaining control over most of Syria, only the Bab al-Hawa crossing remained available for international cross-border aid until February 2023 when other cross border points were reopened to support humanitarian aid after an earthquake and remained open until the fall of the previous Government in December 2024. Since 2020 and until the 8th of December 2024, the health governance entities in the NWS were: SIG through Aleppo Health Directorate, controlling health services provision in northern Aleppo, with further fragmentation caused by newly established, Turkish-affiliated HDs at the district level. Idlib Health Directorate (IHD) and SSG in Idleb with competitive and overlapping roles. Furthermore, the HC Platform, including UN agencies and local and international NGOs, played a significant coordinating role. After the fall of the Assad regime, the Idlib and Aleppo HDs were merged into the MoH structure.

The presence of multiple actors involved in providing healthcare services, diverse funding sources, complex and fragmented governance structures, and the intricate balance between coordination and competition are the primary factors contributing to the existence of different decision-making centres with varying governance arrangements. These interactions and factors have culminated in what we will call in this paper the 'multipolar health system' in NWS.

Purpose and rationale of developing a new health system governance framework

HSG in most CAHRAs is complex and fragmented because several actors impact different functions of the health system: leadership, service planning, financing, and delivery. We argue that existing frameworks cannot describe and evaluate non-hierarchical HSG in CAHRAs. For example, leadership, as a core function of governance, is often viewed as a top-down or vertical function, and much of the peer-reviewed literature on health leadership focuses on the role of governments in leading the health sector and on the individuals' leadership [22]. This provides a narrow view and fails to incorporate the value of leadership at all health system levels, ignoring a myriad of actors in the humanitarian system impacting health systems, such as donors, UN agencies, national NGOs, international non-governmental organisations (INGOs), and political and military actors [34]. Health systems in CAHRAs do not adhere to standard models, where functions are typically clear and comprehensible, and roles usually follow standard terms. In these areas, we need to understand health systems by describing them before evaluating them, given that new actors emerge who, along with traditional actors, claim non-traditional roles and responsibilities.

Additionally, aid-based systems are often primarily determined by what goods and services can be financially and/or operationally supplied rather than by what people want or perceive they need [21]. So, existing frameworks are more donor-based and supply-based frameworks. We suggest shifting to more community-based and demand-based frameworks. This shift is crucial as it ensures health system relevance to local needs, fosters equity by addressing marginalised groups, and empowers communities. Unlike supply-based approaches, demand-driven evaluations prioritise legitimacy, trust, accountability, and localisation by aligning governance with population priorities. Additionally, it supports sustainability by making health systems more responsive and adaptive to changing needs—an essential factor in CAHRAs.

We assume that existing frameworks for assessing HSG need to be revised when applying them in a CAHRA to fit more non-hierarchical governance rather than hierarchical governance. There are several reasons for this assumption.

First is **multipolarity**, which characterises health systems in conflict zones. In a conflict zone, more than one government or belligerent will likely run different parallel health systems in one area. We call these 'Health System Poles' (HSPs), which form a 'Multipolar Health System' (MHS), meaning that different health systems work in the same area but are run by different, often hostile, parties who may not communicate or collaborate with one another. These areas lack central authority (in fact, they

have centres that often work against each other) and may compete and sometimes collaborate. For example, in NWS, three parallel health systems used to work in the same area: the health system run by NGOs and INGOs and coordinated through the WHO-led HC, the SSG, and the SIG. These poles were parallel, at odds most of the time, followed different legal systems, and planned and implemented separately. We can evaluate the governance of either a specific pole or the collective governance of the MHS. This necessitates understanding the **power dynamics** of inter- and intra-poles to maximise collaboration and reduce competition, improving health outcomes.

A central theoretical aspect of our framework is the analysis of power in governance. We view governance not just as institutional design, but as an ongoing contest over 'who rules the sector', i.e. who makes decisions, sets the agenda, and shapes norms and preferences, drawing on Steven Lukes' classic typology of the "Three faces of power" [35]. This perspective aligns with Etzioni's distinction between coercive, utilitarian, and normative power [36], which helps us categorise how various health actors in conflict settings achieve compliance. By placing power at the core of our conceptualisation, we acknowledge that 'system' in CAHRAs is not a neutral arrangement; instead, it results from negotiations, cooperation, dominance, and struggles for legitimacy.

Second, we need to understand the different **roles and responsibilities** of the actors in the health system. Health systems in CAHRAs are characterised by loosely defined and often non-traditional roles and contradictory regulations. For example, in NWS, funds came mainly from Western donors, the UN, and the Turkish government. HDs, HC, NGOs, SIG and SSG issued health policies. This means that who does what should be known before evaluating governance. Otherwise, we might evaluate just part of the system and overlook others. For example, in a stable country, the main source of information is often the government itself; however, in a conflict zone, this is not always the case. In NWS, the HC was the main data source. Its approach focused on understanding the 'four Ws' of who does what, where, and when [33], drawing on inputs from all HC members, including NGOs and HDs. Still, an institution linked to the political opposition, i.e. SIG, the Assistance Coordination Unit (ACU), oversees all data from its early warning system. Furthermore, another institution linked to HDs called the Health Information System Unit (HISU) managed a significant part of the data, in collaboration with both HC and ACU. However, there were many other sources of information in the area. Hence, before we evaluate two principles put in place by Siddiqi et al., namely 'transparency' and 'information and intelligence,' we need to look at all health information system (HIS) sources.

Third is the need to adjust **explanations of health governance principles** to make them more conflict-and risk-sensitive. For example, 'transparency,' one of Siddiqi et al.'s principles, cannot be applied without considering issues related to the safety and security of medical staff and patients. Syrian NGOs, as an illustration, were very reluctant to share 'deconfliction' data of health facilities, given the deliberate targeting of these facilities. This means that one may need to sacrifice transparency for the sake of safety. Also, responsiveness becomes more crucial in CAHRAs, maybe at the cost of efficiency and inclusivity. Another example is the Rule of Law principle, where conflict zones are characterised by lawlessness. In addition, we should explore the possibility of adding additional conflict-and risk-based principles or merging some of them. Consequently, we conclude that current health frameworks used to evaluate HSG, like Siddiqi et al. [37] or Baez-Camargo and Jacobs [38], are short of describing and evaluating such health systems architectures and have serious limitations that hinder their suitability for CAHRAs. Instead, we need a descriptive and evaluative framework to understand the HSG comprehensively and that evaluates it based on principles that fit the conflict and risk zones.

