

## **Should we modify the barrier gestures in the face of emerging SARS-CoV-2 variants?**

Press release of the French National Academy of Medicine

January 22, 2021

SARS-CoV-2 mutations lead to the spread of several more transmissible clones, including the VOC 202012/01 variant, which appeared in England in September, and the 501.V2 variant, which emerged in South Africa in October. According to the WHO, these two clones spread rapidly throughout the world, reaching 60 and 23 countries and territories respectively, including France.

As the circulation of more contagious variants in the population is likely to worsen the current epidemiological situation, the French High Council for Public Health (HCSP) recommends wearing only surgical masks or category 1 fabric masks (Afnor standard) and extending the physical distance between each person from 1 to 2 meters.

As early as April 2, the National Academy of Medicine recommended the compulsory wearing of an "alternative" mask in the public spaces [1], based on the principle that an anti-projection mask covering the nose and the mouth of an asymptomatic carrier can prevent the transmission of the virus in his or her immediate environment. Although category 2 cloth masks and handcraft masks have a lower filtering capacity than surgical masks, their easier use had not been ruled out in order to favor the acceptance of a restrictive measure to be applied by everyone, every day and for a long time to come [2].

The reinforcement proposed by the HCSP is based on a precautionary principle justified by the risk of an epidemic recurrence, but there is a lack of scientific proof: variant or not, SARS-CoV-2 borrows the same access paths, with the same ability to pass through face masks. The effectiveness of "general public" masks has never been faulted when they are correctly worn. Thus, the ComCor epidemiological study shows that the majority of contaminations take place in conditions that allow the mask to be removed [3].

Abandoning category 2 fabric masks and home-made masks in favor of more protective masks calls into question the principle of the mask protecting the wearer's environment, and leads to the additional requirement of protecting the wearer of the mask. Such a change in the recommendations concerning a practice with which the entire population had managed to become familiar risks creating misunderstanding and reviving doubts about the validity of the official recommendations.

Similarly, while it is well accepted that physical distancing is a measure against transmission whose effectiveness increases with the distance between people, it is obvious that it cannot be respected everywhere, whether the limit is set at 1 m (WHO), 1.5 m (Germany, Belgium), or 2 m (Spain, Italy, United States). Extending the distance from 1 m to 2 m is a defensible proposal in theory, but inapplicable in practice. Aware of the threat accompanying the spread of more contagious variants in the population, **the National Academy of Medicine recommends** not to modify the barrier gestures such as they have been defined and improved for several months, but to repeat that they are more necessary than ever and to remind people of the good behaviors:

- the face mask must be worn permanently in the public space, even when the physical distance exceeds 1 meter;
- it must cover the mouth and nose and must be changed every 4 hours or when it becomes wet;
- the condition of the fabric masks must be checked after each wash with a detergent, and any trace of deterioration must lead to their elimination ;
- the compulsory wearing of the mask in public transport, where physical distance cannot be respected, must be accompanied by a very simple precaution: avoid talking and telephoning.

[1] Press release from the National Academy of Medicine "Covid-19 pandemic: enhanced barrier measures during containment and in the ex-containment phase", April 2, 2020.

[2] Press release of the National Academy of Medicine "The proper use of masks", September 7, 2020

[3] Institut Pasteur. Study of the socio-demographic factors, behaviors and practices associated with SARS-CoV-2 infection (ComCor), December 8, 2020