

Weekly COVID-19 testing in healthcare and care home staff may reduce spread

April 24 2020, by Dr Sabine L. Van Elsland, Laura Gallagher



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A new report looks at how different testing strategies could help control COVID-19.

The World Health Organisation has called for increased molecular testing in response to the COVID-19 pandemic but different countries have taken very different approaches.

The [new report](#) investigates how effective alternative strategies could be for COVID-19 control, using a mathematical model.

The researchers estimate that weekly screening of healthcare workers (HCWs) and other at-risk groups irrespective of symptoms, using PCR or point-of-care tests for infection, would reduce their contribution to transmission by 25-33 percent, on top of reductions achieved by self-isolation following symptoms.

Healthcare workers have been disproportionately affected and infected by COVID-19, because of their exposure to infection from patients and fellow staff. They comprise between 4% and 19% of all reported COVID-19 cases in China and Europe.

In a survey of members and fellows of the Royal College of Physicians at the end of March, 11% in England reported being currently off work due to self-isolation as a result of their own COVID-19 symptoms or those of a household member. Transmission to and potentially among this high-risk group compromises both their own health and may also contribute to spread within hospitals.

The study authors suggest that widespread PCR testing in the general population is unlikely to limit transmission more than contact-tracing and quarantine based on symptoms alone, but could allow for contacts to be released earlier from quarantine.

The report was released on 23 April by the WHO Collaborating Centre for Infectious Disease Modelling within the MRC Centre for Global Infectious Disease Analysis, J-IDEA, Imperial College London, in

collaboration with the Vaccine Centre at the London School of Hygiene and Tropical Medicine. Since the emergence of the new [coronavirus](#) (COVID-19) in December 2019, the centres have adopted a policy of immediately sharing research findings on the developing pandemic.

Study author Professor Nicholas Grassly explained: "There has been substantial pressure on the UK government and others to 'test, test, test' in response to the COVID-19 pandemic. We find that testing is most useful when targeted at high-risk groups such as healthcare and care home staff, where regular screening in addition to testing of symptomatic individuals may prevent an additional 25-33 percent of their contribution to transmission in hospital and the community. Testing is also critical to monitoring the epidemic and the effectiveness of lockdown, but its role in the prevention of virus transmission in the community is likely to be limited."

Dr. Marga Pons Salort, another study author, added: "As countries are increasing their testing capacity, it's important to have a testing strategy that translates into a bigger reduction of transmission. This study shows that regular testing of healthcare workers, for example once a week, could reduce their contribution to transmission by 25 percent, provided that [test](#) results are delivered quickly (less than 24 hours after the swab is taken). This is in addition to the reduction in transmission seen when healthcare workers self-isolate after developing symptoms. It needs to be further studied how this strategy will reduce the acquisition of infection within hospitals, both for patients and for healthcare workers."

Testing crucial for tracking pandemic

Testing is essential for pandemic surveillance but the new report suggests its direct contribution to the prevention of [transmission](#) is likely to be limited to patients, HCWs and other high-risk groups.

Immunity passports—using infection testing or antibody testing to demonstrate that someone has had and recovered from COVID-19 and now has immunity—could help people return to work but these face significant technical, legal and ethical challenges, say the report authors.

Provided by Imperial College London

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