



**By email**

[request-734936-c712418a@whatdotheyknow.com](mailto:request-734936-c712418a@whatdotheyknow.com)

Our ref: 09/03/tr/3000

07 April 2021

Dear Meric Kesic,

**Re: Vaccination data among health care workers**

Thank you for your request received on 09 March 2021 addressed to Public Health England (PHE). In accordance with Section 1(1)(a) of the Freedom of Information Act 2000 (the Act), I can confirm that PHE does hold some of the information you have specified. I have responded to your requests in the order raised:-

**1) *What information have you got on the pcr tests ability to know the difference between covid19 and any other coronavirus?***

A range of different PCR assays are being used by Public Health England for the detection of the Covid-19 virus. The specificity of each test is carefully evaluated including the ability to detect the Covid-19 virus (including variants) and to distinguish these from other coronaviruses. The specificities of the assays used are available from the individual manufacturers who are responsible for their production. Evaluations are also available in the peer reviewed scientific literature including that originally produced by an international scientific consortia which included staff from PHE and is available from the reference given below:

Corman VM, Landt O, Kaiser M, Molenkamp R, Meijer A, Chu DK, Bleicker T, Brünink S, Schneider J, Schmidt ML, Mulders DG, Haagmans BL, van der Veer B, van den Brink S, Wijsman L, Goderski G, Romette JL, Ellis J, Zambon M, Peiris M, Goossens H, Reusken C, Koopmans MP, Drosten C. Detection of 2019 novel coronavirus (2019-nCoV) by real-time RT-PCR. Euro Surveill. 2020 Jan;25(3):2000045. doi: 10.2807/1560-7917.ES.2020.25.3.2000045. Erratum in: Euro Surveill. 2020 Apr;25(14): Erratum in: Euro Surveill. 2020 Jul;25(30): PMID: 31992387; PMCID: PMC6988269.

**2) *What information have you got on why you test for coronavirus (flu and common cold) and not covid19?***

Public Health England performs a very wide range of tests for human pathogens including viruses transmitted via the respiratory tract (influenza, covid-19 and other coronaviruses). Data is published through periodic surveillance updates on the PHE website and in specific studies. Two examples of specific studies are given in the references below:

Beale S, Lewer D, Aldridge RW, Johnson AM, Zambon M, Hayward A, Fragaszy E. Household transmission of seasonal coronavirus infections: Results from the Flu Watch cohort study. Wellcome Open Res. 2020 Jun 19;5:145. doi: 10.12688/wellcomeopenres.16055.1. PMID: 33553677; PMCID: PMC7848853.

Aldridge RW, Lewer D, Beale S, Johnson AM, Zambon M, Hayward AC, Fragaszy EB; Flu Watch Group. Seasonality and immunity to laboratory-confirmed seasonal coronaviruses (HCoV-NL63, HCoV-OC43, and HCoV-229E): results from the Flu Watch cohort study. Wellcome Open Res. 2020 Dec 10;5:52. doi: 10.12688/wellcomeopenres.15812.2. PMID: 33447664; PMCID: PMC7786426.

**3) *What information have you got about the false positive rates for the pcr tests?***

No diagnostic test is 100% accurate, false positives and false negatives can occur depending on a number of factors not directly related to the test performance. Once in use, the performance of the test is continually monitored and reviewed for technical quality and performance. PHE is very aware of the risk of false positives where prevalence is low in the population being tested and is working with all Pillar 1 and Pillar 2 labs to put in place measures to reduce that risk including ensuring that appropriate CT values are being used and that where appropriate samples are re-tested to ensure results are as accurate as possible. Further information can be found through the following link - <https://www.gov.uk/government/publications/sars-cov-2-rna-testingassurance-of-positive-results-during-periods-of-low-prevalence> Daily reported case numbers exclude results that have been identified as false. In June 2020 the Scientific Advisory Group for Emergencies published a briefing paper on the impact of false positives and false negatives in the United Kingdom's COVID-19 reverse transcription polymerase chain reaction (RT-PCR) testing programme.

The briefing paper states that the United Kingdom operational false positive rate is unknown, and an attempt has been made to estimate the likely false-positive rate of national COVID-19 testing programmes by examining data from published external quality assessments (EQAs) for RT-PCR assays for other ribonucleic acid viruses carried out between 2004-2019. Results of 43 EQAs were examined, giving a median false positive rate of 2.3%. The paper can be accessed here: <https://www.gov.uk/government/publications/gos-impact-of-false-positives-andnegatives-3-june-2020>

**4) *What information have you got about the cycle rate of the pcr machines?***

The Cycle Threshold varies between the various platforms used within each testing laboratory, and is not therefore uniform. There is correlation between some Platform types, where all parts of the process are similar. Every PHE laboratory has determined the limit of detection for SARS-CoV-2 across all assays used for patient testing. Additionally, every PHE laboratory has in place a strategy for the confirmation of positive results when the screening result was above the threshold identified in the screening assays.

PHE does not hold this information for non-PHE laboratories. Many laboratories

contribute to the government's testing programme and PHE does not maintain central records of testing undertaken in each lab.

Under Section 16 of the FOI Act, public authorities have a duty to provide advice and assistance. Accordingly, you may wish to contact the Department of Health and Social Care, which may be able to advise further. The contact details can be found here:

<https://www.gov.uk/government/organisations/department-of-health-and-social-care>

If you have any queries regarding the information that has been supplied to you, please refer your query to me in writing in the first instance. If you remain dissatisfied and would like to request an internal review, then please contact us at the address above or by emailing [foi@phe.gov.uk](mailto:foi@phe.gov.uk).

Please note that you have the right to an independent review by the Information Commissioner's Office if a complaint cannot be resolved through the PHE complaints procedure. The Information Commissioner's Office can be contacted by calling the ICO's helpline on 0303 123 1113, visiting the ICO's website at [www.ico.org.uk](http://www.ico.org.uk) or writing to the ICO at Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF.

Yours sincerely  
FOI Team