Syria Public Health Network

February 2021

Responsibility to Protect: Syrian Healthcare Workers in the Face of COVID-19

Policy Report

Summary: Attacks on healthcare and healthcare workers (HCWs) have been a hallmark of the Syrian conflict in direct contravention of International Humanitarian Law and the Geneva Conventions. This has led to the deaths of over 920 HCWs, the majority of which are attributed to the Syrian government and its allies, and the forced displacement of thousands of others[1]. Those left behind face a devastated health system which is under-staffed and under-resourced, placing increasing strains on the Syrian healthcare workforce both professionally and personally[2]. Early in the conflict, the provision of aid to those considered opposed to the government was criminalized, contributing to arrests and forced displacement. The situation for Syrian HCWs has been further exacerbated by the COVID-19 pandemic which comes on the back of economic collapse and ongoing violence[3]. These and other factors, including political instability, poor employment opportunities and governance, insufficient salaries and little opportunity for professional development have adversely affected retention[4] and contributed to burnout. HCWs are unlikely to return without guarantees of safety and political stability leading to significant shortages across the healthcare workforce. In this brief, we highlight the challenges which Syrian HCWs who remain in Syria face and prioritise recommendations which can support their safety and their professional lives. *For SPHN's related briefs on COVID-19 in northwest Syria and among internally displaced people in Syria, please visit our brief on impacts of COVID-19 on the Syrian health system and on forcibly displaced populations inside Syria.*

Background: Despite almost ten years of conflict, there remains a significant gap in accurate, timely data on the number and distribution of Syrian HCWs both in Syria or who have been forcibly displaced outside of Syria. The lack of information also extends to the number of Syrian HCWs who have been detained, forcibly disappeared, or killed since the start of the conflict. This builds on preexisting gaps in valid and reliable data regarding the number and distribution of Syrian HCWs across the country, even before the onset of the conflict in 2011. For example, 2009 estimates of HCWs inside Syria include 30,000 doctors, 16,000 dentists, 33,000 nurses, 17,000 pharmacists, 6,000 midwives, and 22,000 technicians[5][6]. Even at the time, underutilization of a talented and dynamic health workforce had led to significant rates of emigration, particularly to the United States and the United Kingdom[7]. Throughout the conflict, estimates of displaced Syrian HCWs fluctuated, and then stagnated, providing no clear indication of the true number of physicians or HCWs, more broadly, who had fled from the country. This included an early estimate of 15,000 Syrian physicians displaced in September 2013[8], followed by an estimate of over 27,000 Syrian physicians (90% of the 2009 estimate) by a high-level UN official in November 2016[9]. Following the siege of Aleppo, over 95% of physicians in the governorate were estimated to have been forcibly displaced, been detained or killed[10].

As such, it is difficult to determine the shortages of human resources for health inside Syria currently, and to predict the numbers of qualified health professionals that are needed to fill current and future gaps, particularly for specialties in which there were shortages pre-conflict, such as mental health, but which are now increasingly essential due to the changing health needs of the population[11]. Syria's health system has been fragmented across different regions of political control leading to at least four health systems functioning within its borders, each with their own leadership and governance structures[12]; this adversely affects workforce planning, training and distribution. These areas include: two thirds of the country which are under government control, northeast Syria which is under *de facto* Kurdish control (population ~3.2mil[13]), northwest Syria which is under opposition control and areas in the north under Turkish control. Northwest Syria and areas under Turkish control account for around 4.17 million people[14].

[1] https://phr.org/our-work/resources/medical-personnel-are-targeted-in-syria/
[2] https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-020-00287-9
[3] https://www.ijidonline.com/article/S1201-9712(20)30308-8/fulltext
[4] https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-020-00287-9
[5] http://www.moh.gov.sy/LinkClick.aspx?fileticket=DqG7Iy5-sG8%3d&portalid=0&language=ar-YE
[6] https://www.avicennajmed.com/article.asp?issn=2231-0770;year=2012;volume=2;issue=3;spage=51;epage=53;aulast=
[7] https://www.syriahealthnetwork.org/wps6/wp-content/uploads/2021/01/Conference-Program-and-Background-Paper_worldbank.pdf
[8] *https://phr.org/our-work/resources/syrias-medical-community-under-assault/*
[9] https://www.youtube.com/watch?v=68GBLTM4KNQ
[10] https://phr.org/our-work/resources/medical-personnel-are-targeted-in-syria/
[11] https://www.nature.com/articles/s41467-020-17369-0
[12] https://merip.org/2020/12/covid-19-exposes-weaknesses-in-syrias-fragmented-and-war-torn-health-system/
[13] https://1bec58c3-8dcb-46b0-bb2a-fd4addf0b29a.filesusr.com/ugd/188e74_542fc8805add4051bce2bcd5fc5fe9ed.pdf?index=true
[14] https://1bec58c3-8dcb-46b0-bb2a-fd4addf0b29a.filesusr.com/ugd/188e74_542fc8805add4051bce2bcd5fc5fe9ed.pdf?index=true

