COVID-19 Questions

Response prepared by the
PHRU in partnership with PRIIME

You asked

Is the re-use of surgical masks as safe as changing masks between patients?

How did we answer this question?

Conducted a rapid literature search assisted by an academic librarian

What did we find?

There is a distinct lack of data available on how long a mask can safely be worn either continuously or intermittently.(1)

Our search found only two relevant studies:

- Chughtai et al. (2019) found that the exterior layer of about 10% of masks collected were positive for at least one type of respiratory virus. The risk of contamination was higher if the mask was worn for longer than 6 hours (either continuously or intermittently) or if the provider saw more than 25 patients.(2)
- Macintyre et al. (2015) showed that the rate of viral infections among HCW's was low (<0.5%) and did not significantly differ between those who wore a mask continuously for at least four hours and those who followed routine practice (which included switching masks between patients and/or not wearing a mask).(3)

What does this mean for primary care practitioners?

The limited data available indicate that wearing a mask continuously rather than changing between masks may not present great health risks to primary care providers.

The outer surface of surgical masks is likely to become contaminated the longer they are worn and/or with higher numbers of patient contacts. To minimize risk of infections, healthcare workers should practice extreme caution when donning and doffing masks used for extended periods.

Given risks of self-contamination, it may be better to wear a mask continuously rather than donning and doffing between patients.

Can we trust this information?

While this is currently the best information we have at our disposal, it is informed by only two studies of low to medium quality. Additional research in this area is likely to shift the guidance on this important issue. Also, the studies we reviewed did not test for COVID-19 exposure.

References:

1. Chughtai, A. A., Seale, H., Islam, M. S., Owais, M., & Macintyre, C. R. (2020). Policies on the use of respiratory protection for hospital health workers to protect from coronavirus disease (COVID-19). International journal of nursing studies, 105, 103567. https://www.sciencedirect.com/science/article/pii/S0020748920300523
2. Chughtai, A. A., Stelzer-Braid, S., Rawlinson, W., Pontivivo, G., Wang, Q., Pan, Y., ... & MacIntyre, C. R. (2019). Contamination by respiratory viruses on outer surface of medical masks used by hospital healthcare workers. BMC infectious diseases, 19(1), 491. https://link.springer.com/article/10.1186/s12879-019-4109-x
3. MacIntyre, C. R., Seale, H., Dung, T. C., Hien, N. T., Nga, P. T., Chughtai, A. A., . . . Wang, Q. (2015). A cluster randomised trial of cloth masks compared with medical masks in healthcare workers. BMJ Open, 5(4), e006577. https://qe2a-proxy.mun.ca/Login?url=https://doi.org/10.1136/bmjopen-2014-006577

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