



Press Release

Issued: 17 June 2021

Fast, precise and unintrusive Covid tests trialled at University

A potentially more accurate, less invasive and cheaper method of screening for Covid-19 is being piloted at the University of Edinburgh.

Instead of the nasal and throat swabs used in current tests, a research project called TestEd has developed a way of detecting if someone has the virus from a saliva sample deposited in a tube.

Edinburgh researchers are applying an innovative approach called hypercube sample pooling which processes dozens of saliva samples for PCR testing at once. This saves time and money while maintaining accuracy, experts say.

Existing PCR tests are highly accurate but samples are normally taken at a test site and sent to a lab for individual analysis, which makes them costly. They are aimed at people with symptoms so do not capture true Covid-19 rates in the community. Rapid lateral flow tests can be carried out at home by people with no symptoms, but are less accurate than PCR lab tests.

The new approach uses the same accurate lab analysis as the standard PCR tests, but saves money and resources by pooling samples while negating the need for swabs.

The study will offer all students and staff at the University twice-weekly testing. TestEd aims to detect infections before symptoms appear to minimise the risk of transmission between members of the University community and assist the safe reopening of campus.

If the system proves successful, organisers hope it could offer benefits beyond the University, in workplaces such as offices, schools and factories which need access to regular testing.

TestEd recently won a £1.8 million grant from the Medical Research Council, part of UK Research and Innovation, to scale up its capacity to test staff and student volunteers and prove that its testing system works.

Since the project began on 11 January 2021, it has conducted more than 18,000 tests. The study aims to do half a million tests by the end of the year and will be made available to all staff and students as they return to campus and through the autumn semester.

The University community is still being advised to use the Scottish Government's free rapid-turnaround lateral flow tests. Volunteering for TestEd is also encouraged to support researchers in developing the potentially transformative technology.

Senior Vice-Principal Professor Jonathan Seckl said: "The pandemic has been in a phase of relatively low levels of infection in the community, but cases are now increasing and Covid-19 remains a serious risk to health. Therefore having a non-invasive, accurate and affordable method to screen large groups of people in the workplace or centres of education is a high priority.

"TestEd offers the promise to provide just such a test with real advantages over the existing approaches. I recommend taking part in the study to all students and staff on a regular basis."



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TestEd Chief Investigator Professor Tim Aitman said: “The rise in cases caused by the Delta variant and the subsequent pause in the easing of restrictions are a timely reminder that we will be living with this disease for some time. Against this backdrop, TestEd addresses three key challenges of Covid-19 testing to keep workplaces safe: its ease of use makes it highly acceptable to people, its pooling of samples makes it affordable, and its use of PCR technology maintains high levels of accuracy.

“TestEd is a transformative approach for testing very large numbers for Covid-19 and for keeping organisations and communities safe.”

More details about TestEd can be found on its website: <https://www.ed.ac.uk/tested-covid>

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