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Commentary

Kamran B. Lankarani [1]

[1]Health Policy Research Center, Institute of Health, Shiraz University of Medical Sciences, Islamic Republic of Iran. (Correspondence to: Kamran B. Lankarani: lankaran@sums.ac.ir).

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A report by Amnesty international released 13 July 2020 announced that more than 3000 health-care workers had died due to infection with SARS-CoV-2 since the beginning of the current pandemic (1). The highest death toll was from the Russian federation with 545 deaths, followed closely by the United Kingdom and United States of America with 540 and 507 fatalities, respectively. The report suggests these high figures are probably an underreporting of the true statistics. For example, the numbers in the United States alone are believed to be more than 800 as of July 2020 (2). While a major concern in some of these countries are disparities in the death toll among ethnic minorities with disproportionately higher death rates among black, Asian and minority ethnic (BAME) physicians (3), the case in the Islamic Republic of Iran

appears different.

According to data from the Islamic Republic of Iran Medical Council, 138 health-care workers in the Islamic Republic of Iran had died due to COVID-19 (23 July 2020) (4). While nursing staff constituted nearly 20% of the fatalities, another 20% were those working in other hospital services, as well as health technicians working in the primary health care system. However, nearly 60% of those who died were physicians, of whom 28% were general practitioners and 32% were specialists. This is in contrast to data from the United Kingdom where nurse fatalities outnumbered that of physicians (5).

Although the death of any health worker is a tragic loss, especially in the middle of a pandemic, the significant proportion of physicians dying from COVID-19 needs special attention.

A number of countries have raised concerns over the availability of personal protective equipment (PPE). However, this could not explain the disproportionate number of deaths of Iranian physicians. When considering that the exposure time of nurses to COVID-19 patients in hospitals, specifically in intensive care units, is several times greater than physicians, and yet both have the same access to PPE, then other factors are implicated. One factor may be the careless use of PPE by physicians. There is greater discipline to follow safety procedures in nursing, likely due to the presence of supervisors observing their activities. This is not the case for most physicians, especially senior grades, possibly resulting in inconsiderate use of PPE. Despite good knowledge on infection control practices, the real observation of these safety measures by physicians in practice might be as low as 3-26% (6,7).

While most hospitals in the Islamic Republic of Iran now provide PPE to all staff, the situation in out-patient departments, public or private, is not the comparable. There are more examples of negligence in following appropriate precautions in out-patient departments, such as non-observance of physical distancing resulting in crowded clinics increasing the risk of transmission. By contrast, it is much more feasible to observe physical distancing in hospitals with their no visitor policies.

Symptomatic patients arriving at clinics with atypical extra pulmonary manifestations may result in reduced observation of standard precautions by physicians, who consider their patients not having COVID-19. It is significant that several Iranian physicians who died from COVID-19 were not involved in hospital care of infected patients, including physicians from disciplines such as ear nose and throat and ophthalmology, but had confirmed exposure to infected patients with

atypical symptoms such as anosmia or conjunctivitis. More than 10% of Iranian gastroenterologists were found to have symptomatic COVID-19 in the early phase of the pandemic during late March 2020 (8). This high number could be related to the fact that up to 50% of SARS-CoV-2 infected patients may have had gastrointestinal complaints, even without respiratory symptoms, at the onset of the disease. In addition, many physicians can be negligent of their own health, resulting in a delay before seeking medical care, yet continue working despite the need for hospitalization or at least rest (9).

Moreover, the concerns over airborne transmission of SARS-CoV-2 outside of medical procedures have made the situation even more challenging. Any contact without proper physical distancing or in closed unventilated space could potentially increase the chance of transmittance of SARS-CoV-2. Added to this is the fact that any health-care worker fatality not only reduces available human resources needed to confront the pandemic, but also affects the mental health of remaining staff, reducing their capacities to carry out their work effectively, and disrupting family life. This issue needs to be taken seriously and health systems should have a programme in place for the safety of their staff.

In conclusion, Iranian physicians appear to be at a higher risk of death due to COVID-19. There are several suggested explanations for this disproportionately higher rate, and effective measures for all health workers, including physicians, should be enacted through a systematic approach (10). While availability of PPE and their proper use is of the utmost importance, the practice of hand hygiene and approach that all patients and visitors could be potentially infected should encourage physicians to follow strict infection prevention measures. Specific programmes to encourage the monitoring and support of health-care workers would address many of the risks mentioned, with a particular focus on physicians, who have been observed to be particularly negligent over their own health.

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