

Sir,

We are concerned that the government's leaked "moonshot" plan ("[Doubts cast on Boris Johnson's 'moonshot'](#)", 10 September), to test millions of people daily for Covid-19 does not appear to take account of fundamental statistical issues. This plan goes well beyond test-and-trace, for which the statistical basis is well established, and – judging on the basis of the leaked plan – its success may require new tests to be more accurate than diagnostic tests for any other disease.

This is not to say that the approach of mass testing is not right but to build a consensus among the scientific community for this, we must first understand precisely what the government's objective is and then assess whether mass testing is the best way to achieve it.

There are harms associated with testing – as there are with not-testing – and before the UK decides to move towards mass-testing, the balance of these harms needs to be assessed.

Tests cause harm when they miss or wrongly diagnose cases. Our current tests have 1 and 2% false positive rates – which, when millions are being tested every day, risks causing personal and economic harm to tens of thousands of people. This problem is exacerbated if the new tests, as is likely, are less accurate than the ones used currently.

If mass-testing can give people confidence that they are disease-free, tests need to detect nearly all cases. Our current tests miss around a fifth of those with the disease – if the new tests are even less sensitive, they may not be accurate enough for the safe running of events but could be useful for complementing social distancing measures.

We urge the government to make information about the new tests and their planned use available to enable broad discussion with experts and reach consensus and understanding on the balance of risks. The Royal Statistical Society is here to provide support with the essential statistical issues.

*Professor Sylvia Richardson and Professor Jon Deeks on behalf of the Royal Statistical Society Covid-19 Task Force*

*A shorter version of this letter appeared in the Times on 11 September 2020:*

<https://www.thetimes.co.uk/article/times-letters-loneliness-and-the-tender-care-of-the-elderly-bzmzc22bq> (paywalled)