- Mid and South Essex NHS Foundation Trust, Essex, UK
- Imperial NHS Healthcare Trust, London, UK
- Turkish Ministry of Health, Gaziantep, Turkey

Twitter @cinarervanur@AulaAb Cite this as: *BMJ* 2023;380:p559 http://dx.doi.org/10.1136/bmj.p559 Published: 08 March 2023

Earthquakes in Turkey and Syria—collaboration is needed to mitigate longer terms risks to health

The response has fallen short in both countries, say Erva Nur Cinar and colleagues

Erva Nur Cinar, ¹ Aula Abbara, ² Ebru Yilmaz³

The catastrophic earthquakes that struck southeastern Turkey and northern Syria on 6 February 2023 left a humanitarian crisis in their wake. As of 1 March 2023, the death toll in Turkey has risen to 45 089, and 6000 deaths have been reported in Syria. It is likely, however, that the death toll and the extent of the damage will continue to rise—particularly in northwest Syria where search and rescue efforts have been impeded by border restrictions. Much of the immediate devastation is apparent, but without careful mitigation, the people of these two countries will experience more insidious, longer term harms to their health.

The ramifications of these earthquakes will be shaped by the fact that in both countries first responders and healthcare workers were also directly affected by the earthquakes. They have experienced trauma, loss, and forced displacement along with the wider population, inflicting a high psychological toll. As local authorities and international actors respond to this crisis, the provision of psychosocial support—which is culturally and linguistically appropriate and free at the point of use—is therefore essential and urgent.3 Without this, there is a risk of long term psychological morbidity, which will harm population health more widely. 4 To meet these needs, mental health and psychosocial services should be integrated with primary care, which itself needs strengthening in both countries. For healthcare providers who are struggling with poor mental health in the earthquakes' aftermath, investing in telepsychology interventions may be a useful strategy for reaching them and providing care.⁵

In Turkey, a country already grappling with a severe economic crisis, the immediate and long term effects of the earthquakes on the health system will be widespread. Responding to the direct healthcare needs of the population, including physical injuries and psychological trauma, as well as recovering from the disruption caused to routine services will place a greater demand on what infrastructure remains. In the aftermath of the disaster, local medical professionals and residents have raised concerns about the potential outbreak of infectious diseases because of overcrowded accommodation, damaged water infrastructure (including sewage and drinking water), and disruptions to food supplies. 7 Several healthcare buildings and the roads leading to them were damaged and have become unusable.8 This threatens the provision of healthcare services and could impede the country's recovery from this disaster. As such, coordination between authorities and humanitarian organisations to provide water,

sanitation and hygiene, shelter, and immediate healthcare are essential.

Relief efforts should focus on those who are most vulnerable, bearing in mind that certain groups are at risk of being neglected. Around 1.7 million (of the 3.8 million) Syrian refugees in Turkey live in areas that have been affected by the earthquakes.9 Even before the earthquake, reports of Syrian refugees facing increased discrimination and resentment had surfaced. 10 Unfortunately, this current crisis has further exacerbated these sentiments in some areas, with Syrians reporting that they have been kicked out of emergency shelters or faced verbal abuse. 11 Authorities and humanitarian organisations must ensure that all healthcare and aid provided is equitable and non-discriminatory, but also recognise the particular needs of those who are most vulnerable.

For Syria, these earthquakes are an additional catastrophe for a country that has already faced multiple, intersecting challenges in recent years, including the protracted armed conflict, outbreaks of communicable diseases (such as the ongoing cholera outbreak and measles), economic crises, attacks on healthcare and related infrastructure, and the forced displacement of large parts of the population. 12 - 14

Northwest Syria is one of the regions most affected both by these crises and the earthquakes. This area contains around 4.5 million people who live under the control of the opposition and who have relied almost solely on humanitarian aid delivered across the border since 2014. Most of the local and international humanitarian organisations that contribute to the World Health Organization led health cluster that oversees and coordinates the delivery of aid to northwest Syria are based in Gaziantep, Turkey—one of the provinces most affected by the disaster. Consequently, the destruction in Gaziantep disrupted immediate relief efforts, contributing to a delayed and disorganised immediate response. ¹⁵

The use of only a single crossing for aid and relief efforts—and the fact this was underused in the immediate aftermath of the earthquakes—also hampered the response. ¹⁶ It was only on 13 February 2023 that two other border crossings were opened—during which time many people had already died in the absence of immediate support. ¹⁷ This emergency arrangement will, however, only keep the extra borders open for three months. ¹⁸ Given the previous state of the health system in northwest Syria, the high needs among the population, and the

ongoing toll of this disaster, the international community must ensure that the border crossings are extended in both number and duration to ensure that essential health and humanitarian assistance reaches those who require it the most.

