Plaintiff's Exhibit 120

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COVID-19, shortages of masks and the use of cloth masks as a last resort

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Critical shortages of personal protective equipment (PPE) have resulted in the US Centers for Disease Control downgrading their recommendations for health workers treating COVID-19 patients from respirators to surgical masks and finally to home-made cloth masks. As authors of the only published randomised controlled clinical trial of cloth masks, we have been getting daily emails about this from health workers concerned about using cloth masks. The study found that cloth mask wearers had higher rates of infection than even the standard practice control group of health workers, and the filtration provided by cloth masks was poor compared to surgical masks. At the time of the study, there had been very little work done in this space, and so little thought into how to improve the protective value of the cloth masks. Until now, most guidelines on PPE did not even mention cloth masks, despite many health workers in Asia using them.

Health workers are asking us if they should wear no mask at all if cloth masks are the only option. Our research does not condone health workers working unprotected. We recommend that health workers should not work during the COVID-19 pandemic without respiratory protection as a matter of work health and safety. In addition, if health workers get infected, high rates of staff absenteeism from illness may also affect health system capacity to respond. Some health workers may still choose to work in inadequate PPE. In this case, the physical barrier provided by a cloth mask may afford some protection, but likely much less than a surgical mask or a respirator.

It is important to note that some subjects in the control arm wore surgical masks, which could explain why cloth masks performed poorly compared to the control group. We also did an analysis of all mask wearers, and the higher infection rate in cloth mask group persisted. The cloth masks may have been worse in our study because they were not washed well enough – they may become damp and contaminated. The cloth masks used in our study were products manufactured locally, and fabrics can vary in quality. This and other limitations were also discussed.

There are now numerous reports of health workers wearing home made cloth masks, or re-using disposable mask and respirators, and asking for guidance. If health workers choose to work in these circumstances, guidance should be given around the use.

There have been a number of laboratory studies looking at the effectiveness of different types of cloth materials, single versus multiple layers and about the role that filters can play. However, none have been tested in a clinical trial for efficacy. If health workers choose to work using cloth masks, we suggest that they have at least two and cycle them, so that each one can be washed and dried after daily use. Sanitizer

spray or UV disinfection boxes can be used to clean them during breaks in a single day. These are pragmatic, rather than evidence-based suggestions, given the situation.
Finally for COVID-19, wearing a mask is not enough to protect healthcare workers – use of gloves and goggles are also required as a minimum, as SARS-CoV-2 may infect not only through the respiratory route, but also through contact with contaminated surfaces and self-contamination.

Governments and hospitals should plan and stockpile proper disposable products such as respirators and surgical masks to ensure the occupational health and safety of health workers. This appears to have been a failure in many countries, including high income countries.

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