

# The challenges of medical relief and health governance in warzones: Syria as a case study

Ammar Sabouni<sup>1</sup>, Abdulkarim Ekzayez<sup>2,3</sup>

<sup>1</sup>*Blavatnik School of Government, University of Oxford*

<sup>2</sup>*Research for Health System Strengthening in northern Syria (R4HSSS), Conflict and Health Research Group, King's College London, UK*

<sup>3</sup>*Syria Public Health Network (SPHN), London, UK*

*Correspondence: Dr Ammar Sabouni ammar.sabouni@bsg.ox.ac.uk*

*Keywords: Syria, conflict, humanitarian, medical diaspora, medical volunteerism, health response*

## Introduction

The conflict in Syria has developed into one of the worst of the twenty-first century. In ten years, more than half of the population of Syria has been displaced, hundreds of thousands killed, tortured, and many more injured and living under dire conditions. March 2021 marked the tenth anniversary of the start of the civil uprising. Intense reflection is necessary if the second decade of the Syrian conflict is to be more successful than the first.

The Syrian conflict is becoming one that people are slowly forgetting. The conflict is misunderstood even though it has been ongoing for over a decade.(1,2)Recent documentary films have shed light on the life stories of activists who took on humanitarian civil society roles after the militarisation of the conflict.(3,4)These activities provided the basis for Syrian civil society work and the ensuing medical and humanitarian response.

Healthcare workers played an essential role in the response to the humanitarian situation. Due to the delayed international response and rising needs early in the conflict, local Non-Governmental Organisations (NGOs) were founded by expatriate healthcare workers in Europe and the US to provide health aid inside Syria.(5) There was little civil society in Syria before the conflict and NGOs had to upscale their structure rapidly to meet increasing needs. International healthcare workers also played an important role, providing much needed specialist services and aiding educational efforts. To

make best use of what limited resources were made available and, in an effort, to protect medical volunteer efforts from fragmentation, local Syrian healthcare workers formed 'Syrian Health Directorates' to coordinate aid and govern the health needs of the population.

These efforts occurred against a backdrop of a 'weaponisation of healthcare'. With the development of the war in Syria, the regime identified healthcare workers and facilities as a strategic target of war. More than 900 healthcare workers were killed in 600 separate attacks.(20) Attacks against healthcare have been known to occur in contexts outside Syria and have intensified in the last two decades. At one point, however, Syria accounted for 70% of attacks against healthcare worldwide. In addition to the scale of attacks, the regime used attacks against healthcare as a deliberate military tactic against civilian targets to 'induce submission of civilian populations [in opposition held areas] and break their resilience'.(10)

## Grass-roots health governance

Since the beginning of the conflict in March 2011, local healthcare workers have been the backbone of the health response. From treating peaceful protesters in governmental hospitals and homes, to establishing secret field hospitals, mobilising scattered health resources, coordinating between emerging new actors, to eventually

building health systems in non-government held areas.(5,6)

From the early months of the uprising, Syrian healthcare workers organised local committees within each community. The purpose of these committees was to coordinate the health response for injuries and trauma and to mobilise resources. At this stage, mobilising available resources to set up effective response meant there were many examples of innovation in conducting complex medical interventions using scarce resources, utilising various cyber security methods for communication, and coordination.(7)

At a later stage, the withdrawal of the Damascus government - Ministry of Health from areas that fell under opposition control, imposed new challenges for the already collapsed health system in opposition-held areas. This included the emergence of new health threats such as Polio in 2013, the daily targeting of medical personnel and health facilities by the Syrian regime, and the diversity of health actors involved in the response such as International NGOs and UN agencies.(8–10). However, despite these enormous challenges, local healthcare workers, supported by the medical diaspora, were able to further develop the medical coordination committees and transfer them into a functioning health system named “the Syrian Health Directorates”.

