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Physicians' deaths related to SARS-Cov-2 infections in Italy

Dear Sir,

A recently published paper by Ing *et al.* reports 278 physicians' deaths from COVID-19 in 21 countries (updated 15 April 2020) [1]. The majority of these reported cases (44%) occurred in Italy.

We would like to point out that this high proportion of COVID-19-related deaths among Italian physicians should not be considered a consequence of increased risk compared with other countries. Rather, these discrepancies in mortality rates are likely related to existing knowledge gaps, not only regarding reported deaths among doctors but also with respect to infection rates among physicians and other health care workers (HCWs). It is estimated that HCWs accounted for 12% of all COVID-19 cases in Italy [2].

More precise data on physicians' deaths are available, thanks to the efforts of the Italian Federation of the Colleges of Physicians (FNOMCEO), which updates a list of Italian doctors who have died from COVID-19 daily [3]. These open-access data on the FNOMCEO website include both active and retired physicians. We analysed these mortality data, excluding all deaths of doctors aged over 75 years [4]. Up to 15 April, 104 active physicians in Italy died of COVID-19, 48 (46%) of whom were General Practitioners (GPs); similar results were published by Lapolla *et al.* [5]. Ing *et al.* report GPs together with emergency room doctors; the FNOMCEO website, however, identifies no GPs as having worked in emergency medicine [1]. Emergency room doctors in Italy typically specialize in Emergency and Critical Care Medicine or Anaesthesiology, among other fields; alternatively, they may not specialize but will have some additional training in emergency medicine. In our article, we show that anaesthetists contributed to 3% of all deaths among Italian doctors, while first-aid doctors accounted for 2% [4]. Our analysis indicates that the second most frequent medical specialty, after GPs, is dentistry, and dentists accounted for 9% of all COVID-19-related deaths. This percentage is slightly higher than that reported by Ing *et al.* [1].

In conclusion, we commend Ing *et al.* for highlighting the need for task-appropriate preventive procedures for physicians with different medical specialties; they appropriately warn readers that the pandemic is still in its initial phase, and they predict increased fatalities among physicians in the future [1]. It is fortunate that recent data from Italy show a decreasing trend of deaths among doctors. Between 15 and 30 April, only 16 additional death cases were reported, and in May–June to date, only 10 doctors were listed on the FNOMCEO website. This decreasing trend may be related to the attenuation of the epidemic in Italy as a result of national restrictions. However, the role of

targeted preventive measures aimed at assisting health services in dealing with the emergency cannot be overlooked.

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Reply

We thank Dr. Modenese and Professor Gobba for their comments on COVID-19-related physician deaths in Italy. The course of the pandemic continues to change since our tabulations from 15 April 2020 [1]. As of 18 June 2020 the countries with the most deaths from COVID-19 in descending order are the USA, Brazil, the UK and Italy [2].

All countries have struggled to provide appropriate personal protective equipment to health care workers. We acknowledge the bravery and service of Italian physicians such as Roberto Stella who continued to care for patients despite running out of masks [3]. In our Results section [1] we recognized that the Italian National Federation of Medicine Surgery and Odontology had the most comprehensive listing of physician deaths of all the countries we examined. We regarded retired physicians who returned to work during the pandemic as physician deaths in the line of duty [1], and out of respect for their sacrifice used a more liberal age limit in our inclusion criteria.

General practitioners and emergency medicine physicians were listed together as a group because they are usually the first point of contact in patient care. Also, in