

## Healthcare workers need better advice on cloth masks, biosecurity expert says

**(SYDNEY, Tuesday 7 April 2020):** The Kirby Institute's Professor Raina MacIntyre is calling for caution and evidence to give healthcare workers guidance on situations where supplies of appropriate personal protective equipment (PPE) are stretched or unavailable.

Professor MacIntyre, whose clinical trial on cloth face masks is the only [published research](#) of its kind, says that healthcare workers are growing increasingly anxious about dwindling supplies of respirators and disposable surgical face masks, which are the recommended PPE for treating sick patients, and are seeking alternatives such as cloth masks. The Centres for Disease Control (CDC), the leading national public health institute in the United States, [recently recommended](#) the use of bandannas in the absence of appropriate respirators or face masks, and supplies in Australia are also becoming depleted. "These are desperate times, and alternatives, and evidence to support them, are being sought," says Professor MacIntyre.

Professor MacIntyre's research, published in 2015, is being increasingly referred to by concerned healthcare workers – but her study cautioned against the use of cloth masks, finding that surgical masks were superior to cloth masks in protecting against infection. It also found that cloth mask wearers had higher rates of infection than the standard practice control group of health workers, many of whom wore no mask.

"Whilst the control group largely wore no mask, in some instances a surgical mask was used, in line with standard practice. This will have provided a level of protection for this group, and could explain why cloth masks looked worse than the control group," she explains. "The study was not designed to address the question of whether or not masks should be used, but rather, which type of mask was the most effective."

### **Cloth masks better than nothing – but only if used correctly**

Professor MacIntyre says that the most important advice for healthcare workers during the COVID-19 pandemic is **not** to work without personal protective equipment or where PPE is inadequate. If they choose to work in inadequate PPE, they should understand the current evidence to make an informed choice.

"The key point it demonstrated is that cloth masks do not protect as well as surgical masks and may increase your risk if not washed and replaced daily. It is critical for hospitals and governments to plan and stockpile proper disposable products to protect healthcare workers in a crisis such as the one we are currently experiencing."

Under the current circumstances and in light of global shortages, Professor MacIntyre suggests that healthcare workers could look to procure their own PPE if their employer is unable to provide it. "A range of reusable masks, including industrial respirators, may be available online, and these can be cleaned according to the manufacturer's instructions. It's important to look for products that have certified respirator status, which can be identified on the packaging, but waiting times may be long and even these supplies are short," she says.

“In the current circumstances, healthcare workers who choose to work with inadequate protection should be aware that any physical barrier over the nose and mouth should give *some* protection against self-contamination with the hands, but will not protect as well as a respirator or surgical face mask,” says Professor MacIntyre. “Cloth masks are certainly not as good.”

Cloth masks performed poorly in the study as they were found to have poor filtration, and can become damp and contaminated, creating an environment for infection. Professor MacIntyre says that correct use of cloth face masks involves daily washing and sterilisation. Other options are re-use or extended use of disposable masks. There is a lot of research currently underway of [sterilising disposable masks](#). But even this is risky - a new study shows that SARS-CoV-2 was found on [the outer surface of a mask 7 days after contamination](#).

“I suggest that cloth masks only be used in the general community, and people should have at least two and cycle them, so that each one can be washed and dried daily after use. Importantly, this advice is driven by informed common-sense, not research, but in these extraordinary times this is better than no advice at all or to have desperate health workers choosing not to wear a mask while working,” Professor MacIntyre says.

### **Coming together as a community**

Professor MacIntyre says it is a time for the medical research community and other industries to come together to support frontline healthcare workers. “Many of us, including medical researchers, industry and other workplaces have PPE stocks that healthcare workers dealing with COVID-19 are in desperate need of,” she says. “We need to be nimble and pool all our available resources. Let’s donate what we have to frontline clinicians.”

She says that the occupational health and safety of our health workers should be our top priority – not only in the context of their critical role during the COVID-19 pandemic, but in society at large. “If a large proportion of doctors and nurses become sick, or even die, the ability to respond to the pandemic and to treat other serious illness will be compromised,” she says. “Moving forward, we really need to ensure that stockpiling of PPE is far better than it has been leading up to this crisis.”

**ENDS**

For more information and resources, see <https://iser.med.unsw.edu.au/blog/impact-ppe-shortages-health-workers-during-covid19-pandemic>

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