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Letter to the Editor

Comfort and compliance with the use of facemasks during COVID -19 infection

Dear Editor,

I found very interesting the article wrote by Swennen et al.[1] about custom-made 3D-printed face masks. The fabrication of this prototype is a promising idea and is a feasible alternative since medical, N95 and FFP2/3 masks are in shortage in different countries[2].

With respect to the authors, what I found essential before its massive production is its use in real-life situations. The reliability of mask not only depends on face seal leakage but also on its correct use, compliance and fitting[3].

Healthcare workers (HW) have to wear a mask for long periods and if the person feels discomfort wearing it, it would affect the compliance during its use. The discomfort experienced by HW has been associated with tight-fit models[4] It was previously demonstrated that flat fold N95 respirators offer and enhanced facial comfort without compromising its protection level[5].

In my opinion, the idea is motivating but I should recommend the fabrication of a thinner mask to enhance general comfort in HW.

It is also important to scan the face in neutral and while performing typical facial expressions as smiling, these facial movements may increase contact pressure at the chin[6].

Seal leakage, fitting, and compliance have to be validated in future studies. Since there is a lack of time to perform them, I strongly recommend the fabrication of thinner custom-made 3D-printed facemasks and the use of face visors as a barrier.

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Competing intersts

Nothing to declare.

Ethical approval

Not applicable.

Patient Consent

Not applicable.

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Reply to Letter to the Editor ''Comfort and compliance with the use of facemasks during COVID-19 infection''

We thank the author for their letter. The author correctly states that it is essential to use the mask in real-life situations before its widespread production. This is indeed correct, and no mask should be used until proven safe and not to cause complications, in particular dermatological issues.

The original article clearly stresses the importance of testing the prototypes of the mask and the fit of the mask against the face, as well as the fit of the filter in the filter holder[1]. This could be done with calibrated tests used by regulatory bodies

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