



## COVID-19 and telemedicine: Immediate action required for maintaining healthcare providers well-being



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### ABSTRACT

The well-being of the health care workforce is the cornerstone of every well-functioning health system. As a result of the pandemic, medical healthcare providers are under an enormous amount of workload pressure along with increased total health expenditures. The overwhelming burden of COVID-19 illness could lead to caregiver burnout. Direct-to-consumer telemedicine can enable patients to connect with their healthcare provider at a distance. This virtual platform could be used by smartphones or webcam-enabled computers and allows physicians to effectively screen patients with early signs of COVID-19 before they reach to hospital.

### To editor,

Since the first case of the novel coronavirus SARS-CoV-2, also known as coronavirus disease 2019 (COVID-2019) was identified in Wuhan, Hubei province, China at the end of 2019, the number of new cases out of China has risen rapidly day to day. On 11th March 2020, the WHO Emergency Committee declared COVID-19 a global pandemic that will affect all countries on the globe [1]. To date, confirmed cases of COVID-19 have surpassed 240,000 cases and global death toll exceeds 10,000 people [2].

The well-being of the health care workforce is the cornerstone of every well-functioning health system. As a result of the pandemic, medical healthcare providers are under an enormous amount of workload pressure along with increased total health expenditures. The overwhelming burden of COVID-19 illness could lead to caregiver burnout. The major causes of psychological distress among healthcare workers are including long work hours, sleep disturbances, debilitating fatigue, and the risk of getting infection and put their family at risk of a life-threatening condition. According to the China's National Health Commission, more than 3300 healthcare workers had been infected and at least 22 have died. Unfortunately, in Iran, at least 40 healthcare workers have died due to COVID-19 infection and dozens have reportedly been put under observation after experiencing signs and symptoms of COVID-19 infection. Physicians' burnout and shortage of health care workforce has a serious consequences for patients and could

cause medical system on the verge of a devastating collapse [3].

In times of outbreak, emergency departments can be an overwhelming, chaotic places when a large number of patients arriving at local health care facilities. The most important aspect of being prepared is planning ahead. The concept of "forward triage" was designed for response to various types of crisis scenarios such as virus epidemics and catastrophes. Forward triage is the process of determining the patients' condition before they arrive in the emergency department. Direct-to-consumer telemedicine can enable patients to connect with their healthcare provider at a distance [4]. This virtual platform could be used by smartphones or webcam-enabled computers and allows physicians to effectively screen patients with early signs of COVID-19 before they reach to hospital. As a result, this could lead to a substantial decline in unnecessary patients visit, promoting self-quarantine and reducing emergency department overuse. Moreover, this approach provides remote monitoring of recently discharged patients, which is a crucial step in containing the outbreak. In addition, providing care from afar can help reduce the risk of clinicians' exposure to infections.

The use of telemedicine had been largely evaluated by numbers of hospital systems such as Jefferson Health, Cleveland Clinic, and the University of Pittsburgh that provide online neurologic assessment in patients need an emergency neurologic care [5]. China has also implemented real-time virtual consultation services that addresses the home health care needs for patients. Although limitations including payment, credentialing, ethical consideration, and staffing of specialists

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are also exist that needs to be taken into account.

The decline in workforce capacity of physicians and nurses raise serious concerns about diminishing the quality of health care delivery system. This fact will emphasize another important aspect of using telemedicine which is the ability to reinforce those health care workers that have been quarantined at home after exposure to COVID-19 and employ quarantined physicians to communicate with patients remotely via computer. It should be noted that telemedicine cannot replace in-person patient care, but could benefit other frontline physicians by reducing their workload and optimizing their time to attending to patients being in a critically-ill condition.

Creating telemedicine program takes time and does not happen overnight. It requires sources, funding and precise guidelines. Many countries have been already invested in telemedicine and received promising results. The chaotic flow of patients in the emergency departments pose a unique challenge to the maintenance of quality of care especially in times of crisis and pandemics. Forward triage via telemedicine can turn these obstacles into an opportunity and provide a pathway to overcoming patient flow and reducing the workload of physicians as well as minimizing the risk of exposure of healthcare providers. It should be remembered that planning ahead can drastically improve our crisis management capabilities. It is time for our experts from different fields to start addressing this issue and put their suggestions into practice.

#### Authors' contributions

BM and NRK highlighted the potential use of telemedicine for triage

of patients with COVID-19 and drafted the manuscript. ADM and EF contributed to the discussion and revised and formatted the manuscript. NM contributed to the discussion and revised the draft. All authors read and approved the final manuscript.

#### Declarations of Competing Interest

None.

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This is dedicated to honoring the memory of our brave fallen doctors and nurses who fought against COVID-19.

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