Scientific assessment and peer review of the studies on which the oral mask guidelines of the Belgian Government are based.

The document **"Mise à jour des recommendations sur l'utilisation des masques buccaux lors de la pandémie de COVID-19 - juin 2020"** (Updated recommendations on the use of face masks during the COVID-19 pandemic - June 2020) , drawn up by, among others, the Belgian Supreme Health Council and Sciensano, serves as a guideline for the face mask policy in Belgium.

An analysis of this document

Conclusion: There are no scientific elements present to assume that it makes sense to recommend the general population to wear face masks.

Context: the recommendations concerning mouth masks have been modified: In the old recommendations (April 2020), FFP2 masks were reserved for spaces in which aerosolization procedures are used and only in case of suspected or confirmed COVID19 cases. The current recommendations are stricter, although there is no real scientific evidence for this. Due to these new recommendations, FFP2 masks are now recommended for all healthcare personnel working in COVID departments, and also for all healthcare personnel coming into contact with COVID patients, longer than 15 min at less than 1,5 m, if the patient cannot wear a surgical mask.

Reference is mainly made to a new study

https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31142-9/fulltext
Published in The Lancet, in june 2020.

Physical distancing, face masks, and eye protection to prevent person to person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis

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This is a review of 172 observational studies. 30 of these studies examined the association between the use of different face masks and virus transmission. The recommendations are therefore based on these 30 studies.

When looking at these 30 studies, the overall conclusion is: there are no scientific arguments for the general population to wear face masks. The studies are of a very low quality, they are often about "12-16 layer cotton masks". According to those studies themselves, there is a "low-quality evidence".

The proof that masks would reduce the risk of infection can be categorized as "low certainty", which is identical to eye protection by the way.
“Low certainty: our confidence in the effect estimate is limited; the true effect could be substantially different from the estimate of the effect.”

A crazy quilt of studies

Upon analysis of the studies on masks, it soon turns out that this is a mishmash of studies that may (or may not!) be about face masks, letters to the editor, a case description about one patient, a study by a veterinarian, not peer-reviewed studies, ... Studies which describe themselves as:

- “subject to recall and reporting bias”,
- ”respondents may have been concerned that results could be used to evaluate their performance”(!!),
- “ investigation were heterogeneous across sites: different teams made different decisions regarding to how to define close contacts, how to categorize exposure risks, which close contacts to actively monitor, which types of exposure information to collect …”

Substandard quality

Actually, we could stop here already: the quality of the studies is simply insufficient!
Moreover, not only the quality of the studies is inferior, some studies just prove that wearing mouth masks outside the professional setting (in a hospital situation where aerosol-generating procedures are applied) and even within the professional setting is not significantly associated with an increased risk of infection:
“… association (risk for infection – always/not always/never medical mask) statistically significant *only* among Health Care Workers HCW in room with aerosol generating procedures.”

In a study with 121 hospital employees, 14 of whom had "high risk contacts" and 80 with "medium risk" they state:
“Because transmission-based precautions were not in use, no HCW wore personal protective equipment (PPE) recommended for COVID-19 patient care during contact with the index patient.”
Despite this fact, there are no more than 3 (three!!) who develop COVID19.

In another study with 372 HCW, 121 come into contact with SARS patients, only 40% used protection material. Despite this fact, only 8 persons become ill: 2 with mild symptoms, 6 with pneumonia.
If the infection rate without protection equipment, in a hospital environment with proven cases of infection, is already so low: what does that say about the general population?

There are studies that lead to recommendations, but certainly not in the ordinary population:
"These findings may help to guide recommendations for the protection of *high-risk occupational groups*".

So much for the 30 studies on which they rely.

Publication and peer review

A legitimate question then is: how is it possible that a WHO study of such low quality has been published? How has this ever been moved through the peer review?

You can find the answer in the study itself:
"according to contractual agreement, the funder provided review at the time of final publication."
OK, so in fact it is apparently a marketing document.
In addition, transparency about "the funder" is missing:

"This systematic review was commissioned and in part paid for by WHO." In part… Who contributed to the costs? That remains obscure.

Since when do we take a marketing document, name it a scientific study and base our policy on it?
Moreover, is the whole document still critically examined and proofread by objective scientists? The answer is shocking:
"All authors provided critical conceptual input, analysed and interpreted data, and critically revised the report."
So the authors themselves have been critical with regards to their own work …

In other words: if the intention was to come to dubious conclusions, in tabloid and children's novel style, then this document with the recommendations from the Belgian High Health Council and Sciensano succeeded very well. If the intention is to do scientific objectification and truth finding, on which policy makers can rely, given the potential impact on the economy and the immense side effects such as depression, anxiety problems, suicide, developmental disorders in our children, bankruptcies, etc ... Then the quality of the research is profoundly unsatisfactory and does not suit its purpose.

They clearly admit themselves that nothing really scientific can be concluded at the moment: “Further high-quality research, including randomised trials of the optimum physical distance and the effectiveness of different types of masks in the general population and for health-care workers’ protection, is urgently needed.”

Conclusion

There are no scientific elements present to assume that it makes sense to recommend the general population to wear face masks.