



The impact of COVID-19 in the healthcare workforce in Peru

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Dear Editors,

The coronavirus disease 2019 (COVID-19) outbreak has subdued all health systems, wreaking havoc throughout the world. As of 6 September 2020, the World Health Organization (WHO) has reported more than 27 million cases of COVID-19 and nearly 900 thousand deaths for this disease. The American continent reached more than 14 million cases and the most affected countries are the United States, Brazil, and Peru [1]. In Peru, as 6 September 2020, official reports from the ministry of health include 683,702 positive cases by either immunologic or molecular tests, and mortality is estimated to be approximately 4.34% [2].

On 15 March 2020, the Peruvian government initiated a countrywide quarantine, thus becoming the first country in the American continent to enter in an emergency state [3]. The government closed its borders, initially for 15 days. At that time, Peru had 71 COVID-19 confirmed cases; cases and deaths then increased exponentially, and Peru extended the quarantine on 31 July 2020, and then focused quarantine in some provinces until 30 September 2020. Unfortunately, given the national socio-economic context, Peru could not effectively handle the quarantine. Approximately 70% of the workforce in Peru is made up of informal workers who had no income during the extended quarantine. After a few weeks, the absence of these resources resulted in breaking of the quarantine and triggered a collapse of sanitary measures that we now live with.

This pandemic has showed the real dimensions of the crisis in our health system. Nearly 50% of our healthcare workforce serve in Lima, the capital city of Peru. This creates shortages and inequalities in geographic distribution of health personnel in

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Table 1 Peruvian population and physicians infected and killed by COVID-19 in Peru ([2, 8] Source: Ministry of health of Peru and Peruvian Medical College as of 6 September 2020)

Geographical regions	Total population			Physicians		
	Infected	Deaths	Case fatality (%)	Infected	Deaths	Case fatality (%)
Coast	518,343	24,935	4.81	2275	116	5.10
Highlands	62,907	2,217	3.52	750	27	3.60
Jungle	102,452	2,535	2.47	651	27	4.15

the country. There are additional structural and organizational deficiencies, such as lack of specialized laboratories, scarce intensive care units (ICU), and the scarcity of personal protection equipment (PPEs) [4, 5]. Undoubtedly, under these adverse conditions, healthcare personnel have been the perfect target for this virus [6].

In Peru, 58,404 physicians are practicing across the country, 21.9% of whom are > 60 years old, making them highly susceptible to COVID-19 [7]. According to a report from the Peruvian Medical College (PMC) by 6 September 2020, 3,676 physicians had contracted COVID-19, 81 of whom were hospitalized in ICU with mechanical ventilation, and 170 had died. The Peruvian coast is the geographical region with the highest mortality and percent case fatality among physicians (Table 1) [8]. The Peruvian Obstetrician College report that as of 6 September 2020, a total of 2035 obstetricians had contracted COVID-19 and 21 had died [9]. Unfortunately, there is no information about other categories of healthcare professionals.

Complicating this tragic situation, is a lack of efficient coordination between representatives of the central government, the Ministry of Health, and regional governments. Our health system was not prepared to handle the demand of health services because of these deficits and the result was the collapse of healthcare system, despite constant technical advice of the Peruvian Medical College (PMC) about how to manage the pandemic [10]. The system was ill prepared to handle the vastly increased needs for care. The PMC has had to use its own economic resources to mitigate the difficult situations of COVID-19 infected physicians in remote areas—even paying private air transportation to Lima (the capital city) for critically ill patients in search of better opportunities treatment [11].

Despite the new measures and extension of the state of emergency until the end of September 2020 declared by the Peruvian government to diminish the contagion rate, the future remains uncertain in our country [12]. It is urgent to improve the working conditions for the healthcare workforce, including the provision of more PPE, prioritization of attention to infected personnel, to improve the telehealth attention and allocate more financial resources in health. Only with these actions will Peru have more opportunities to manage adequately our COVID-19 patients.

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Compliance with ethical standards

Conflict of interest Authors declare they have not potential conflict of interest with this work.

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