

Letter to the Editor

Cite this article: Farin F and Moslehi S. Responding simultaneously to flood and COVID-19 in Iran. *Disaster Med Public Health Prep*. doi: <https://doi.org/10.1017/dmp.2021.6>.

Keywords:

Floods; climate change; health impact; Iran; COVID-19

Corresponding author:

Shandiz Moslehi,
Email: moslehi.sh@iums.ac.ir

Responding Simultaneously to Flood and COVID-19 in Iran

Farin Fatemi PhD¹ and Shandiz Moslehi PhD^{2,3}

¹Research Center for Health Sciences and Technologies, Semnan University of Medical Sciences, Semnan, Iran;

²Health Management and Economics Research Center, Iran University of Medical Sciences, Tehran, Iran and

³Department of Health in Disasters and Emergencies, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran

Global climate change has increased the number and intensity of extreme climate events such as floods, heat or cold waves, and drought.¹ Based on this fact, Iran has experienced massive floods during the past 2 decades; the most disastrous ones happened on March 2019 with 2 million affected people and more than 4 billion dollars in costs.² Iran was successful in controlling the current epidemics of viral infections after the flood in March 2019 because the health system could establish a rapid surveillance system to allow early detection and isolation of the patients in the field hospitals in the flood-stricken areas.²

Due to weather predictions and flood warnings by the Iranian Meteorology Organization (IMO) in winter and spring 2020-2021 for 15 provinces, coinciding with the coronavirus disease 2019 (COVID-19) crisis in Iran, flood management has become a more complex issue. Iran, like many other countries, has been severely affected by the coronavirus pandemic, and the health-care system is being overwhelmed after 9 mo of fighting against COVID-19. However, addressing this issue scientifically, literature reviews and expert panels have recommended the most important measures applicable to better management of floods during the presence of COVID-19 in Iran³⁻⁵:

- Enhancing whole-of-society coordination mechanisms to support preparedness including the health, Red Crescent, transport, travel, security, and other first responders to crisis
- Establishing emergency camps or temporary settlements for displaced populations who should leave their homes
- Early detection of the patients of COVID-19 in the displaced population and isolating sick individuals by establishing a surveillance system in emergency camps and temporary settlements
- Control of critical points for managing Coronavirus-infected waste in health-care centers or field hospitals
- Meeting the flood-stricken people's emergency health needs by paying special attention to vulnerable people, particularly the elderly, women, and children
- Intensive training and reminders of the public health measures, including hand hygiene, respiratory etiquette, and social distancing, by health-care providers in the provinces that have received the flood warnings
- Supply of medicine, determination of distribution locations and how patients access outpatient drugs, and training of delivery and drug distribution personnel
- Weekly distribution of adequate quantities of hygiene items such as masks, soap, waterless antiseptic agents (ie, alcohol-based solutions) for disinfecting hands and surfaces among flood-stricken people
- Control shared bathrooms, clean surfaces with water and detergents, and use appropriately designed toilets to prevent the contamination of groundwater resources
- Access to psychological consults and supports for flood-affected people, particularly for households that lost member(s) due to COVID-19

It is recommended that policy-makers and health-care managers in flood prone areas focus on the above measures before and during the occurrence of floods. It is important for policy-makers to encourage stakeholders to manage the floods and COVID-19 using the managerial considerations that have been suggested in this study.

Conflict of Interest. The authors declared that there is no conflict of interest.

References

1. **Yadollahie M.** The flood in Iran: a consequence of the global warming? *Int J Occup Environ Med*. 2019;10(2):54-56.

2. **Peyravi M, Peyvandi AA, Khodadadi A, et al.** Flood in the south-west of Iran in 2019; causes, problems, actions and lesson learned. *Bull Emerg Trauma.* 2019;7(2):199–200.
3. **WHO.** Flooding: Managing health risks in the WHO European Region (2017). Copenhagen, Denmark: WHO Regional Office for Europe.
4. **Dizaji RA, Ardalan A, Fatemi F.** Response functions in disasters: Iran flash flood 2016. *Disaster Med Public Health Prep.* 2019;13(5-6):842–844.
5. **Van Minh H, Anh TT, Rocklöv J, et al.** Primary healthcare system capacities for responding to storm and flood-related health problems: a case study from a rural district in central Vietnam. *Glob Health Action.* 2014;7:23007.