Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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introduction of preventive measures such as social distancing to reduce the pace of the spread, providing valuable time for upgrading of the medical services, and preparing the community.

If the use of the term pandemic is delayed too long, the declaration of the pandemic could convey a message to the public that the authorities have lost control, generating irrational panic reactions. Since it is expected, and even perhaps desirable, that the public experience some fear during a pandemic, an early declaration of a pandemic might be helpful in mitigating panic. Recruiting public cooperation is much more feasible when the society in general and the health services in particular are not yet under considerable pressure, and there is time for appropriate explanations to the public as to how the pandemic will be controlled. The question remains as to what is the optimal timing for declaring a pandemic. Following the 2009 H1N1 pandemic, Morens and colleagues[4] provided useful criteria for defining a pandemic. They included the following components: the cause should be a new virus that has not circulated in humans previously, the disease should be widespread geographically, there should be clear person-to-person spread, and outbreaks should be explosive in nature, with a relatively high case-fatality rate. It seems to me that for some time, the COVID-19 outbreak met all these criteria.

Since there continues to be a lack of consensus about when it is appropriate to use the term pandemic, I suggest that a multi-disciplinary group of epidemiologists, infectious disease specialists, risk communicators and health administrators be convened to create new, clearer, expanded definitions of the terms outbreak, epidemic, and pandemic.

I declare no competing interests.

Manfred S Green
manfred.s.green@gmail.com

School of Public Health, University of Haifa, Haifa 3498838, Israel

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COVID-19 battle during the toughest sanctions against Iran

Coronavirus disease 2019 (COVID-19) has spread rapidly throughout the world. WHO declared the outbreak a global pandemic on March 11, 2020.[1] In Iran, the first official announcement of deaths from COVID-19 was made on Feb 19, 2020. As of March 16, 2020, 14 991 people have been infected with severe acute respiratory syndrome coronavirus 2, and 853 people have died from COVID-19. 4996 people have recovered.[2]

The economic loss caused by the spread of COVID-19 in Iran coincides with the ever-highest politically induced sanctions against the country. Although various sanctions have been in place for the past four decades, since May, 2019, the unilateral sanctions imposed by the USA against Iran have increased dramatically to an almost total economic lockdown, which includes severe penalties for non-US companies conducting business with Iran. The Iranian health sector, although among the most resilient in the region,[3] has been affected as a consequence.[4] All aspects of prevention, diagnosis, and treatment are directly and indirectly hampered, and the country is falling short in combating the crisis.[5] Lack of medical, pharmaceutical, and laboratory equipment such as protective gowns and necessary medication has been scaling up the burden of the epidemic and the number of casualties. Despite WHO and other international humanitarian organisations dispatching supplies and medical necessities,[6] the speed of the outbreak and the detrimental effects of sanctions have resulted in reduced access to life-saving medicines and equipment, adding to the health sector's pre-existing requirements for other difficult health conditions.[7] It is shameful that besides the lives lost to this deadly virus, extreme sanctions limit access to necessary materials and therefore kill even more Iranian people.

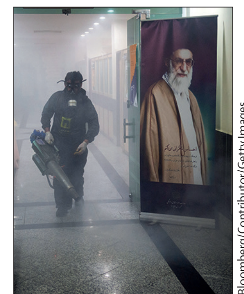
Although sanctions do not seem to be physical warfare weapons, they are just as deadly, if not more so. Jeopardising the health of populations for political ends is not only illegal but also barbaric. We should not let history repeat itself; more than half a million Iraqi children and nearly 40 000 Venezuelans were killed as a result of UN Security Council and US sanctions in 1994 and 2017–18, respectively.[8] The global health community should regard these sanctions as war crimes and seek accountability for those who impose them.

Given the COVID-19 pandemic and its alarming outcomes in Iran,[9] the international community must be obliged to stand against the sanctions that are hurting millions of Iranians. It is essential for the UN Security Council and the USA to ease, albeit temporarily, the barriers to providing life-saving medical supplies to Iran. In the future, the global community must anticipate possible impacts of sanctions on humanitarian aid and move to prevent further disasters from happening.[4] Viruses do not discriminate, nor should humankind.

We declare no competing interests.