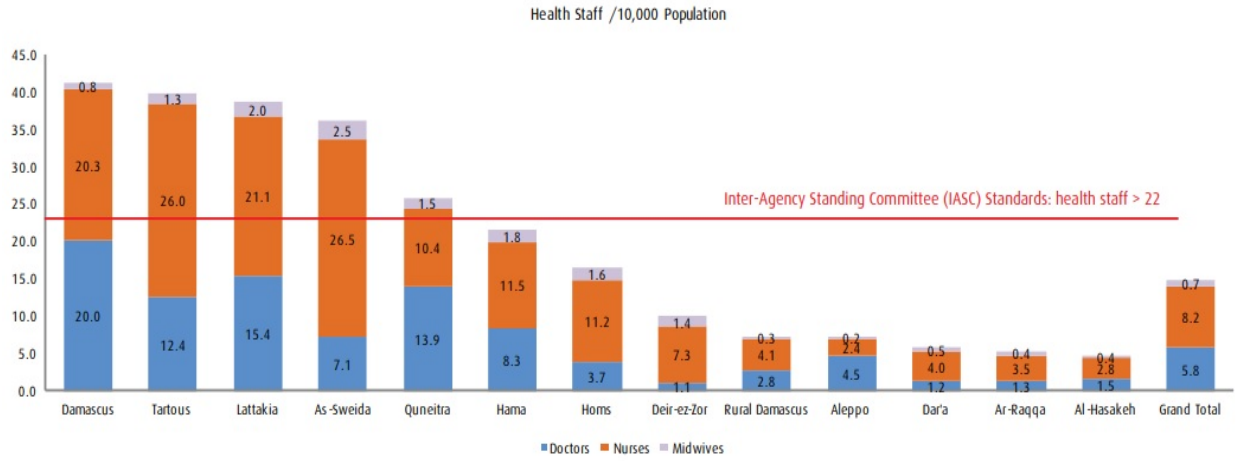

Figure 1: Number of health staff (doctors, nurses and midwives) per 10,000 population in public hospitals, according to HeRAMS Bi-Annual Report January - June 2020 Public Hospitals in the Syrian Arab Republic[15]

The World Health Organization's Health Resource Availability Monitoring System (HeRAMS) data from June 2020 (see Figure 1) provides **estimates of the distribution** of doctors and nurses across governorates in Syria[16], however there is little disaggregation in terms of specialty and how much they contribute to the public or private sectors[17]. This data indicates that the total number of medical doctors in public hospitals in government-controlled areas are 11,846 and shows an unequal distribution of HCWs per 10,000 population with 38-41 per 10,000 in Damascus, Tartous and Lattakia (governorates which saw less conflict compared to other areas) compared to 5-6 per 10,000 in Hassakeh, Raqqa and Dera'a) with no data on Idlib; only 5 governorates are above the Sphere standard of 22 per 10,000 HCWs[18]. In contrast, the Syrian Ministry of Health continues to publish yearly statistics on the number of HCWs inside the country, with data indicating that in 2019, the estimated number of doctors include 30,875 and 18,679 dentists.[19] However, it is important to note that these numbers likely do not account for displaced HCWs, or those who remain registered, but no longer work inside Syria.

