

# Letter to the Editor

## Lethality rate of the two waves of the COVID-19 pandemic in Italy

Dear Editor,

In the current COVID-19 pandemic, the virus is showing a two-faced behavior: although in most cases it gives rise to an asymptomatic or paucisymptomatic infection, in someone the virus can act as an explosive fuse triggering a devastating cascade of autoimmune, inflammatory and dyscoagulative events. That happens especially in elderly and in subjects "fragile" for health problems in whom phenomena of pulmonary vasculitis and thromboembolism can result in a severe or fatal outcome<sup>1</sup>.

In Italy there have been two waves of the disease: the first one from February to May 2020; the second one, which began in September and is still in progress today, November 20, 2020; in this second wave the growth curve of infections was low in the first weeks, then from October 10 it became very steep until a few days ago when it became approximately flat.

A comparison between the two waves is difficult as during the first phase there was a very limited availability of molecular testing needed for the diagnosis of COVID-19. During the second wave, the number of swabs that could be done was much higher, although having even more would have been preferable.

Table I, reconstructed from the bibliographic entry website<sup>2</sup>, shows the death/infected ratio during the two waves (the second is still in progress) and in the intermediate period in which the new daily infections were few.

The lethality rate of the first wave appears to be very high (Table I); probably it appears much higher than the real one, due to the low number of swabs available and, therefore, the high number of unidentified infected. It is possible to hypothesize that the real infected people were about 8 to 10 times the 237,000 ascertained, but that can't be demonstrated.

During the second wave the number of people found infected is much higher whereas the lethality ratio is much lowered: 1.2%. At now the lethality rate is much lower than the first wave, mostly from the much higher number of swabs carried out that have identified many infected in asymptomatic people and among children and young people, in whom the disease is frequently less aggressive. Furthermore, the use of social distancing, masks and sanitization, as well as reducing infections, may have reduced viral loads in some infected. Eventually the second wave met the health organization and medical and paramedical personnel better prepared and experienced.

**Table I.** COVID-19 disease in Italy.

Period	Number of Cases	Deaths	Deaths/infected ratio
From January 2020 to June 15, 2020	237.290	34.371	14.48%
From June 16, 2020 to August 31, 2020	32.899	1.120	3.4%
From September 1, 2020 to November 20, 2020	1.075.578	13.078	1.21%
Total	1.345.767	48.569	3.6%

So the real lethality rate of COVID-19 in Italy appears to be close to 1 to 1.2%. However this not too high lethality rate of the disease must not lead to imprudent optimisms because it is unfortunately balanced by an extremely high contagiousness. Furthermore, a single disease, which in our country causes 600 or 700 deaths per day, cannot be underestimated.

In the absence of specific therapy and waiting for the vaccine, we must not let our guard down on physical distancing, the use of masks and the hygiene of the hands and surfaces we touch with our hands.

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### **Conflict of Interest**

The Authors declare that they have no conflict of interests.

### **References**

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- 2) <https://lab24.ilsole24ore.com/coronavirus/en>.

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