

## COVID-19, a pandemic or not?

The current outbreak of coronavirus disease 2019 (COVID-19), caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), continues to spread, and as of March 11, 2020, it has reached 115 countries, with 119 239 cases and 4287 deaths. In January, WHO decided to define the outbreak of COVID-19 as a public health emergency of international concern, which triggered the release of funding and other resources. Despite SARS-CoV-2 now being present in every continent apart from Antarctica, WHO remains reluctant to make the next step and call the outbreak a pandemic. On March 5, Tedros Adhamon Ghebreyesus, director-general of WHO, stated that while the outbreak might be uncontrolled in some settings, it is not yet uncontrollable and that would be the threshold to pass for the definition of a pandemic. However, on March 8, Tedros admitted that the threat of a pandemic is becoming very real, and should WHO decide to call the outbreak a pandemic, it would be "the first pandemic that could be actually controlled".

What are reasons behind WHO's reluctance to define the outbreak of COVID-19 as a pandemic and what difference would it make? There are mixed views about the impact that a declaration of a pandemic by WHO would have. On the one hand, a declaration of a pandemic would favour a change of strategy in managing COVID-19 with more focus on implementing social distancing measures and less emphasis on border closure, which might help to flatten the epidemic curve. Moreover, several insurance companies have policies that will pay claims only if a formal declaration of pandemic is made by WHO. On the other hand, senior WHO official Michael Ryan and others cautioned against "the dangers of using the pandemic word". The main concern is that calling the outbreak of COVID-19 a pandemic might prompt governments to needlessly or prematurely change their strategies in ways that could undermine their efforts at containment.

These concerns stem from the fact that in outbreak management, two approaches for disease control can be considered: if a pathogen has slow transmission capacity, containment is the approach that permits adoption of measures that limit the spread of a pathogen within well-defined foci (eg, identification and isolation of infected patients, contact tracing, and quarantine of small areas where cases have appeared); by contrast, when a

pathogen starts to spread rapidly and there is sustained local transmission, rendering it impossible to isolate all cases, mitigation measures should be put in place with aims such as slowing down the spread of a pathogen within a country or region. Mitigation measures, such as the closure of schools and banning of mass events, specifically aim at avoiding overburdening health systems with an escalation of cases in need of intensive care. The current lockdown of Italy in the face of the rapid increase of COVID-19 cases has this specific goal. The time gained through mitigation measures can potentially also allow the evaluation of new therapeutic options and in the long run the development of a vaccine. WHO's current position is that in most areas containment of COVID-19 is still possible, so a declaration of a pandemic would hamper the commitment of individual countries to put in place rapidly and effectively the required containment measures.

Independently from the potential definition of COVID-19 as a pandemic, the spread of SARS-CoV-2 around the world is putting into question the utility of travel bans, strongly opposed by WHO, that some countries have adopted to reduce the risk of introducing the virus in their territories. Banning incoming flights from countries with high numbers of cases of COVID-19 is not a watertight measure because it does not prevent infected individuals from arriving from countries with intermediate numbers where controls are less stringent. In addition, screening travellers for fever using infrared thermometers at airport customs and border checkpoints misses at least 25% of people with fever, making the measure suboptimal for stopping entry of the virus in a country. The fact that SARS-CoV-2 can be transmitted by asymptomatic infected people also puts in doubt the value of control measures such as screening at borders. For severe acute respiratory syndrome in 2003, despite extensive controls in airports, not a single case was detected before entering a country.

The uncertainty around COVID-19 being a pandemic is causing a disjointed response to the disease among different countries. Declaration of a pandemic, combined with clear and coordinated management guidelines, might help every country limit the impact of the disease and bring it more swiftly under control.

■ *The Lancet Infectious Diseases*



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*Lancet Infect Dis* 2020

Published Online

March 13, 2020

[https://doi.org/10.1016/S1473-3099\(20\)30180-8](https://doi.org/10.1016/S1473-3099(20)30180-8)