Finally, this paper begins with a primary assumption about HSG in CAHRAs: a valid evaluation requires explicit criteria that are applicable across contexts. On that basis, we assumed a two-step framework and some questions to be answered (Table 1). First, a descriptive layer maps the governance assemblage. It identifies foundational descriptors such as poles, power dynamics, and roles and responsibilities, regardless of the evaluative values inherent within them, to establish a shared empirical baseline and avoid making normative judgments before understanding the empirical scoping. Second, an evaluative layer uses a principle-based set of criteria (e.g., transparency, accountability, equity). This sequencing preserves contextual nuance while enabling transparent, portable judgments, and it aligns our approach with principle-oriented governance frameworks such as Siddiqi et al., while adding the prior mapping that CAHRAs require.

Methodology

This qualitative study is designed to develop a comprehensive framework for understanding and evaluating HSG within CAHRAs. The methodology integrates a multi-faceted approach, encompassing five methods: thematic analysis of existing HSG frameworks, expert consultations, focus group discussions (FGDs), key informant interviews (KIIs), and fieldwork reflections from primary authors. The discussion focuses on examples mainly derived from NWS between 2011, the starting year of the conflict, and 2024, the year of the fall of the

Table 1 The aspects needed in a health system governance framework for conflict-affected and high-risk areas and questions to be answered when describing and evaluating a health system

Part	COMPONENT	Questions to be answered
Descriptive	Multipolarity, Power Dynamics and Roles and Responsibilities	- Which parties or HSPs are directly or indirectly engaged in providing health services, and what conflicts and synergies arise between them? - How do the power dynamics manifest between HSPs, particularly in influence and control? What are the types of power used by different HSPs? - How are responsibilities and roles divided among poles (inter- and intra-poles), and where do inconsistencies, gaps, or overlaps in duties occur?
Evaluative	Health Governance Principles	- How 'good' is the non-hierarchical governance of a health system? - Is the health system recognised as legitimate and trusted by local communities and stakeholders? - Do the responses of the health system members complement each other to cover health needs in these fragmented contexts? - Do the health system members strive to localise health services and strengthen health systems

central Syrian Government and the opposition's control of most of the Syrian territories.

Data collection

An expert panel

An expert panel was convened to explore the applicability of existing health governance frameworks within CAHRA contexts. This session was held at King's College London in May 2023 and included nine experts specialising in health systems, governance, and political science in CAHRAs. The participants were primarily UK-based for logistical reasons. Four experts were from King's College London, three were from London School of Economics, one was from Syria Development Centre, and one was independent.

Before the panel, participants received detailed materials outlining existing HSG frameworks, alongside the purpose and rationale of this study. During the one-day session, the primary authors presented these frameworks and cross-cutting studies, emphasising their limitations in CAHRAs. They also proposed a need for a new framework, inviting feedback from participants. The primary authors facilitated discussions in English, with two notetakers from King's College London documenting proceedings. A discussion guide focused on identifying and addressing existing frameworks' limitations and analytical themes that need to be considered for more evaluations. Notes were used as data for analysis.

Framework identification and thematic analysis

This analysis aimed to evaluate existing HSG frameworks to determine their applicability and limitations in addressing the complexities of governance in CAHRAs and MHSs. The identification of gaps and best practices in these frameworks was used to guide the development of a tailored framework that aligns with the realities of governance in CAHRAs, while addressing existing gaps in other frameworks.

As a foundational step, we utilised the paper "Frameworks to Assess Health Systems Governance: A Systematic Review" by Pyone et al. (2017) to identify a comprehensive list of health governance frameworks that have been developed and applied in diverse settings. This ensures that our analysis was grounded in the breadth of existing knowledge and theoretical approaches.

Following this, we developed a set of analytical themes derived from a combination of academic and grey literature, including our introductory paper to this work by Alkhalil et al. (2024), titled "Capturing sources of health system legitimacy in fragmented conflict zones under different governance models: a case study of north-west Syria" [26]—the primary source of themes for this paper—and expert panel discussions. The critical need for these themes, including multipolarity, power dynamics, roles and responsibilities, and legitimacy, to understand and evaluate governance in CAHRAs' health systems was clearly explained in the purpose and rationale.

Each framework identified was systematically analysed against these themes to assess its relevance, adaptability, and limitations in addressing the unique challenges posed by MHSs. The analysis sought to uncover gaps and strengths in the frameworks, particularly in the context of governance fragmentation, contested legitimacy, unstructured power relations, and fluid roles and responsibilities.

Based on the expert panel and thematic analysis, we selected Siddiqi et al.'s framework as the starting point for developing our new working framework. It is one of the most widely recognised and cited HSG frameworks in the global health literature. Siddiqi et al.'s model represents a structured adaptation of existing good governance frameworks, including the WHO's domains of stewardship; the Pan American Health Organization's essential public health functions; the World Bank's six fundamental aspects of governance; and the United Nations Development Programme's principles of good governance [37]. Its clear and principle-based structure made it a strong foundation for both scholarly engagement and systematic critique. While it lacks tools to describe governance in areas of limited statehood, its structure allowed us to

adapt and extend it by incorporating missing but essential elements.

Focus group discussions

Two FGDs were held to validate our explanation of the health governance principles mentioned by Siddiqi et al.'s framework and propose new ones tailored to CAHRAs. The FGDs were conducted virtually via Zoom in November 2023 and January 2024, each lasting two hours. Four participants worked with Syrian humanitarian organisations based in Turkey: two were affiliated with the Syrian American Medical Society and two with MEHAD. The others included: one with a UK-based organisation called Global Health Partnerships (formerly THET - Tropical Health Education Trust), one with WHO EURO, and one with the private sector—pharmaceutical industries with commercial activity in northern Syria. All participants were Syrians.

Prior to the FGDs, participants received bilingual (Arabic and English) explanations of the governance principles drawn from Siddiqi et al. and the proposed modifications. During the discussions, participants compared these explanations, evaluated their relevance to CAHRAs, and provided feedback. The sessions also introduced three new principles—legitimacy, complementarity, and localisation—for participants' input. Discussions were primarily conducted in Arabic, with English explanations provided as necessary. One primary author facilitated the discussions, while another took detailed notes. The sessions were recorded and transcribed.

Key informant interviews

Three KIIs targeted experts in HSG based in Europe to gather feedback on the proposed framework. These interviews were conducted in English and Arabic virtually via Zoom between March and July 2024, each lasting around 90 min. Two of the interviewees were Syrians, and one was Lebanese. The two primary authors conducted the KIIs, which began with an explanation of the study's rationale, the limitations of existing frameworks, and an overview of the proposed framework. Experts were then asked for detailed feedback. The data generated was recorded and transcribed verbatim for analysis.