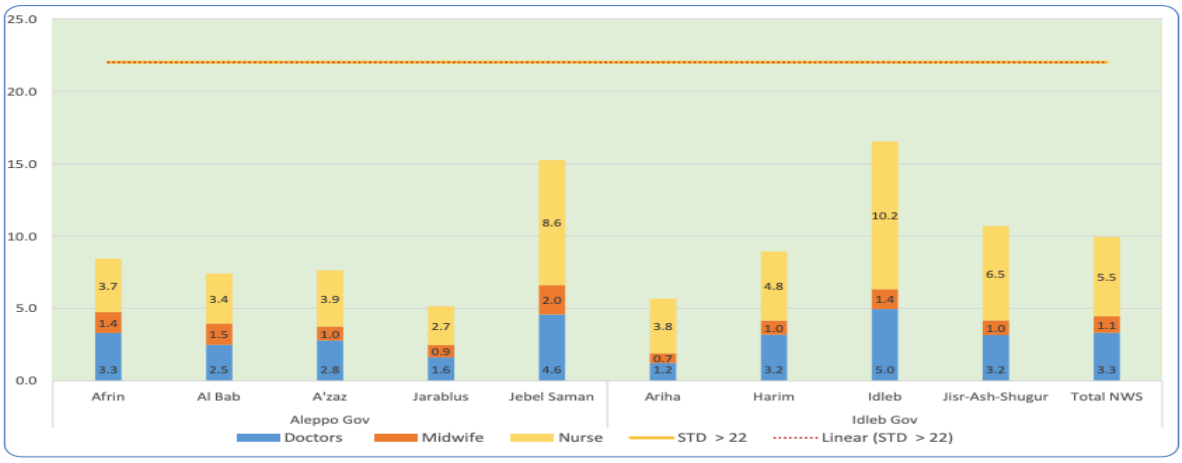

*Figure 2: Number of health workers (medical doctors + nurse + midwife) in **Idlib and Aleppo** per 10,000 population, by district, according to the WHO NWS HeRAMS June 2020 report*

[15] https://applications.emro.who.int/docs/syr/EMRLIBSYR258E-eng.pdf?ua=1
[16] https://applications.emro.who.int/docs/syr/EMRLIBSYR258E-eng.pdf?ua=1
[17] https://applications.emro.who.int/docs/syr/EMRLIBSYR258E-eng.pdf?ua=1
[18] https://spherestandards.org/wp-content/uploads/Sphere-Handbook-2018-EN.pdf
[19] http://www.moh.gov.sy/LinkClick.aspx?fileticket=DqG7Iy5-sG8%3d&portalid=0&language=ar-YE

In northwest Syria, recent estimates suggest that there are 1.2 to 5.0 doctors per 10,000 people though estimates of the number of doctors change often and vary by district. There is an upper estimate of slightly over 1,000 doctors (615 hospitalists), up to 427 midwives, 1,994 nurses and 763 community health workers[20]. However, these figures are rapidly changing due to ongoing violence in the area and potential for duplication as HCWs may work in more than one facility contributing to an overestimate of numbers.

COVID-19 and healthcare workers across Syria: HCWs across Syria face some common challenges as well as important differences. Across Syria, the response to COVID-19 has been inadequate, fragmented and insufficient to meet the needs of the population and of HCWs with under-testing rife and insufficient health system capacity[21]. As of 7th February 2021, a total of 14,408 laboratory confirmed cases (947 fatalities) have been declared in areas under government control[22] and 21,031 laboratory confirmed cases (407 fatalities) have been declared in northwest Syria through the WHO and the Assistance Coordination Unit's Early Warning and Response Network (EWARN) respectively. Data in northwest Syria demonstrates that HCWs continue to be among those disproportionately affected by the pandemic, with over 7% of cases among HCWs and 6% among allied health professionals (including community health workers) however this percentage was higher earlier in the outbreak[23].

