

Royal Statistical Society statement on proposed Covid-19 schools testing programme

The Royal Statistical Society (RSS) has major concerns about the scientific basis and safety of the Government's plans for Covid-19 testing using lateral flow tests in schools. The RSS is also concerned about inaccuracies and omissions in the information provided to schools in the Covid-19 "National Testing Programme: Schools and Colleges Handbook".¹

The policy up to now has been for contacts of known Covid cases, both staff and students, to remain at home for 14 (now ten) days, but not to be tested. The new proposal is for these contacts to be tested in school every day for seven days, and to only isolate if they test positive.

For the plan to work, we need to know that the lateral flow test can identify individuals who are developing a Covid-19 infection, before they spread it to others. As far as we are aware, there are no studies which show how well these tests work in school children when delivered by school staff, nor how well repeated tests work at detecting infection before it can spread.

The Government Handbook states: "These tests work" and "they were shown to be as accurate in identifying a case as a PCR test". The studies referred to were completed by Oxford University and Public Health England² and showed that the INNOVA lateral flow test missed 42% (158/372) of cases in the largest study, where Boots test-and-trace staff administered the test. Information from these studies is of limited value to schools as they were done in people mainly with symptoms. When the INNOVA lateral flow test's performance was evaluated in over 5,000 people without symptoms in Liverpool, over half of positives were missed, including 30% of those with high viral loads who were likely to have the highest risk of infecting others.³

The Royal College of Pathologists⁴ and others⁵ have stated that as lateral flow tests miss a substantial proportion of cases, they cannot be used safely to exclude disease. In the new testing programme for schools, individuals who have been exposed and have received a negative result will still have a significant risk of having the Covid-19 infection and spreading it to others. It is essential that those receiving negative results are told that they have significant risk of having the infection, so to avoid false reassurance. This advice is not in the Government Handbook.

Lateral flow tests are imperfect tests. They must be used with great care. The Chief Medical Officer has stated that they must not be used in ways that increase risk.⁶ Likewise, many care homes have decided that the test is too inaccurate to be used to screen visitors for Covid infection.

The RSS is of the opinion, based on the known science and evidence, that there is a substantial risk that these proposals are unlikely to be safe and call upon the Government to review them with urgency.

Professor Jon Deeks, co-chair of the RSS Working Group on Diagnostic Tests

18 December 2020



References

- 1) NHS Track and Trace. COVID-19 National Testing Programme: Schools and Colleges Handbook. 15 Dec 2020
- 2) Preliminary report from the Joint PHE Porton Down & University of Oxford SARS-CoV-2 test development and validation cell: Rapid evaluation of lateral flow viral antigen detection devices (LFDs) for mass community testing. 8 Nov 2020. <https://www.ox.ac.uk/news/2020-11-11-oxford-university-and-phe-confirm-lateral-flow-tests-show-high-specificity-and-are>
- 3) Cabinet Office, Department of Health and Social Care. Community testing: a guide for local delivery. Updated 30 November 2020. <https://www.gov.uk/government/publications/community-testing-explainer/community-testing-a-guide-for-local-delivery>.
- 4) The Royal College of Pathologists. Accuracy of Lateral Flow Antigen Tests for Covid-19. 14th December 2020 <https://www.rcpath.org/discover-pathology/news/accuracy-of-lateral-flow-antigen-tests-for-covid-19.html>
- 5) Deeks JJ, Raffle AE. Lateral flow tests cannot rule out SARS-CoV-2 infection. BMJ 2020; 371: m4787. doi: <https://doi.org/10.1136/bmj.m4787> (Published 11 December 2020)
- 6) House of Commons Science and Technology Committee Health and Social Care Committee. Oral Evidence: Coronavirus: lessons learnt, HC 877. Wednesday 9th December. Professor Whitty's response to Neale Hanvey, Q808.