Reflexivity

The purpose of integrating real-life experiences from the lead authors, MK and ZA, who were involved in founding, leading and managing healthcare systems in conflict-affected NWS for more than a decade, was to gain a practical understanding of the ground realities of governance. This included addressing the real challenges encountered in governance and reflecting on the use of current frameworks in conflict situations, as well as their limitations.

The authors conducted numerous brainstorming sessions to discuss their observations, interactions with local and international stakeholders, practical examples, and personal reflections on the effectiveness and limitations of existing health governance frameworks. The discussion focused on health system building and responses over the study period. These sessions served as the primary source for reflections regarding suggested modifications to the Siddiqi et al.'s framework before testing these suggestions through the aforementioned qualitative methods.

Methodological reflections on case dependence

While the framework was developed with reference to diverse theoretical inputs and international literature, the empirical grounding of this study is drawn primarily from the Syrian conflict (2011–2024). This reliance on a single, protracted crisis has important methodological implications. First, the long duration and intensity of the Syrian conflict provided rich opportunities for observation and reflection by the primary authors. Such prolonged engagement allowed us to capture temporal shifts in governance arrangements across phases of conflict and multiple actors. Second, Syria represents an extreme case of health system fragmentation, multipolarity, and legitimacy struggles. This makes it particularly useful for theory building, as extreme cases often magnify phenomena that are harder to observe in less disrupted settings. Finally, Syria is one of the most extensively studied cases in the literature concerning health systems within protracted conflicts, making it an excellent 'informed' case to examine [7, 39–43].

However, case-dependence introduces limits to transferability. The structural features of the Syrian war, including heavy international involvement, complex diaspora engagement, and parallel quasi-governmental authorities, may not be fully transferable to other CAHRAs. To address this, we drew on comparative insights from other conflicts documented in the literature [8, 9, 19] to ensure that the framework was not over-fitted to Syria alone. Moreover, our methodological choice to first describe governance before evaluating it was explicitly designed to make the framework adaptable across contexts; it can be applied to different health systems, even when multipolarity, roles, and power dynamics differ.

Ethical considerations

Verbal consent was obtained from the participants in the expert panel, while written consent was obtained from the participants in the FGDs and KIIs. Data handling adhered to strict privacy protocols, with all information

anonymised and securely stored in compliance with ethical standards.

Data analysis and synthesis

Thematic analysis was employed to analyse data collected from expert panels, FGDs, interviews, and fieldwork reflections. This approach involved an iterative, manual process of data immersion, theme identification, and refinement. Themes were based on the study objectives and discussions within FGDs, KIIs, and the expert panel. Key themes include: (1) challenges in applying theoretical frameworks to the complex and dynamic environments of CAHRAs, (2) health governance principles explanations, (3) power dynamics in CAHRAs, (4) untraditional roles and responsibilities of public health authorities, (5) multipolar health system, and (6) new principles, including legitimacy, localisation and complementarity. These themes underwent rigorous review to accurately reflect the raw data, ensuring they encapsulated key issues and concepts. Finally, these themes were synthesised into a coherent narrative, providing a nuanced understanding of the complexities and challenges of HSG in CAHRA environments. This synthesis drew upon theoretical frameworks and practical experiences on the ground, facilitating informed insights for developing a new HSG framework in CAHRAs.

Findings and discussions

A previous systematic review described the principles of HSG and examined evidence on barriers and facilitators for stronger HSG and found that the most frequently identifiable governance principles are (1) participation and coordination, (2) effectiveness and efficiency, and (3) equity and inclusiveness. Conversely, the least frequently identifiable governance principles are (1) rule of law, (2) ethics and (3) responsiveness [19].

These principles are based on Siddiqi et al.'s framework. Although these seem exhaustive of all governance principles, one can make the following assumptions behind using principles' frameworks, including Siddiqi et al.'s:

- There is a government behind the health system.
- This government issues and enforces the law.
- The internal and external legitimacy of this government is taken for granted.

The participants in the expert panel confirmed our previous assumption about the situation in CAHRAs, where sometimes there is no government, and there is a struggle over legitimacy among various parties, including the legitimate government, emerging governments, and organisations. Therefore, solely studying the principles without incorporating new ones or adjusting their explanations will result in an incomplete understanding of health systems and may lead to inappropriate or suboptimal decisions. Expanding upon these principles necessitates identifying public authorities, ensuring legitimacy, clarifying roles and responsibilities, and understanding power dynamics. This holistic approach is crucial for comprehensively understanding health systems in CAHRAs.

Health governance frameworks limitations in conflict-affected and high-risk areas

The frameworks analysis (Table 2) has been applied to the HSG frameworks identified by Pyone et al. [14] in their systematic review. The 13 frameworks illustrate both strengths and limitations, particularly when applied to MHSs in CAHRAs. While many frameworks demonstrate strengths in specific areas, such as governance principles or accountability, most are designed for stable settings with centralised systems. This limits their utility in addressing the complexities of health systems in CAHRAs.

Each framework was assessed against key themes identified as critical for understanding governance in fragmented contexts: multipolarity, power dynamics, roles and responsibilities and legitimacy.

All frameworks assume centralised or hierarchical structures, which is not the case in all CAHRAs, particularly these where multiple actors work independently and might be competing with each other. Legitimacy was discussed in two of the frameworks—Siddiqi et al. [37] and Abimbola et al. [44]—focusing on traditional legitimacy derived from state structures, while the contested legitimacy in war zones is not discussed. Similarly, Cleary et al. [45] and Baez-Camargo & Jacobs [46] prioritise accountability to citizens but do not consider other legitimacy indicators. Power dynamics were discussed in several frameworks, such as Abimbola et al. [44], Smith et al. [47], and Vian [48], yet the discussion was related to the power relationship between the different actors in the health ecosystem of stable countries. The power types and faces were not explained explicitly, and the majority of the studies focused on the power distribution between the central government, intermediate institutions, and service providers.

None of the frameworks has studied or discussed MHSs due to the focus on traditional governance structures with an assumption of one pole health system in all analysed studies.

The majority of the studies discussed roles and responsibilities narrowly, presuming stable governance structures. All the studies failed to include untraditional and contested roles in CAHRA systems.

