

Avoiding Diagnostic Lens Fogging During the COVID-19 Era: Options to Consider [Letter]

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Dear editor

The use of properly worn face masks by patients during slit-lamp examinations has become imperative during the COVID-19 pandemic. Unfortunately, vapor escaping from the top of a patient's mask can form condensation on the cool surface of hand-held examination lenses. This can make critical ophthalmic examinations such as funduscopy or gonioscopy very challenging. Pressing the patient's top of the mask against the dorsum of the nose or the cheekbones ensures that vapor exhaled by the patient is directed away from the lens, thus avoiding lens fogging. However, touching the patient's mask carries the risk of contamination. In this article, we offer alternatives to tackle the problem of hand-held examination lens fogging due to face masks, while avoiding the risk of SARS-CoV-2 contamination.

We read with interest the paper by Pérez González et al that was recently published in the journal.¹ The authors elegantly described a technique that reduces the risk of hand-held lens fogging during slit-lamp examination. The technique involves holding the lens between the index finger and thumb while pressing the patient's top part of the face mask against his/her cheekbone with the remaining 2 or 3 fingers.¹ The authors should be commended for sharing their valuable experience. However, we have to express certain concerns.

Despite the fact that the risk of SARS-CoV-2 transmission through tears is low, the front of the face mask should be considered contaminated. Indeed, the World Health Organization cautions against touching the outer surface of masks, and if that happens accidentally, immediate disinfection is needed.² Although we agree with Pérez González et al that the use of gloves may limit the risk of contamination, we should also bear in mind that touching the patient's mask and face increases the risk of contaminating the hand-led lens and other objects in the examination room.

We would like to share alternatives that we have found useful:

- Even before the patient enters the examination room, adhesive medical tape can be used to affix the top of the patient's mask at the dorsum of his/her nose and the cheekbones. Porous and hypoallergenic tapes can be used for patients with sweaty or sensitive skin.³ This should be done by staff using disposable gloves and ensures that the patient wears the mask properly not only during the slit-lamp examination, but throughout the consultation.
- Lens fogging occurs when the warm water vapor condenses on the cooler surface of the lens and forms tiny light-scattering droplets. Washing the lens

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with soapy water leaves a thin surfactant layer that reduces the surface tension and causes the water molecules to spread out evenly, thus forming a transparent layer. Therefore, the lens is less likely to mist up during the examination.⁴

- Finally, especially in patients with less-than-ideal cooperation during funduscopy (eg children), we have found the use of a non-mydratic fundus camera extremely useful for the examination of the posterior pole.

We hope these alternatives will be useful to colleagues during such challenging times.

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