**Amirhossein Takian, Azam Raoofi, Sara Kazempour-Ardebili*
takian@tums.ac.ir

Department of Global Health & Public Policy, School of Public Health (AT), Department of Health Economics & Management, School of Public Health (AT, AR), and Health Equity Research Center (AT), Tehran University of Medical Sciences, Tehran 1416753955, Iran; and Consultant Endocrinologist, Tehran, Iran (SK-A)



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For **details of the Iran sanctions** see https://www.treasury.gov/resource-center/sanctions/Programs/Pages/iran.aspx

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For **data on hospital beds from the Organisation for Economic Co-operation and Development** see https://data.oecd.org/healtheqt/hospital-beds.htm

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See **Online** for appendix

Evidence informing the UK's COVID-19 public health response must be transparent

The UK Government asserts that its response to the coronavirus disease 2019 (COVID-19) pandemic is based on evidence and expert modelling. However, different scientists can reach different conclusions based on the same evidence, and small differences in assumptions can lead to large differences in model predictions.

Our country's response to COVID-19 is demonstrably different from how most other countries are responding globally, including elsewhere in Europe. As the government has stressed, it is imperative to delay and flatten the epidemic curve to ensure the National Health Service can cope.[1] This is particularly essential for the UK, which only has 2·5 hospital beds per 1000 population, fewer than in Italy (3·2 per 1000), France (6·0), and Germany (8·0). Initial data from Italy have shown that 9–11% of actively infected patients with COVID-19 required intensive care during the first 10 days of March, 2020.[2]

It is not clear how the UK's unique response is informed by the experiences of other countries, particularly those that have achieved relative control over the virus as a result of widespread testing, contact tracing, and state-imposed social distancing measures, such as Singapore, Hong Kong, Taiwan, and South Korea.[3] The WHO-China Joint Mission on Coronavirus Disease[4] shows very clearly that only immediate and decisive public health responses worked to prevent or delay hundreds of thousands of cases in China, and WHO has advised that it is vital to tackle the virus at the early stages with social distancing.[4]

We welcome the UK Government's announcement that the modelling and data considered by its Scientific Advisory Group for Emergencies will be published in the future.[1] However, we request that the government urgently and openly shares the scientific evidence, data, and models it is using to inform current decision making related to COVID-19 public health interventions within the next 72 h and then at regular intervals thereafter. Time is a luxury we simply do not have as we face this critical public health crisis. As we have already seen in other countries, a matter of a few days can prove critical in terms of saving lives and avoiding health system collapse.

As the UK was not the first country to face a COVID-19 outbreak, knowledge of the disease and evidence pertaining to effective public health interventions is increasingly available. However, this is only advantageous if we incorporate the best available evidence from observations elsewhere and use the time this affords us to refine a comprehensive response based on input and scrutiny from a broad base of scientific experts.

With the UK increasingly becoming an outlier globally in terms of its minimal social distancing population-level interventions, transparency is key to retaining the understanding, cooperation and trust of the scientific and health-care communities as well as the general public, ultimately leading to a reduction of morbidity and mortality.

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**Nisreen A Alwan, Raj Bhopal, Rochelle A Burgess, Tim Colbourn, Luis E Cuevas, George Davey Smith, Matthias Egger, Sandra Eldridge, Valentina Gallo, Mark S Gilthorpe, Trish Greenhalgh, Christopher Griffiths, Paul R Hunter, Shabbar Jaffar, Ruth Jepson, Nicola Low, Adrian Martineau, David McCoy, Miriam Orcutt, Bharat Pankhania, Hynek Pikhart, Allyson Pollock, Gabriel Scally, James Smith, Devi Sridhar, Stephanie Taylor, Peter W G Tennant, Yrene Themistocleous, Anne Wilson, on behalf of 36 signatories†*

n.a.alwan@soton.ac.uk

†Signatories are listed in the appendix.

University of Southampton, Southampton SO16 6YD, UK (NAA); Usher Institute, University of Edinburgh, Edinburgh, UK (RB); UCL Centre for Global Non-Communicable Diseases (RAB) and UCL Institute for Global Health (RAB, TC, MO), University College London (HP), London, UK; Liverpool School of Tropical Medicine, Liverpool, UK (LEC, AW, SJ); University of Bristol, Bristol, UK (GDS, ME, GS); Institute of Population Health Sciences (SE, AM, CG), Barts and The London School of Medicine and Dentistry, Queen Mary University of London (DM, ST), London, UK; Department of International Public Health (SJ), London School of Hygiene & Tropical Medicine, London, UK (VG, JS); University of Leeds, Leeds, UK (MSG); University of Oxford, Oxford, UK (TG, YT); University of East Anglia, Norwich, UK (PRH); University of Edinburgh, Edinburgh, UK (RJ, DS); University of Bern, Bern, Switzerland (NL); University of Exeter, Exeter, UK (BP); Newcastle University, Newcastle, UK (AP); and University of Leeds, Leeds, UK (PWGT)