The frameworks analysed are health governance frameworks such as: Mikkelsen-Lopez et al. [49], Siddiqi et al. [37], Brinkerhoff & Bossert [50], Abimbola et al. [44],

Table 2 Comparative analysis of health governance frameworks: applicability in conflict-affected and high-risk areas (CAHRAs)

Framework	Publication Year	Author	Purpose	Limitations Toward Multipolarity	Limitations Toward Legitimacy	Limitations Toward Power Dynamics	Limitations Toward Roles and Responsibilities (*R*&Rs)
Accountability and health systems: toward conceptual clarity and policy relevance.	2004	Brinkerhoff	Evaluates the effectiveness of accountability systems in international development programs. The framework includes five components: clarity of roles and responsibilities, credible information, active participation, incentives for good performance, and consequences for poor performance. The framework aims to provide a systematic approach to assessing the strengths and weaknesses of accountability systems and improving their effectiveness in achieving development goals.	It focuses on development settings with centralised governance. It lacks tools for fragmented, humanitarian-focused governance.	It explores the importance of accountability in increasing legitimacy in the eyes of citizens, yet there are several sources of legitimacy other than accountability.	It discusses power at the professional level but does not explore broader governance-related power dynamics.	It defines R&Rs narrowly in terms of accountability, rather than the broader health system.
Health systems assessment approach: a how-to manual	2007	M. Islam	The framework provides a modular and comprehensive approach to assessing health systems, organised around governance, financing, service delivery, human resources, pharmaceutical management, and health information systems.	It focuses on a single health system and does not directly address fragmented or multipolar health systems with parallel governance structures, common in CAHRAs.	Legitimacy is indirectly considered under governance but assumes central health systems as the primary source of legitimacy, limiting application in CAHRAs where multiple legitimacy claims may coexist.	It does not explicitly address the complexity of power dynamics within and across governance poles in CAHRAs within multipolar systems.	It assumes stable R&Rs within a structured health system, and it struggles with the dynamic, overlapping, and contested roles and responsibilities characteristic of fragmented health systems in CAHRAs.
Review of **corruption** in the health sector: theory, methods and interventions	2008	Vian	It aims to provide a systematic approach for identifying and analysing corruption in the health sector through five key components: definition of corruption, contextual factors, indicators of corruption, assessment methods, and recommendations for action. The framework can help to inform strategies for addressing corruption and improving the governance and accountability of health systems.	It does not address governance in broader contexts, is corruption-focused, and lacks multipolarity analysis.	It overlooks legitimacy as a key factor in health governance evaluation.	It focuses on corruption-related power dynamics but misses broader power relations critical for fragmented governance.	R&Rs are discussed regarding corruption and not broader governance responsibilities in CAHRAs.

Table 2 (continued)

Framework	Publication Year	Author	Purpose	Limitations Toward Multipolarity	Limitations Toward Legitimacy	Limitations Toward Power Dynamics	Limitations Toward Roles and Responsibilities (*R*&Rs)
Framework for assessing **governance** of the health system in developing countries: Gateway to good governance	2009	Siddiqi et al.	It evaluates governance at national, district, and facility levels, emphasising the roles of ministries and government agencies.	Assumes central ministry leadership; lacks applicability to fragmented systems where governance poles might operate independently.	It considers legitimacy under participation and consensus orientation, yet the framework assumes one central or intermediate institution is responsible for the people's voice in the decision-making process. It is limited in capturing other legitimacy sources in CAHRAs.	It neglects the diverse power dynamics and unstructured authority within fragmented governance structures.	It relies on traditional governance structures with defined roles; it considers the "role of the state vs. the market" and the "role of the ministries of health vs. other state ministries." It struggles with non-traditional roles in CAHRAs.
Analysing and addressing **governance** in sector operations	2008	European Commission	It uses stakeholder analysis to assess governance through principal-agent relationships.	It assumes a government-led system; its applicability in fragmented health systems is limited.	It neglects legitimacy aspects in conflict settings where multiple actors claim authority.	Limited insights into multi-stakeholder power dynamics in CAHRAs.	It presumes stable governance structures and struggles with dynamic, non-traditional and contested roles in conflict-affected systems. R&Rs are clearer regarding accountability channels because the framework aims to self-regulate the system. CAHRA is a very challenging context in terms of preserving accountability or governance channels. The channels are fragile and linked mainly to the source of funds or power and not to the affected population.
The essence of **governance** in health development.	2011	Kirigia & Kirigia	It provides governance scoring at the national level, focused on leadership and accountability.	It relies on the Ministry of Health's centralised role. The scoring methodology does not discuss or suggest the status of multipolarity of conflict-affected areas, which makes its applicability in conflict contexts questionable.	Legitimacy challenges in non-centralised systems are not mentioned.	It does not address power distribution beyond centralised governance structures, limiting its utility in fragmented settings.	It assumes clear roles under the national leadership of the MoH, which is unsuitable for the dynamic responsibilities in conflict contexts.

Table 2 (continued)

Framework	Publication Year	Author	Purpose	Limitations Toward Multipolarity	Limitations Toward Legitimacy	Limitations Toward Power Dynamics	Limitations Toward Roles and Responsibilities (*R*&Rs)
An approach to addressing **governance** from a health system framework perspective	2011	Mikkelsen-Lopez et al.	It evaluates governance within the WHO health system building blocks, emphasising problem-solving in governance issues. It examines governance across national, district, facility, and community levels alongside five proposed governance principles: (1) strategic vision and policy development, (2) participation and consensus-building, (3) accountability, (4) transparency, and (5) anti-corruption measures.	It focuses on governance within defined health blocks and lacks tools to address fragmented systems with fluid governance structures.	Legitimacy challenges in non-centralised systems are not mentioned.	It starts by identifying the stakeholders for each block and then assessing their roles and powers. Yet, the framework does not discuss how to assess this power distribution. Moreover, in CAHRAs, power is not limited to traditional health actors; it is a complex process where military actors, for example, can exercise their power to gain or implement health functions.	It fails to account for fragmented systems' dynamic, contested nature of roles and responsibilities.
Holding health providers in developing countries **accountable** to consumers: a synthesis of relevant scholarship	2012	Berlan & Shiffman	It examines health providers' accountability to consumers, focusing on the health system and social influence factors.	It assumes functioning institutions for accountability, unsuitable for weakened governance structures in CAHRAs.	It neglects the broader legitimacy of health systems, focusing only on consumer-provider relationships.	It focuses primarily on accountability mechanisms between health providers and the community or governing institutions without specifically emphasising power dynamics among various stakeholders.	It overlooks the complexity of R&Rs in multipolar, conflict-affected governance systems. It does not account for the fragmented accountability pathways, competing priorities, and overlapping roles typical of multipolar health systems.