This health system was built using a bottom up approach connecting local medical bodies with a central core team in each governorate. While it had no direct affiliation with political actors, it derived its legitimacy from its general assembly which included each and every medical doctor in the field at the time. This health system covered wide geographical areas under opposition control. With recent changes of areas of control, this health system is now limited to opposition held areas in northwest Syria.(11–13)

This bottom up health system proved effectiveness in tackling key health threats under enormously challenging environments. The Polio response in northwest Syria between 2013 and 2016 was an example for the marked effectiveness. The number of confirmed cases of Polio in 2013 was 36. This was reduced to only one case in 2014 and zero cases in 2015 thanks to the door to door vaccination campaigns that were delivered by local medical teams within this central functioning health system.(14,15)

## Medical diaspora

The Syrian medical diaspora has played a key role in supporting these local grassroots initiatives since 2011. Some of the leading medical NGOs in the health response in Syria were established by the medical diaspora such as Syria Relief (UK), the Union for Medical and Relief Organizations (UOSSM), the Syrian American Medical Society (SAMS) and the Syrian British Medical Society (SBMS).

The role of the diaspora was profound in the areas of medical training, funding gaps, knowledge transfer and management, advocacy and institutional development. (16,17). Diaspora individuals and networks were involved in developing clinical protocols and guidelines and were also involved in training local doctors on best practice. While international NGOs are usually limited to donor strategies and funding constraints and therefore withdrew from certain areas following funding shortages, these diaspora organisations had a high level of commitment to explore all available options to sustain services in areas they served.(5) As for advocacy, diaspora health organisations developed strategies for key issues facing the health response. For example, SAMS established a dedicated system to report attacks against healthcare and to monitor the application of the UN Security Council Resolution 2286 on preventing attacks on health.(18)

These diaspora organizations went even further to act as intermediaries between local actors and international humanitarian, academic and policy actors. There are multiple examples of multidisciplinary partnerships initiated by Syrian diaspora organizations with academic institutions to analyse and utilise available health data to inform local practice and advance health planning and policies.(19)

## International Medical Volunteerism

In 2013, British orthopaedic surgeon Abbas Khan from Streatham, south London, was murdered by the Damascus government for crossing the border to Aleppo to provide clinical services. Since then international medical volunteers have continued to courageously risk their lives to donate valuable time and expertise. Healthcare workers have come from the UK, US, Europe, Pakistan, and other countries, to provide virtually non-existent specialist and sub-specialist services in conflict-stricken areas in Syria and neighbouring countries. In addition to the value of their clinical service, these healthcare workers have provided valuable educational

opportunities to local healthcare-workers. Medical education during the protracted conflict has been severely neglected and these volunteers provided formal and informal teaching opportunities to local colleagues while in Syria. These efforts, though fragmented and severely underfunded, have been expanded with the help of diaspora NGOs to provide a wide array of educational interventions. This ranges from the David Nott Foundation's 'war doctor' training to more protracted medical education needs such as conflict-sensitive evidence-based medicine and academic skills.(21,22) After coming home from Syria, these volunteers have continued to be valuable advocates for the cause of the Syrian people. In addition to providing their time to tele-educational interventions, they play an active role in fundraising, raising public awareness, and media coverage of the Syrian conflict.

## What's Next for The Health Response in Syria?

After ten years of the devastating conflict in Syria which has had significant impacts on the health of Syrians, we should start thinking about long term strategies for the health system in Syria. The triple burden of injuries and disabilities, communicable diseases, and non-communicable diseases is very challenging to any health system to address. The humanitarian style health system in non-governmental held areas is not prepared to tackle issues such as mental health or specialised care for cancer and other non-communicable diseases. Therefore, more sustainable solutions are needed to support these innovative initiatives. While the focus of the international health response in Syria has been on saving lives, there should more focus onwards on health outcomes that are related to early recovery. These outcomes include responsiveness, comprehensiveness, integration of services, and social and financial protection. This cannot be done without investing in areas of health governance, health information, health education and medical training, local models for health financing and sustainable health infrastructure and supply chains.

Notably among these requirements, the need for comprehensive medical education is dire; patients have ongoing and worsening mental health, non-communicable disease, and other health needs.(23,24) Bdaiwi et al described the severe lack of clinical educators in Syria and identified the need for consistent, evaluated and accredited tele-education.(25) While opportunities to volunteer clinical services have diminished, healthcare workers abroad have an essential role in supporting these medical education efforts. This is

through continuing to participate in tele-educational interventions with diaspora NGOs, building on links with academic institutions to provide accredited courses, and continuing advocacy for funding of these essential life-saving interventions.