The response of authorities as well as the international community has fallen short on both sides of the Syria-Turkey border. Anger has bubbled over in both countries at the inadequate responses to the earthquakes and trust will need to be restored. Given the scale of the disaster, there must be improved coordination and collaboration of relief efforts between authorities and humanitarian organisations to meet the immediate and long term needs of those affected. Only then will people be able to start rebuilding and recovering from what they have lost.

Competing interests: None declared.

Provenance and peer review: Not commissioned; not externally peer reviewed.

- Butler D. Earthquake death toll in Turkey rises above 45 000. Reuters. 1 March 2023. https://www.reuters.com/world/middle-east/earthquake-death-toll-turkey-rises-above-45000-afad-2023-03-01/
- 2 UN Office for the Coordination of Humanitarian Affairs. Syrian Arab Republic: Earthquakes Syria Situational Updates. 1 Mar 2023. https://reliefweb.int/report/syrian-arab-republic/syrian-arab-republic-earthquakes-syria-situational-updates-1-march-2023
- World Health Organization. Mental health in emergencies. 16 Mar 2022. https://www.who.int/news-room/fact-sheets/detail/mental-health-in-emergencies
- Forbes D, Creamer M, Wade D. Psychological support and recovery in the aftermath of natural disaster. *Int Psych* 2012;9:15-17. doi: 10.1192/S1749367600002939doi: 10.1192/S1749367600002939.
- 5 Almoshmosh N, Jefee-Bahloul H, Abdallah W, etal. Use of store-and-forward tele-mental health for displaced Syrians. *Intervention (Amstelveen)* 2020;18:-70.
- 6 Roeder A. The Turkey-Syria earthquake's humanitarian challenges. Harvard TH Chan School of Public Health. 15 Feb 2023. https://www.hsph.harvard.edu/news/features/turkey-syria-earthquake/
- Karakas B. Turkey earthquake: Infectious diseases pose acute danger. DW. 18 Feb 2023. https://www.dw.com/en/turkey-earthquake-infectious-diseases-pose-acute-danger/a-64752659
- 8 United Nations Population Fund (UNFPA). Turkiye Earthquake Situation Report #1.10 Feb 2023. https://reliefweb.int/report/syrian-arab-republic/turkiye-earthquake-situation-report-1-10-february-2023.
- 9 Republic of Türkiye, Ministry of Interior, Presidency of Migration Management. Distributions of Syrians Under Temporary Protection by Year. 2023. https://en.goc.gov.tr/temporary-protection.27
- Gebeily M, Kucukgocmen A, Henriette Chacar H. Earthquake fans anti-Syrian sentiment in Turkey amid desperate conditions. Reuters. 13 Feb 2023. https://www.reuters.com/world/middleeast/earthquake-fans-anti-syrian-sentiment-turkey-amid-desperate-conditions-2023-02-13/
- International Federation of Red Cross and Red Crescent Society (IFRC) and Data Friendly Space. (DFS). Turkiye Earthquake February 2023, Bi-weekly Highlights. 21 Feb 2023. https://re-liefweb.int/report/turkiye/turkiye-earthquake-february-2023-bi-weekly-highlights-21022023
- Fouad FM, Sparrow A, Tarakji A, etal. Health workers and the weaponisation of health care in Syria: a preliminary inquiry for The Lancet-American University of Beirut Commission on Syria. *Lancet* 2017;390:-26. doi: 10.1016/S0140-6736(17)30741-9. pmid: 28314568
- Saad NJ, Almhawish N, Abbara A. The Cholera Outbreak in Northeast Syria: water, conflict and humanitarian challenges. PLOS Blog. 7 Feb 2023. https://speakingofmedicine.plos.org/2023/02/07/the-cholera-outbreak-in-northeast-syria-waterconflict-and-humanitarian-challenges/
- Abbara A, Zakieh O, Rayes D, etal. Weaponizing water as an instrument of war in Syria: Impact on diarrhoeal disease in Idlib and Aleppo governorates, 2011-2019. *Int J Infect Dis* 2021;108:-8. doi: 10.1016/j.ijid.2021.05.030. pmid: 34010668
- 15 The Guardian Staff and Agencies. Syria earthquake aid held up as millions suffer in freezing conditions. The Guardian.13 Feb 2023. https://www.theguardian.com/world/2023/feb/13/syria-earthquake-aid-held-up-as-millions-suffer-in-freezing-conditions
- 16 United Nations (UN). Adopting Resolution 2672 (2023), Security Council Renews Cross Border Aid Operations into North-West Syria for Six Months, Requests Special Report on Humanitarian Needs. 9 Jan 2023. https://press.un.org/en/2023/sc15168.doc.htm
- 17 Alsaafin L. Rescuers denounce aid 'failure' in Syria's devastated northwest. Aljazeera. 12 Feb 2023. https://www.aljazeera.com/news/2023/2/12/white-helmets-critical-of-lack-of-un-aid-insyrias-northwest
- 18 The UN. Earthquake disaster: UN chief welcomes Syria decision to open aid corridors. UN News. 13 Feb 2023. https://news.un.org/en/story/2023/02/1133437