Table 2 (continued)

Framework	Publication Year	Author	Purpose	Limitations Toward Multipolarity	Limitations Toward Legitimacy	Limitations Toward Power Dynamics	Limitations Toward Roles and Responsibilities (*R*&Rs)
Leadership and **governance** in seven developed health systems (cybernetic framework)	2012	Smith et al.	The cybernetic leadership and governance model integrates elements of traditional hierarchy, market mechanisms, and network-based governance. This framework emphasises three core components: priority setting, performance monitoring, and ensuring accountability. It highlights the ability of systems to self-regulate through feedback loops, utilising information to monitor actions and guide progress toward objectives. Additionally, it places a strong focus on accountability and the effective management of networks.	The applicability of this model is limited to contexts with multiple competing entities within fragmented health systems. It stems from a clearly defined role of governmental and political leadership in establishing priorities, monitoring performance, and ensuring accountability. While the basis of leadership within this model is well understood in stable contexts, the same cannot be said for multipolar health systems. In situations marked by conflict, hierarchical lines are neither clearly defined nor stable. Instead, governance relies on network-based structures that are tied to an unpredictable and dynamic distribution of power.	It does not account for fragmented legitimacy claims among governance actors in CAHRAs.	It explores power distribution between the central governments, intermediate institutions, and service providers, but lacks depth on untraditional power manifestations common in fragmented health systems.	R&Rs are discussed within a centralised and stable governance structure. This makes it unsuitable for CAHRAs with dynamic, unstructured roles.
Social **accountability** and its conceptual challenges: an analytical framework	2013	Baez-Camargo & Jacobs	It explores accountability through direct (voice/exit) and indirect (institutional capacity) pathways.	It does not account for fragmented accountability channels and assumes a single governance system, even within fragile contexts.	It does not address legitimacy directly, as it assumes a predefined political regime and public administration structure.	The framework discusses the informal distribution of power in the health system; however, it is limited to exploring the types and faces of power necessary to understand power dynamics in conflict-affected areas.	R&Rs are very well defined at the accountability level, yet understanding the actors' R&Rs at several levels, such as service provision, is limited.
Health **governance**: principal–agent linkages and health system strengthening	2013	Brinkerhoff & Bossert	It explores governance relationships between principals (citizens) and agents (state/healthcare providers).	Applicable to individual principal-agent models, but struggles with assessing governance in areas with multiple conflicting principal-agent relationships.	It discusses the legitimacy of the state in managing and policy-making. However, the framework does not deal with several possible legitimacy sources and claims in fragmented and conflict-related health systems.	It fails to address power dynamics within multipolar systems.	It explains how R&Rs are distributed among the principals (citizens) and agents (state and healthcare providers). Still, it is limited to the applicability at the level of conflict-affected multipolar health systems due to the overlapping of several roles and responsibilities between different poles.

Table 2 (continued)

Framework	Publication Year	Author	Purpose	Limitations Toward Multipolarity	Limitations Toward Legitimacy	Limitations Toward Power Dynamics	Limitations Toward Roles and Responsibilities (*R*&Rs)
Resources, attitudes and culture: an understanding of the factors that influence the functioning of **accountability** mechanisms in primary health care settings.	2013	Cleary et al.	It focuses on accountability in primary healthcare settings based on resources, attitudes, and values in health systems (principal-agent theory).	It is designed for accountability mechanisms, not broader governance, limiting its application to multipolar systems.	It does not address legitimacy challenges in CAHRAs with contested governance. It deals with a stable governmental context and clearly focuses on politicians as decision-makers.	It addresses some power distribution issues between the state, providers and citizens. However, it lacks depth on multi-actor power dynamics common in fragmented systems.	The framework clearly defines R&Rs at the accountability mechanisms level. However, R&Rs in the service provision are not well-described.
Towards people-centred health systems: a multi-level framework for analysing primary health care **governance** in low- and middle-income countries.	2014	Abimbola et al.	It assesses PHC governance in LMICs through three levels: collective (community), operational (patients, healthcare staff), and constitutional (government) governance. It relies on the common-pool resources theory. It focuses on PHC governance, with special attention to non-state actors.	It focuses on one governance structure and is unsuitable for parallel systems common in CAHRAs.	Legitimacy is derived from the constitutional level. It does not consider multiple sources of legitimacy in CAHRAs.	It addresses power dynamics between governance levels. It assumes that the constitutional level is the source of power in the LMICs and that government regulation is essential to balance power and ensure accountability across governance levels. However, it lacks insight into inter-pole power struggles in fragmented systems.	It assumes a single system in which actors have clear and stable R&Rs, which does not reflect the fluid and overlapping roles in CAHRAs.

European Commission [51], Smith et al. [47], and Kirigia & Kirigia [52], and other focus on accountability such as: Baez-Baez-Camargo & Jacobs [46], Cleary et al. [45], Berlan & Shiffman [53], Brinkerhoff [54], and Vian [48]. All the frameworks discuss governance and accountability in stable environments.

The summary highlights the gaps and strengths across frameworks, underscoring the need for adaptations to ensure relevance and effectiveness in CAHRAs.

Health governance approaches

Abimbola et al. define three approaches to studying health governance. The first is the government-centred approach, which focuses on the role of governments above or excluding non-government health system actors and is mainly evaluative. The second is the building-block approach, which is descriptive and focuses on the internal workings of healthcare organisations. It treats governance as one of several building blocks of organisations. The third is the institutional approach, which focuses on how rules governing social and economic interactions are made, changed, monitored and enforced and is descriptive in nature [22].

According to the expert panel participants, a framework for studying HSG in CAHRAs should follow the institutional approach. However, it should also be descriptive and evaluative to capture the multipolarity aspects present in the conflict zones.

Multipolarity

Multipolarity is the first step scholars should start with to understand HSG in CAHRAs. This step could be done through stakeholder analysis, mapping, and understanding partnership networking within an area. Although there are sometimes no clear boundaries between different poles, a pole can be defined as a decision-making centre that delivers health services, issues policies, and/or provides supplies; it significantly influences the health sector in a specific area. Different poles can apply different governance models, including bottom-up, top-down and hybrid [26]. Hence, it is vital to group actors after the stakeholder analysis and mapping as poles based on their level of interaction, mutual recognition, and collaboration. A critical aspect of a pole is that it has concerns regarding other poles' legitimacy. It is important to mention that recognition might sometimes vary and that some partial or one-way recognition might also exist. For example, the SIG pole does not recognise the SSG pole and vice versa. Moreover, the HC-IHD pole does not recognise the SSG as a legitimate entity. In contrast, the SSG pole accepts the legitimate role of the HC.

It is essential to clarify that the multipolarity framework focuses on poles operating within the same geographical area and interacting with each other. Therefore, actors such as the GoS or the SDF are not considered part of the health governance system in northwest Syria, as their authority and operations do not overlap geographically with the region's active poles.