Looking at the future of Syria's health system we need to learn from key lessons of the humanitarian health response. Long term investments in local capacities, resources and innovations are needed; Syria's medical diaspora should be further capitalised with solutions for systematic recruitment of their expertise and resources; and international medical volunteerism should engage with international and Syrian organisations which have clear strategies on sustainable health interventions.

## Conflict of interest:

Neither author has a conflict of interest relevant to this work.

## Funding statement

Dr. Abdulkarim Ekzayez was supported by the National Institute for Health Research (NIHR) as part of the Research for Health System Strengthening in northern Syria (R4HSSS) project reference 131207 using UK aid from the UK Government to support global health research.

## References

1. Afzal N, Harun M. A Critical Analysis of Newspaper Editorial Discourse on the Portrayal of Uprising in Libya and Syria. *Acad Res Int* [Internet]. 2015 [cited 2021 Mar 20];6(4). Available from: [www.savap.org.pk243www.journals.savap.org.pk](http://www.savap.org.pk243www.journals.savap.org.pk)
2. Rettberg JW, Gajjala R. Terrorists or cowards: Negative portrayals of male Syrian refugees in social media [Internet]. Vol. 16, *Feminist Media Studies*. Routledge; 2016 [cited 2021 Mar 20]. p. 178–81. Available from: <https://www.tandfonline.com/action/journalInformation?journalCode=rfms20>
3. Kermode M. For Sama review – affecting chronicle of life in war-torn Aleppo [Internet]. *The Guardian*. 2019 [cited 2021 Mar 20]. Available from: <https://www.theguardian.com/film/2019/sep/15/for-sama-review-documentary-aleppo-syria>

4. Clarke C. The Cave review – horror and hope in a Syrian hospital battered by war [Internet]. The Guardian. 2019 [cited 2021 Mar 20]. Available from: <https://www.theguardian.com/film/2019/dec/06/the-cave-review-syria-hospital-documentary>
5. Duclos D, Ekzayez A, Ghaddar F, Checchi F, Blanchet K. Localisation and cross-border assistance to deliver humanitarian health services in North-West Syria: A qualitative inquiry for the Lancet-AUB Commission on Syria. *Confl Health* [Internet]. 2019 May 27 [cited 2019 Oct 21];13(1):20. Available from: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=refere nce&D=pre m&NEWS=N&AN=31149026>
6. Fardousi N, Douedari Y, Howard N. Healthcare under siege: A qualitative study of health-worker responses to targeting and besiegement in Syria. *BMJ Open*. 2019 Sep 1;9(9).
7. عاصي عبد الوهاب  
تجربة الأطباء في سوريا بين السلم والحرب  
Jusoor for Studies. 2020  
[https://www.jusoor.co/public/details/تجربة\\_الأطباء\\_في\\_سوريا\\_بين\\_السلم\\_والحرب/799](https://www.jusoor.co/public/details/تجربة_الأطباء_في_سوريا_بين_السلم_والحرب/799)  
(accessed March 20, 2021).
8. Fouad FM, Sparrow A, Tarakji A, Alameddine M, El-Jardali F, Coutts AP, et al. Health workers and the weaponisation of health care in Syria: a preliminary inquiry for The Lancet –American University of Beirut Commission on Syria. *Lancet* [Internet]. 2017 Dec 2 [cited 2019 May 15];390(10111):2516–26. Available from: <http://www.journals.elsevier.com/the-lancet/>
9. Wong CH, Chen CYT. Ambulances under siege in Syria. *BMJ Glob Heal* [Internet]. 2018;3(6):e001003. Available from: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=refere nce&D=pre m&NEWS=N&AN=30555725>
10. Ekzayez A, Sabouni A. Targeting Healthcare in Syria. *J Humanit Aff* [Internet]. 2020 Dec 7 [cited 2021 Mar 20];2(2):3–12. Available from: <http://dx.doi.org/10.7227/JHA.038>
11. Alzoubi Khaled Iyad Mamoun Othman Houssam Alnahhas Omar Abdulaziz Hallaj Z. Reinventing State: Health Governance in Syrian Opposition-Held Areas Researched and Written by MIDMAR. 2019.
12. Douedari Y, Howard N. Perspectives on Rebuilding Health System Governance in Opposition-Controlled Syria: A Qualitative Study. *Int J Heal Policy Manag* [Internet]. 2019 Jan 9;8(4):233–44. Available from: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=refere nce&D=emex b&NEWS=N&AN=627675843>
13. Ekzayez A. Analysis: A Model For Rebuilding Infrastructure in — Peacebuilding Deeply. *Syria Deeply*. 2018.
14. Tajaldin B, Almilaji K, Langton P, Sparrow A. Defining polio: Closing the gap in global surveillance. *Ann Glob Heal*. 2015 May 1;81(3):386–95.
15. Ismail SA, Abbara A, Collin SM, Orcutt M, Coutts AP, Maziak W, et al. Communicable disease surveillance and control in the context of conflict and mass displacement in Syria. *Int J Infect Dis* [Internet]. 2016;47:15–22. Available from: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=refere nce&D=emed 17&NEWS=N&AN=611400294>
16. Frehywot S, Park C, Infanzon A. Medical diaspora: an underused entity in low- and middle-income countries' health system development. *Hum Resour Health* [Internet]. 2019;17(1):56. Available from: <https://human-resources-health.biomedcentral.com/articles/10.1186/s12960-019-0393-1>
17. Ekzayez A, al-Khalil M, Jasiem M, Al Saleh R, Alzoubi Z, Meagher K, et al. COVID-19 response in northwest Syria: innovation and community engagement in a complex conflict. *J Public Health (Bangkok)* [Internet]. 2020 Aug 18 [cited 2021 Mar 20];42(3):504–9. Available from: <https://academic.oup.com/jpubhealth/article/42/3/504/5841457>
18. Sahloul A, Katoub M. The Failure of UN Security Council Resolution in Preventing Attacks on Healthcare in Syria. 2017 [cited 2021 Mar 20];(January):1–20. Available from: <https://www.sams-usa.net/wp-content/uploads/2017/03/UN-fail-report-07-3.pdf>
19. Ekzayez A. Partnerships with local organisations are vital for conducting health research in Syria—personal reflections. *J Int Humanit Action* [Internet]. 2020 Dec 9 [cited 2020 Nov 27];5(1):12. Available from:

<https://jhumanitarianaction.springeropen.com/articles/10.1186/s41018-020-00079-z>

20. Heisler M, Baker E, McKay D. Attacks on Health Care in Syria — Normalizing Violations of Medical Neutrality? *N Engl J Med* [Internet]. 2015 Dec 24;373(26):2489–91. Available from: <http://www.nejm.org/doi/10.1056/NEJMp1513512>

21. Sabouni A, Bdaiwi Y, Janoudi SL, Namous LO, Turk T, Alkhatib M, et al. Multiple strategy peer-taught evidence-based medicine course in a poor resource setting. *BMC Med Educ* [Internet]. 2017 May 4 [cited 2021 Mar 20];17(1). Available from: <https://pubmed.ncbi.nlm.nih.gov/28472986/>

22. Sabouni A, Chaar A, Bdaiwi Y, Masrani A, Abolaban H, Alahdab F, et al. An online academic writing and publishing skills course: Help Syrians find their voice. *Avicenna J Med* [Internet]. 2017 [cited 2021 Mar 20];7(3):103–9. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28791242>

23. Keasley J, Oyebode O, Shantikumar S, Proto W, Mcgranahan M, Sabouni A, et al. A systematic review of the burden of hypertension, access to services and patient views of hypertension in humanitarian crisis settings [Internet]. Vol. 5, *BMJ Global Health*. BMJ Publishing Group; 2020 [cited 2021 Mar 20]. p. 2440. Available from: <http://gh.bmj.com/>

24. Kehlenbrink S, Smith J, Ansbro É, Fuhr DC, Cheung A, Ratnayake R, et al. The burden of diabetes and use of diabetes care in humanitarian crises in low-income and middle-income countries [Internet]. Vol. 7, *The Lancet Diabetes and Endocrinology*. Lancet Publishing Group; 2019 [cited 2021 Mar 20]. p. 638–47. Available from: <http://www.thelancet.com/article/S2213858719300828/fulltext>

25. Bdaiwi Y, Rayes D, Sabouni A, Murad L, Fouad F, Zakaria W, et al. Challenges of providing healthcare worker education and training in protracted conflict: A focus on non-government controlled areas in north west Syria [Internet]. Vol. 14, *Conflict and Health*. BioMed Central; 2020 [cited 2021 Mar 20]. p. 42. Available from: <https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-020-00287-9>