

## The impact of attacks on Syrian health systems

Airstrikes on Syrian hospitals have deep, severe impacts on the health system, on service utilisation, and on the health workforce.

### Long-lasting, potentially irreversible damage to health systems

Violent attacks on the Syrian healthcare system have been a characteristic of a decade of conflict. This mixed-methods study aimed to describe their impacts, addressing a global evidence gap.

The findings demonstrate that long-lasting, cumulative impacts result from attacks. These are found at every level of the health system including the health workforce, and health service utilisation by communities. Stronger support for health workers and hospitals and protection from future attacks is critical to mitigate these impacts, and increased international resources should be targeted at this issue. Local stakeholders should be consulted on resource allocation within health systems.



***Cave Hospital in Al Atareb, Syria, following an airstrike in 2016. Credit: Syrian American Medical Society.***

## Background

Access to healthcare is critical for communities, and needs are high during conflict. Syria has experienced over a decade of conflict, characterised by targeted violence against civilians, healthcare providers and health facilities, but little evidence has been available on their impacts. Understanding how attacks affect health systems including service utilisation, service delivery, and sequelae on patients and communities is necessary, to strengthen reconstruction and protection efforts, and calls for accountability.

## How the research was conducted

Qualitative (hospital service utilisation) and quantitative (interview) data was analysed and triangulated. Outpatient consultation, trauma care, and maternity care visits at attacked hospitals were analysed, controlling for conflict intensity. Interviews with 40 health workers evaluated impacts on health systems, and staff personal and professional lives.

## Key findings

- Attacks on health facilities significantly reduced health service use, particularly outpatient and trauma consultations. Services were severely hampered immediately following an attack and remain disrupted for at least three weeks. Thousands of patients lost access to consultations, diagnoses, medications/treatments, and procedures.
- There were severe, cumulative, and long-lasting impacts on the health system at multiple levels, directly affecting care provision. Attacks affected governance (organisational fragmentation, communication breakdowns and barriers for leadership). They led to financing instability, destruction and loss of medicines, infrastructure, and equipment.
- Profound personal and professional repercussions were found in health workers, including 'anticipatory stress', fear, and anxiety about future attacks; moral injury, due to conflicting obligations of caring for self/family and caring for patients; precarious employment, and lack of consistent pay. Intersectional vulnerabilities particularly impacted women, rural health workers, and low-income staff.
- However, health workers rejected both 'hero' and 'victim' narratives. They saw themselves fighting on the frontlines for human rights, social justice and peace, in solidarity with colleagues and community.

## Implications for humanitarian practitioners and policymakers

Violent attacks have devastating impacts on health systems, patients, and communities that may never be reversed. Responses must be multi-faceted, considering the complex impacts of attacks on every level of the health system.

Increased international resources are needed to address attacks and mitigate their impacts. Deprioritising the Syrian crisis will lead to severe and exacerbated needs in the long term. Halting violent attacks, and holding perpetrators accountable, must remain an international priority.

Findings on financial instability resulting from attacks highlighted that international decision-making tended to allocate resources “top-down”, possibly worsening systemic impacts of attacks through resource misallocation. Local stakeholders should be consulted to improve response effectiveness and resource targeting.

The resistance and solidarity among health workers suggests that bolstering support for the workforce would be a good investment, helping to strengthen ongoing services and community-based responses.

## Recommendations for future research

Data collection on the impacts of attacks should continue, to inform responses and strengthen calls for accountability. Increasing the interoperability of routine humanitarian datasets, and provision of technical guidance for strong data collection, verification, management and sharing, would enable such efforts.

Further research could also identify differential impacts based on the type and severity of attack on specific communities and their respective health systems.

## About the study team

The research was a collaboration between the University of California at Berkeley, Johns Hopkins University, the Syrian American Medical Society (SAMS) and the Assistance Coordination Unit (ACU). The co-principal investigators, Rohini Haar and Aula Abbara, led a research team including Naser AIMhawish, Len Rubenstein, Hannah Tappis, Ryan Burbach, Diana Rayes, and Mohamad Hamze.

## Keywords

Attacks on health, Syria, conflict, health workers, humanitarian response, violence, war, health service delivery, attacks on healthcare, health system, International Humanitarian Law, human rights

## Articles and further reading

- Research outputs can be found on the Elrha project page:  
<https://www.elrha.org/project/evaluating-the-public-health-impacts-of-attacks-on-health-in-syria/>
- UC Berkeley project page:  
<https://cghdde.berkeley.edu/projects/conflict-and-health>
- To learn more and support partner organisations in the study:
  - SAMS: <https://www.sams-usa.net/>
  - ACU: <https://acu-sy.org/>



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