Power dynamics

Due to conflict, power is often distributed unequally. It is fraught with tension between various domestic and international entities, including legitimate authority, emerging governmental bodies inside a country and beyond borders, UN institutions, donors and NGOs. It is also important to note the fluidity of power dynamics, which may wax and wane depending on time, funding, leadership, etc.

Actors or poles can be systematically categorised into three distinct types based on their power exertion: coercive, utilitarian, and normative, based on how they secure compliance from others [36]. Coercive power involves force, such as in the SSG in NWS; utilitarian power is based on performance-reward contingencies, such as NGOs and the health cluster; and normative power rests on members' beliefs, such as IHD. This means that the HC-IHD pole has both utilitarian and normative power. Additionally, some donors, such as the US, have mixed utilitarian and coercive power in Syria. Moreover, the SSG, characterised by coercive power, works to gain more legitimacy and thus normative power, expressing the changing nature of power dynamics.

Moreover, we can see that within every system/pole, there are the "Three faces of power," using Steven Lukes' categories [35]:

1) **Decision-making power**, which is the most visible among the three dimensions, with attention given to policy preferences explained through political activities. In the context of HSG in CAHRAs, this could be described as the power to decide admission and exclusion criteria for members, allocate resources, set health policies and laws, and decide on humanitarian and health response plans and interventions. For example, when the referral system was formed in NWS in 2017, all organisations that operate ambulances were invited to join the system and work in coordination and under the umbrella of the HC, including organisations that own a minimal number of ambulances. The only organisation that was excluded from the system and from membership in the HC was the 'civil defence,' which is known as 'White Helmets,' even though it had the most significant number of ambulances at the time, was licensed in more than one European country and Turkey, and there was a consensus between the Syrian organisations and the IHD on the necessity of the White Helmets joining. According to the participants, the reason for the exclusion was the decision of the WHO, the leading organisation of the HC, for political reasons related to Russian pressure. The organisation

played a significant role in documenting war crimes in Syria during the conflict and was therefore targeted by several international parties, including Russia and Iran.

2) **Non-decision-making power**, including setting the agenda and blocking decisions, it makes specific issues inappropriate for conversations in 'legitimate' public forums. This might involve controlling which health issues are worthy of public attention or funding, or deciding what health interventions align with the pole's mandate. For instance, despite the governance fragmentation that NWS has suffered, the HC platform was not the appropriate place to discuss governance and development issues, but rather the life-saving services' agenda based on the WHO preferences. Also, some stakeholders have the power to block decisions and resist change. For example, according to KIIs, there was resistance from some NGOs and, to a lesser extent, the private sector to efforts to strengthen the health system in NWS. Also, despite not having the power to make health decisions, military groups often can intervene and prevent the implementation of some decisions, including the opening of health facilities in a specific place or the implementation of a vaccination campaign, for example.

3) **Ideological power** allows one or a party to influence people's wishes, preferences and thoughts by using beliefs, norms and ideas. In HSG, this could involve influencing public and professional opinions about what constitutes 'good' health practices, determining the norms around health and illness, or shaping beliefs about the roles and responsibilities of different actors in the health system. For example, only cadres who work in the area outside the control of the Syrian regime continuously for more than five years are eligible to nominate themselves to the board of trustees elections of the IHD; loyalty to the Syrian Revolution is a significant unwritten criterion for any leadership position in NWS.

In fragmented conflict settings, these power dynamics can be complexly intertwined. Different actors, from local authorities to international NGOs, may exercise these forms of power differently, impacting everything from allocating resources to framing health issues and the broader public's understanding and expectations around the meaning of health and illness and healthcare delivery and governance. Understanding these power dynamics is crucial for effective health governance and policy-making in challenging environments.

Therefore, to understand HSG in a given system or pole, we must understand which type of power the system that we are studying has and who controls the different dimensions of power within the system.

Roles and responsibilities

Stakeholders in CAHRAs sometimes seek responsibilities outside their traditional mandate to fill a gap or gain power and legitimacy. Additionally, parties may relinquish some responsibilities within their traditional mandates to avoid clashes or because of resource constraints. So, assuming we know what governmental institutions, quasi-governmental institutions, and NGOs do in the health sector is not straightforward in conflict zones. For example, IHD established the forensic medicine and drug control departments in NWS in 2016. Forensic medicine in Syria traditionally belongs to the Ministry of Justice, and drug control belongs to the MoH in Damascus, which means these two departments are outside the traditional mandate of IHD. However, no legitimate Ministry of Health or Justice was in the area that year. Additionally, IHD stopped operating these departments in 2021 to avoid clashes with the SSG, which established the same functions under its MoH. The above example illustrates how roles and responsibilities can overlap, duplicate, or compete with each other.

Health governance principles in conflict-affected and high-risk areas

The research team evaluated the applicability of Siddiqi's principles in CAHRAs by convening two FGDs. This process was instrumental in adapting, merging, adjusting and contextualising these principles. A critical outcome was the introduction of three new principles specifically tailored to address the unique challenges prevalent in CAHRAs: Localisation, complementarity and legitimacy.

The health sector within areas beset by conflict notably relies on external aid. This dependency underscores the need to address the prevalent 'power imbalances' between international, national, and local actors. As of 2022, 1.2% of global humanitarian funding has been allocated directly to local and national actors responding to humanitarian crises, compared to 61% to UN agencies [55]. International aid agencies have little incentive to cede power to other organisations, and most engagement with local NGOs is through sub-contracting rather than genuine strategic partnerships [21]. With the rise of supremacist populism in the Global North, sovereignty rhetoric in Africa, and the decolonisation movement of the Global South, **localisation** emerges as a critical principle in this context, aiming to redress the distribution of resources, control, and decision-making toward local entities, thereby fostering a more equitable and contextually relevant aid distribution. In particular, localisation becomes crucial in sustainability efforts and future endeavours to re-integrate the health system. However, looking at localisation just through the aid effectiveness and service sustainability lens is a narrow view supported by the current business model of Western-funded humanitarian aid. The fundamental moral and political argument of localisation is the right of people to create

legitimate health systems that are in line with their needs, culture, beliefs, and history.

In CAHRAs, more attention should be given to **complementarity**, a principle that addresses the fragmentation often observed in delivering and managing health aid and interventions. The logic of any government is based on the complementary roles of different governmental institutions. However, when the government is absent or too weak in an area, basic complementarity might not exist. Grounded in Complex Adaptive Systems and Civic-Ecosystem thinking, complementarity asks whether mapped roles and responsibilities and functions fit together to cover needs without harmful gaps, duplications, or counterproductive competition [56]. Complementarity extends beyond official networks to include non-traditional actors and individuals. This is especially important in the early stages of response to an acute crisis.