HCWs across Syria have **borne the brunt** of the pandemic as they work in an already devastated health system where extensive attacks on healthcare have occurred[24] [25]. Northwest Syria has been among the most affected with ongoing attacks on healthcare [26] [27] following an escalation of attacks by the Syrian government and its Russian allies on the area[28]. HCWs face multiple obstacles, including inadequate PPE as well as poor training in its use, poor infection prevention and control (IPC) measures both before and during the conflict, insufficient and limited access to testing, unavailability of technical support, compounded by criticism and blame from local communities and the press. This is exacerbated by further interruption to training and education[29] and greater risks of infection to HCWs and their families compared to the rest of the population. High numbers of fatalities have been reported, particularly in areas under government control where the names of around 165 doctors who have died, presumably from COVID-19, have been released[30] [31]. In northwest Syria, a total of 391 doctors have been reported to have had COVID-19 among the estimated 1,000 doctors (nearly 39%) in the area though underreporting and undertesting as well movement between Turkey or Turkish controlled areas may affect this number[32]. As of epi-week 52/2020, the percentage of cases among HCWs is 13% though it was as high as 25% earlier in the outbreak[33]. In northeast Syria, as of 6th December 2020, 667 of the 7,256 confirmed cases of COVID-19 (9% of cases) were recorded among HCWs; 205 (28% of cases among HCWs) were recorded in Hassakeh city[34].

Additional challenges faced are the need to make ends meet in a **collapsed economy** where poverty rates exceed 80%[35]. This and the shortage of HCWs means that they are often forced to work in more than one facility or see patients in their homes, increasing the risk of transmission, even when asymptomatic[36]. Poor health system governance across Syria and poor labor rights also means that HCWs may not be paid for days self-isolating, in quarantine or on leave (including illness), also increasing transmission. This is particularly the case in northwest Syria where humanitarian organisations and their funders may not agree to pay even when absence is required for the sake of patients and HCWs[37]. In addition, though shielding of HCWs with chronic conditions which put

[20] https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/herams_2nd_quarter_2020_final.pdf
[21] https://1bec58c3-8dcb-46b0-bb2a-fd4addf0b29a.filesusr.com/ugd/188e74_542fc8805add4051bce2bcd5fc5fe9ed.pdf?index=true
[22] https://covid19.who.int/region/emro/country/sy/
[23] https://authors.elsevier.com/sd/article/S0163-4453(21)00046-3
[24] https://www.manchesteropenhive.com/view/journals/jha/2/2/article-p3.xml
[25] https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)30741-9/fulltext
[26] https://www.bmj.com/content/368/bmj.m451
[27] http://syriahealthnetwork.org/attachments/article/37/PolicyBrief_NWSyria_28.2.20.pdf
[28] https://www.bmj.com/content/368/bmj.m451
[29] https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-020-00287-9
[30] https://www.hrw.org/news/2020/09/02/syria-health-workers-lack-protection-pandemic
[31] https://shaamtimes.net/291818/%D8%A8%D8%A7%D9%84%D8%A3%D8%B3%D9%85%D8%A7%D8%A1-%D8%A3%D9%83%D8%AB%D8%B1-%D9%85%D9%86-150-%D8%B7%D8%A8%D9%8A%D8%A8%D8%A7%D9%8B-%D8%AE%D8%B3%D8%A7%D8%A6%D8%B1-%D8%B3%D9%88%D8%B1%D9%8A%D8%A7-%D9%85/
[32] https://www.acu-sy.org/wp-content/uploads/2020/05/COVID-19-surveillance-weekly-bulletin-in-North-of-Syria-W52.pdf
[33] https://authors.elsevier.com/sd/article/S0163-4453(21)00046-3
[34] https://reliefweb.int/report/syrian-arab-republic/syrian-arab-republic-covid-19-response-update-no-13-9-december-2020
[35] https://reliefweb.int/report/syrian-arab-republic/fast-facts-syria-crisis-march-2019
[36] https://www.bmj.com/content/371/bmj.m4851
[37] https://www.ijhpm.com/article_3588.html

them at increased risk of COVID-19 or who are in the later stages of pregnancy is considered in high income settings, in Syria, this is a luxury.

The toll of working in Syria's health systems with risk of attack or arrest (particularly in areas outside of government control) mean that the **risk of personal and secondary trauma** is high; this has been exacerbated by the COVID-19 pandemic which has affected the mental well-being of even those who are not working in extreme conflict[38]. This is particularly so for new graduates who may need to work beyond their expertise given the exodus of more experienced HCWs[39]. This has been exacerbated by community factors and negative messaging in local media which has affected public trust[40] [41] with reports of attacks on doctors occurring with little legal protection offered. For example, in an area under government control in Aleppo, two doctors were attacked in September 2020 after a patient died; one of the perpetrators was a policeman in the Syrian government and no case was brought against them[42]. The Aleppo Medical Syndicate has since called for the addition of an article to the penal code which criminalizes such attacks on HCWs similar to neighbouring countries. One measure aimed at supporting the retention and return of HCWs in areas under government control includes a **change to the law** in December 2020 when it was declared by the Military Medical Services Department that doctors in charge of military or reserve service in the Syrian government's army forces, could spend their military duty in the nearest military medical centre to their place of residence and that they could work in private clinics after finishing their daily shifts[43]. The impact of such measures is yet to be seen.

