

COVID-19: global spread was inevitable

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The study on the effects of travel restrictions from China on the global spread of the virus published in Science

Restricting travel from China could not have been enough as a measure to prevent the global spread of COVID-19. This is the main conclusion reached by a group of scholars from an **international team**, including Italians **Marco Ajelli** and **Stefano Merler** from **Fondazione Bruno Kessler** in Trento, Corrado Gioannini, Maria Litvinova, Luca Rossi and Alessandro Vespignani from the ISI Foundation in Turin, that was published in the journal Science with the title *"The effect of travel restrictions on the spread of the 2019 novel coronavirus (COVID-19) outbreak"*.

The study shows that, by January 22, 2020, i.e. one day before quarantine orders were issued for the entire Wuhan area, the epidemic had already spread so widely across Wuhan and other provinces in China, that travel restriction measures to avoid the global spread of COVID-19 were ineffective. In fact, scholars estimate that the number of cases in Wuhan on January 22 ranged between 62,000 and 200,000, while only 270 had been reported to WHO by that date, and that the rest of China had already reached between 3,000 and 16,000 cases.

These numbers derive from the high rate of transmissibility estimated by the authors for China before the restriction measures, with each infected person transmitting the disease to other 2.6 people on average and with a doubling in the number of cases estimated in little more than 4 days.

The study also shows that further travel restrictions extended to the entire Country would have been insufficient to limit the spread of COVID-19, if they were not accompanied by a drastic reduction in transmissibility in China. And this did occur, but unfortunately too late to avoid the global spread of the virus. Among the countries most at risk of receiving COVID-19 cases imported from China, the study identifies Japan, Thailand, Korea, Taiwan and the United States.

*"These results – **Stefano Merler**, researcher with Fondazione Bruno Kessler commented – clearly show our fragility in the face of crises such as the one generated by the emergency of COVID-19. Thinking about it, it is hard to imagine what could have been done better in China. In less than a month, they spotted the new pathogen and in less than three months they almost stopped a rampant epidemic in China. But all this was not enough to avoid the global spread of the virus, due to the strong global*

interconnection, with tens of millions of people moving from one country to another every day. I also believe – Merler concluded – that this crisis clearly demonstrates the need for international coordination to deal with some types of crises, which cannot be effectively addressed if we do not study and previously share global containment plans and strategies“.

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