In the fragile context of CAHRAs, the **legitimacy** of and trust in the public health authorities become critical. In the absence or weakness of state authority, voluntary compliance becomes the keystone for health services in crisis and more 'normal' periods. Key decisions must be legitimate and taken by a manageable number of partners [20]. Many stakeholders in the health system might lack local and/or international legitimacy. For instance, NGOs and INGOs are considered legitimate actors by the donors simply because they have registered as legal entities somewhere in the world, on the one hand and because they are members of the HC on the other. However, one of the belligerents might regard them as illegitimate or even illegal. Moreover, the legitimacy issue has been faced since the early days of the conflict started in NWS, as the aim of forming the health governance entities, such as IHD, was to pull the legitimacy shield of the central government in Damascus, in addition to systemising the service delivery, according to participants in the expert panel. Legitimacy shares common ground with several other principles, including participation, consensus orientation, rule of law, transparency, equity and inclusiveness, and accountability. However, it is based on four distinct sources: legality, consent, justification, and performance. This broader scope makes legitimacy more comprehensive than any individual principle in Siddiqi et al.'s framework, which justifies its classification as a stand-alone principle. Moreover, this shows how legitimacy is the cornerstone in any governance process within the health sector.

Several of our chosen governance principles find echoes in the Humanitarian-Development-Peace Nexus literature, which emphasises national governance focusing on coordination, complementarity, transparency, accountability, integration, conflict sensitivity, protection, monitoring, adaptive systems and inclusion of affected populations and localisation [57]. Though those themes and principles often arise in development/humanitarian discourse, their presence in nexus policy debates supports our decision to evaluate them, even under conflict conditions. Our work diverges by tightly grounding them in descriptive mapping (roles & power) first, and then applying them to health system poles under pressure.

Additionally, in adapting Siddiqi et al.'s framework, we observed that some principles are conceptually distinct, but they can be merged empirically in CAHRAs. For example, information systems and transparency are closely intertwined; reliable governance depends on both the generation of accurate data and the appropriate disclosure of that data. In conflict settings, this should be controlled by conflict-sensitive transparency, where disclosure is calibrated to protect facilities, staff, and patients. Similarly, while the rule of law and ethics can be assessed independently, in CAHRAs, their boundaries blur. Legal frameworks are often impaired or absent, and compliance with international norms requires reinforcement through ethical duties of care at the institutional and provider levels. For these reasons, we merged these pairs into 'Intelligence and Conflict-Sensitive Transparency' and 'Rule of Law and Ethics,' to preserve clarity while reflecting how they operate in practice under conditions of fragility and violence. Additionally, we merged them to keep the number of assessed principles manageable for researchers.

Finally, the eleven principles (Table 3) in our framework collectively capture both the procedural and performance dimensions of governance. Some emphasise the processes and behaviours through which authority is exercised, while others focus on results and system outcomes. Together, they also reflect both supply-side governance, which concerns how institutions and actors deliver, regulate, and coordinate health functions, and demand-side governance, which concerns how communities, professionals, and stakeholders participate, influence, and hold authorities to account. This balanced mix ensures that the framework evaluates governance as both a relational process and a performance outcome, integrating supply and demand perspectives within HSG.

Health system governance framework in conflict-affected and high-risk areas

This framework provides a descriptive and evaluative approach to studying HSG in CAHRAs (Fig. 3). To begin, scholars should identify the HSG poles to map the MHS. However, they can select a specific pole they want to evaluate (e.g., the most legitimate or the most powerful one according to the target agenda) instead of studying the whole system. For different poles to be included in the framework, they must have relationships with each other, and these poles are typically located in a specific

Table 3 Explanation of health system governance principles in conflict-affected and high-risk areas

Principles	Explanation
Strategic Vision	Leaders have a systematic perspective on health and human development, long-term rehabilitation, restoring the health system, and eliminating the sources of inequalities resulting from the conflict or that existed before. They recognise the historical, cultural, and social complexities of delivering healthcare amidst conflict, including immediate life-saving services.
Participation and Consensus Orientation	Decision-making for health should include voices from all stakeholders, including local communities, governmental and/or quasi-governmental institutions, NGOs, and international agencies, when possible. Such broad participation is built on the ability of all men and women, including vulnerable people, to participate constructively, either directly or through legitimate intermediate institutions. This requires a deliberate effort to bridge divides and mediate between conflicting interests and different health policies and procedures.
Rule of Law and Ethics	In conflicts where regular legal frameworks pertaining to health might be impaired or even non-existent, international humanitarian law and international guidelines and norms should be upheld and promoted as guiding principles. Within this framework, patient-centred principles, including autonomy, dignity, nonmaleficence, and beneficence, should be prioritised. Specific attention should be given to safeguarding the interests and rights of health workforces.
Intelligence and Conflict-Sensitive Transparency	It involves the systematic collection, analysis, and sharing of accurate health data. Collaborative intelligence sharing among agencies can provide a more comprehensive understanding of health needs and support the strategic vision of health—while prioritising the free flow of health information in a conflict-sensitive manner that safeguards operations, healthcare workers, and beneficiaries.
Equity and Inclusiveness	Despite the challenges, the principle of providing healthcare equitably, prioritising the most vulnerable and marginalised, should be upheld. Particular attention should be given to the elderly, women, children, people with disabilities, internally displaced people, and minorities.
Complex Accountability	International and local actors should be held mutually accountable in addition to community-based and institutional accountability structures. They are also responsible for violations of international humanitarian law and human rights abuses.
Effectiveness and Efficiency	In a conflict zone, processes and institutions should efficiently produce results that address the urgent needs of the population and positively influence health outcomes. This should be done while maximizing the use of limited resources and ensuring the effective and transparent utilization of donors' funds. This involves prioritizing essential services and implementing strict monitoring and evaluation tools to avoid corruption and resource waste.
Responsiveness	It refers to the commitment and capacity of governing authorities and institutions of a health system to design policies and programs to promptly and effectively address the affected population's urgent health needs, concerns, and grievances. This includes delivering essential services, ensuring security, protecting human rights, and facilitating communication and feedback mechanisms to adapt and respond to the dynamic situations individuals and communities face.
Complementarity	The synergistic alignment of functions among international and local actors ensures that each contributes their unique strengths and resources effectively to enhance the health system's resilience and responsiveness collectively.
Localisation	It is a shared funder-recipient practice of modifying mentality, policies, processes, and resource allocation to strengthen local health systems and leadership within the current humanitarian business model. This enables communities, especially in protracted conflict, to address their health needs independently, increase aid effectiveness and sustainability, and build a health system aligned with their history, beliefs, needs and capacity.
Legitimacy	The legitimacy of a public health authority is the recognised and accepted right to exert influence and act, both by political agencies and the public, that is seen as lawful and justified in society and national politics. It includes four sources: views of justification, acts of consent, views of performance, and views of legality [26].

geographical area. In the example of NWS, the three poles were located in the area under Turkish/opposition influence. In other conflict contexts, poles under different influences can build relationships among themselves, and thus, the poles are determined according to the context studied. Usually, there are no completely separated boundaries among the poles. Some stakeholders may be located on more than one pole, which is also a communication channel between these poles. The pole is chosen as a decision-making centre. According to our field experience, you can see one, two, or three poles in one area at most, as actors tend to form alliances to protect themselves in these risky and complex environments.

