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## COVID-19 jeopardizes the response to coming natural disasters

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In the last decade, natural hazards caused an average loss of 60,000 people per year worldwide, representing 0.1% of total deaths (Ritchie and Roser, 2020). Now, the current crisis stemming from the rapid spread of COVID-19 is threatening public health globally. Its potential simultaneous occurrence with other natural disasters may dramatically aggravate human loss and generate chaos. Health systems are increasingly overwhelmed in the most affected countries, where other expected natural hazards and potentially associated epidemics could further increase the amount of citizens requiring assistance, creating a dangerous feedback loop (Watson et al., 2007).

Disasters can happen at any time. In fact, several concurrent natural disasters have disrupted lockdown measures and caused damage such as the earthquake that occurred in Croatia in late March. First responders must ensure the continuity of essential services to protect people although the virus is critically decimating them. Many professionals are being infected (e.g., during the peak of the COVID-19 crisis, at least 20% of infected people in Spain were health workers, according to the Ministry of Health) and immense amounts of money and resources from most first responder agencies have been mobilized toward massive health emergency assistance, limiting the capacity to respond to new disasters. Also, authorities are reacting to the pandemic through well-known restrictions depending on national governments that are already changing organizational workflows in most agencies, limiting intra and inter-institutional interactions, and making difficult strategic and tactical responses to coming emergencies.

To meet the challenge of reducing coming natural disaster impacts on human health while minimizing the risk of virus transmission, national and international policies need to address contingency plans aiming to improve prevention, preparedness, mitigation, response and rehabilitation to new emergency events. Such contingency plans need to be adapted and implemented by emergency agencies to their specific work environments, as some of them are currently doing (Agência para a gestão de fogos rurais, 2010). This includes establishing safe work protocols and guides to prevent new infections through strict security

measures according to international health regulations (Centers for Disease Control and Prevention, 2020; World Health Organization, 2020), identifying possible double whammy scenarios considering all natural hazards, analyzing worst-case scenarios through periodic risk assessments and a re-design of activities considering social distancing. Pre-crisis emergency planning and coordination of all stakeholders, and response management plans for early mobilization of decimated resources are critical. In this sense, agencies need to optimize resources in strategic planning through proportional responses to the incidents based on potential consequences, risks and community vulnerability. Moreover, it seems mandatory for governments and institutions to lead and coordinate the coming crisis responses through effective communication plans, education, engagement and support to communities (World Health Organization, 2020).

With all countries facing an unprecedented global threat, authorities should consider increasing international cooperation, and further strengthening both health and emergency systems to avoid their collapse, especially in developing countries where resources are scarce. Finally, applied science becomes essential to develop medical countermeasures, support decision-making in coming disasters to minimize damage and improve public safety.

### References

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