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Letter to the Editor

# COVID-19 mortality in Italy: The first wave was more severe and deadly, but only in Lombardy region \*



We read with great interest the work by Bongiovanni et al.<sup>1</sup>, who by comparing patients admitted to emergency room of ASST Rhodense, in Lombardy region, during the first wave (2-8 March 2020) and the second wave (19-25 October 2020), concluded that "the severity and the mortality of COVID-19 infection was lower during the 2nd wave of pandemic". Their findings confirm those found in a similar research by Borghesi et al., in Lombardy region.<sup>2</sup> Despite both these studies have similar relevant limitations, which are the lack of comparison with the final outcome, since the studies were carried out at the beginning of the COVID-19 second wave, and the fact that a "relatively small number of cases is not sufficiently representative of such a large target population",<sup>2</sup> they are well representative of the situation in Lombardy region, where official figures show 16,362 deaths (47.7% of all deaths in Italy) during the first wave (March-May 2020) and 15.515 deaths (18.9% of all the deaths in Italy) during the second and the third wave together.<sup>3</sup> However, Lombardy is just one of the twenty Italian regions. Therefore, the conclusion reached by Bongiovanni et al., that "in the second wave the mortality of COVID-19 pandemic was lower", is ambiguous and misleading, and, therefore, deserves to be clarified. Their statement, indeed, is true for Lombardy, but it cannot be generalized to the rest of Italy, where the total number of deaths was 34.260 during the first wave (from 21 February 2020 to 11 June 2020) and 38,535 during the second wave (from 14 September 2020 to 31 December 2020).<sup>4-6</sup> This opposite trend of deaths between Lombardy and the rest of Italy deserves to be highlighted and explained. Probably, this difference is due to the fact that many Southern Italian regions, which were spared by the first wave, were the hardest hit during the second wave. This was due in part to the relaxation of the severe lockdown measures<sup>7</sup> put in place in the context of the first strict and generalized lockdown -one of the world's longest and severe in Europe - which has been credited with getting the first wave under control.8 But this difference was also due to a decentralized national healthcare service that has generated different regional responses, in terms of hospital capacity and strategy, to the COVID-19 emergency.9

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## **Declaration of Competing Interest**

None.

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