If we have more than one pole, the power dynamics are described between poles and within the studied pole, while if we have one pole, they are described within the target pole. Power dynamics include the three types of power: coercive, utilitarian, and normative power, and the three faces of power: decision-making, non-decision-making and ideological power. Then, scholars should describe the roles and responsibilities of primary stakeholders in the MHS; who does what?

The evaluative part includes 11 principles to be assessed. The importance and weight of these principles differ based on the specific context. For example, legitimacy considerations are more significant in protracted conflicts and when the government is a party to the conflict. Complementarity is so necessary when there is no government in place. Localisation should have more attention in protracted conflicts. Effectiveness is a key principle in acute humanitarian crises.

The framework is designed for a range of actors working on HSG in CAHRAs. Researchers and academics can use it as an analytical tool to describe and evaluate non-hierarchical governance arrangements, enabling comparative studies across contexts. Policymakers and planners

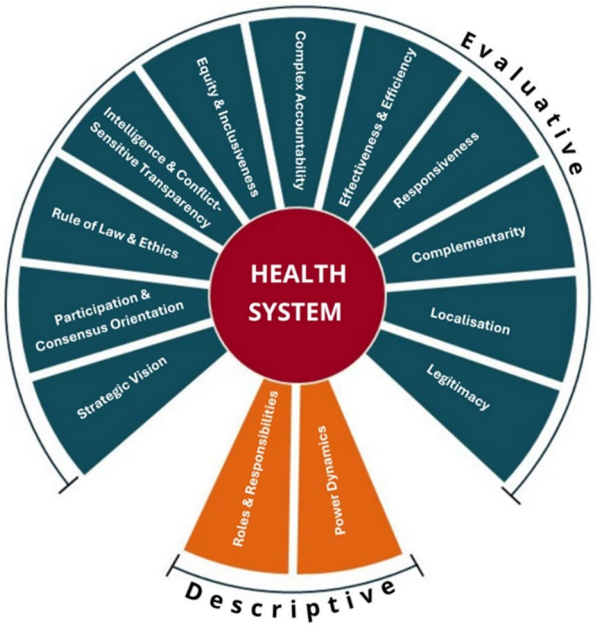

Fig. 3 Health system governance framework of a multipolar health system in conflict-affected and high-risk areas

in governments and quasi-governmental institutions can apply it to identify gaps in governance functions, clarify roles and responsibilities, and assess legitimacy and trust. Donors and humanitarian agencies can use the evaluative principles to guide funding decisions.

Limitations

The principal authors' experience is heavily influenced by Syria's unique and highly complex conflict. While this has enabled detailed, longitudinal insights, it also limits the immediate transferability of findings. The framework should therefore be regarded as a working heuristic whose validity requires further testing in other CAHRAs such as Afghanistan, Yemen, or Somalia. Comparative applications will be essential to refine its transferability.

While the framework covers many comprehensive issues in CAHRAs, some researchers might find it complicated, which limits its use in simple and rapid studies.

Conclusion

This paper addresses the gaps in the existing HSG frameworks in CAHRAs. The authors propose a new institutional approach framework by adding more dimensions to the well-known principle-based frameworks, such as Siddiqi et al., to address complexities imposed by conflicts. The framework is designed to deal with environments where the government's control and leadership role is absent or weak, allowing other actors to exercise some or all of the state's roles, including the provision of health services. The framework can deal with fragmented health systems characterised by MHSs. Typically, this framework is applicable in CAHRAs.

The framework has a descriptive part, which includes power dynamics: power types including coercive, utilitarian and normative and power faces, including (1) the decision-making power, (2) non-decision-making power, and (3) Ideological power. The framework also describes traditional and untraditional roles and responsibilities of the targeted MHS or health governance pole. In the evaluative part, the framework includes eleven principles: strategic vision; participation and consensus orientation; rule of law and ethics; intelligence and conflict-sensitive transparency; responsiveness; equity and inclusiveness; effectiveness and efficiency; complex accountability; complementarity; localisation; and legitimacy.

This framework is therefore intended as a practical and analytical tool for scholars, policymakers, donors, and local actors engaged in health governance in CAHRAs. Its utility lies in helping users to describe fragmented systems systematically and to evaluate governance against conflict-sensitive principles, thereby informing more contextually grounded policy and programmatic decisions.

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Author contributions

MK and ZZ were responsible for the initial conceptual framework, literature review, coordinating the expert panel, FGDs, and KIIs, analysis, drafting the paper, multiple rounds of edits, and producing the final manuscript. SS contributed to the literature review, analysis, framework development, editing, and production of the final draft. AA, AE, AAG, and KB contributed to the review, editing, and production of the final draft. PS and SS contributed to the overall development of the paper, reviewing, editing and producing the final draft. All authors read, edited, and approved the manuscript.

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Data availability

The datasets generated and analysed through the expert panel, FGDs and KIIs are not publicly available as they contain information that could compromise research participant privacy. All other data sources used in this study were publicly accessible.

Declarations

Ethics approval and consent to participate

Ethics approval to conduct the expert panels, Key Informants Interviews and Focus Group Discussions was obtained from Kings College London (CKL) (MRA-22/23-37646). All participants were informed about the study's purpose, methods, and their right to withdraw at any time without consequences. Informed consent to participate was obtained from all participants before data collection. The study ensured that all interviewee quotes remained anonymous.

Consent for publication
Verbal consent was obtained from participants in the expert panel, and written consent was obtained from participants in the focus group discussions and the key informants' interviews. Participants were informed that the findings might be shared and published in academic journals, conferences, or other scientific platforms. Their personal information and identity remain confidential, and all necessary steps were taken to ensure anonymity and privacy. The results were presented in an aggregated and anonymised format to protect participant privacy. By providing consent, participants agreed to disseminate and publish study findings while ensuring confidentiality and privacy.

Competing interests
The authors declare no competing interests.

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