Priority Recommendations to protect Syrian healthcare workers:

1. Protection: There needs to be the **immediate cessation of attacks** on healthcare and HCWs, particularly in northwest Syria where such attacks continue; this will allow HCWs in the area to focus on the COVID-19 response. Laws and policies which guarantee the protection of HCWs will also support **retention** and may also support the **return** of Syrian HCWs to support the COVID-19 response and healthcare in Syria. This includes the prohibition of attacks on HCWs, facilities or vehicles clearly identified as healthcare related. In addition, HCWs need i. access to **appropriate PPE** and training in how to use and dispose of it with strict enforcement of its use, particularly in communal areas of health facilities ii. effective **IPC measures** in their places of work with training e.g. online training and contextually appropriate protocols and up-to-date information in readily accessible formats e.g. posters, checklists is required. This is being implemented to some extent by WHO through partners but gaps remain. iii. increased access to SARS-CoV-2 PCR testing; this is already improving in northwest Syria however increased access is required in areas under government control and in northeast Syria iv. given the direct personal risks which they face as well as the possibility of re-infection, HCWs should be prioritized alongside vulnerable groups for **vaccination**; this would also reduce vaccine hesitancy among staff and the community.

2. Employment rights: Governance measures which support HCWs' right to **fully or partly paid leave** to support them when they need to quarantine, self-isolate, require sick leave or have conditions which require them to shield. This is particularly important in northwest Syria where humanitarian organisations may not be able to do this due to funding restrictions or financial concerns. The average salary for a doctor in areas under government control is around $100-150 per month which, even before the economic collapse was insufficient to meet essential needs; as such, most doctors also need to work in the private sector, which in some parts of Syria, is very limited.

3. Training and support: Though there has been a great deal of training around different aspects of COVID-19 both locally and **via tele-education**, the distribution and appropriateness to the local context may not always be sufficient. Different humanitarian organisations, either singularly e.g. Syrian American Medical Society, Syrian Board of Medical Specialties or in collaboration with WHO e.g. Primary Care International have provided training as well as ongoing support, particularly for ICUs in northwest Syria. EWARN has also conducted a number of training sessions on COVID-19 surveillance between March and May 2020 locally in health facilities in northwest Syria. HCWs also need support against burnout which is under-reported among Syrian HCWs except for one study which noted a high prevalence of burnout among resident doctors in areas under government control.[44] Measures

[38] https://bmjopen.bmj.com/content/10/5/e034291
[39] https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-020-00287-9
[40] https://www.sciencedirect.com/science/article/pii/S2666623520300210
[41] https://academic.oup.com/jpubhealth/article/42/3/504/5841457?login=true
[42] https://www.dnn-sy.net/أحدهما-بالعناية-المشددة-القصة-الكامل/
[43] http://alalamsyria.com/news/17754
[44] https://pubmed.ncbi.nlm.nih.gov/31827575/

which mitigate burnout and provide mental health and psychosocial support are required across Syria, for both HCWs and civilians alike.

Conclusion: Despite almost ten years since the revolution, we still have **little accurate data** on the numbers, training and distribution of Syrian HCWs, who remain are fundamental to the health system, both now and in future, and to the COVID-19 response across Syria. Even prior to the COVID-19 pandemic, Syria's HCWs faced extensive challenges which adversely affected the retention and resilience of the workforce. As such, their protection must be prioritised both for their sake and for the rest of the Syrian population.

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About SPHN: The Syria Public Health Network was established in 2015 to provide a space where academics, humanitarian and international organisations, policy makers and Syrian public health professionals can discuss, analyse and generate policy proposals for the types of health interventions and research that can support the current and future health needs in Syria and Syrian refugee hosting countries. Visit www.syriahealthnetwork.org for more details or email info@syriahealthnetwork.org