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Global Response to COVID-19 for Emergency Healthcare Systems and Providers: From the IFEM Task Force on ED Crowding and Access Block

Coronavirus disease (COVID-19) was declared a pandemic by the World Health Organization (WHO) on March 11, 2020. (1) At the time of this press release, the virus has since affected 169 countries with over 300,000 confirmed cases and 14,000 deaths.(2) This release is aimed at emergency medicine providers and leaders around the world to advocate for methods that must be enacted immediately to protect the integrity of global emergency care as defined by the WHO. (3)

Analyses from data in China, Italy, and the U.S, show that the majority of cases are asymptomatic or mild, particularly for younger individuals. However, older age and comorbidities have been associated with hospitalization, necessity of ICU care, and death, although young and healthy individuals can die from the disease as well. (4,5) As of March 20, the data indicate a current global case-fatality rate of 4.2%, owing predominantly to deaths in elderly populations, with significant variation between countries. (6,7)

The impact of COVID-19 on patients is exacerbated when health systems are overwhelmed. Importantly, healthcare providers experience this strain as well, with frontline providers consisting of 8% of the total cases in Italy. (8) In China, nearly 15% of affected healthcare workers were in severe or critical condition. (9,10) COVID-19 presents a significant challenge to health systems across the world. Countries must take immediate action to prevent the collapse of emergency care and thus limit significant morbidity and mortality. (11) We recognize that many of the measures proposed here may appear extreme; repercussions to psychological health, economic stability, and longitudinal sustainability should not go without consideration. (12–14) To this end, for the vast majority of countries affected by COVID-19, especially for those with extensive exposure and transmission, this Task Force, on behalf of the International Federation for Emergency Medicine, recommends the following actions(15) (16):

1. Immediate and aggressive measures to limit transmission of COVID-19.

Social distancing (more than 2 meters), self-isolation of symptomatic individuals (including healthcare providers), self-quarantine of exposed individuals (for frontline healthcare workers working with COVID-19 populations, this means quarantine from family and friends), the cancellation of all large gatherings ('large' determined by region-specific guidelines) (17), closing of non-essential venues, and cancellation of non-essential services are initial steps that governments must take to flatten the incidence curve of the disease. Screening tools should be available and widely promoted to the public to facilitate self-identification of when quarantine is required. (18) This reduces the strain that healthcare and emergency care systems experience, permitting these systems to provide better care.



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2. Ensure that frontline providers are adequately protected from COVID-19 infection.

There is no patient emergency more important than the safety of our healthcare workforce. Appropriate, judicious use of personal protective equipment (PPE) is key. Adequate personal protective equipment, including masks, eye wear, gowns, and gloves, should be available for all healthcare workers and used in accordance with WHO guidance. PPE depletion is widely reported in the US and Italy, and it is likely that healthcare providers around the world may have inadequate PPE. This indicates the urgent need to institute PPE-sparing strategies, protecting local stock, recycling PPE, and implementing novel strategies to minimize the risk of transmission.

Efforts must be taken to ensure that frontline clinicians minimize their risk of COVID-19 infection. However, if providers are symptomatic, they should self-isolate to reduce the risk of transmission; this is necessary, although it reduces the supply of healthcare workers and further exacerbates the strain that emergency care systems experience. Healthcare providers at risk of developing serious disease (ex. age over 60, underlying comorbidities, immunosuppressed) should have work assignments that limit their exposure, including telemedicine responsibilities. (19) Emergency departments should develop institution-specific policies regarding staffing based on demographics of emergency care providers.

3. Protect vulnerable populations

Where possible, more vulnerable populations (ex. those that are older, have comorbidities, live in nursing homes, live in high-density housing, individuals experiencing homelessness), should be separated from known COVID-19 populations. Layers of defence, including identification and registration of vulnerable individuals, establishment of tiered hotlines, and mobilization of volunteers should be implemented for these populations to prevent additional surges of in COVID-19 patient volumes. Non-essential hospital visitation should be limited, and offsite testing should be available for the entirety of the population.

4. Create and preserve hospital capacity

In many countries, even with appropriate containment, mitigation, and suppression measures, it is expected that the surge of patients requiring hospitalization and intensive care will rapidly overwhelm current hospital capacities. Countries expecting this surge should prepare adequately – this may involve increasing the amount of elective surgeries before cancelling them, transferring all patients not requiring hospitalization to outpatient care, and increasing hospital and ICU bed capacity. In order to cope with surges, in-demand hospitals and emergency services should aim to regularly operate below peak capacity. During the response, if the ED is the receiving area for COVID-19 patients, crowding must be avoided so as to ensure patients with serious emergencies requiring hospitalization are not exposed or experience



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delays in care. Hospital capacity should be preserved during the response as well – for example, recovering patients should be transferred offsite (ex. hotels), and mild influenza-like illnesses should be diverted from triage in the emergency department, reserving it for higher acuity cases. In cases where there are decreasing workforce capacities, an alternative workforce may be trained and deployed in the healthcare and hospital system. This may take the form of redeploying significant numbers of temporarily redundant workers (ex. in the airline industry) to assist in hospitals in appropriate capacities.

5. Optimize emergency care operations to respond to a surge of suspected and critically ill COVID patients

The International Federation for Emergency Medicine recognizes the emergency care systems around the world will vary in their capacity to respond to a surge of patients. (20) Interventions include setting up and triage areas at all healthcare facilities, ensuring availability of off-site testing, training for medical/ambulatory teams in the management of COVID-19, and establishment and deployment of dedicated teams and ambulances for the care of COVID-19 cases. (16) Additionally, where possible, separation of emergency areas into zones for suspected cases and non-infected cases should be attempted. (21) Institutions must also prioritize the physical and psychological needs of staff. (22) Early consideration of which patients can be offered mechanical ventilation and the resources required demands urgent consideration of locally developed criteria for when to enact palliative measures.

IFEM recognizes COVID-19 will affect some countries more than others, and the response should be tailored accordingly. Nevertheless, in countries where there is risk of significant spread, immediate actions outlined here must be taken to minimize the impact of this virus. IFEM can play a role in information sharing and support between international emergency medicine clinicians.

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