Winter coughs and fevers will put huge strain on COVID-19 testing capacity

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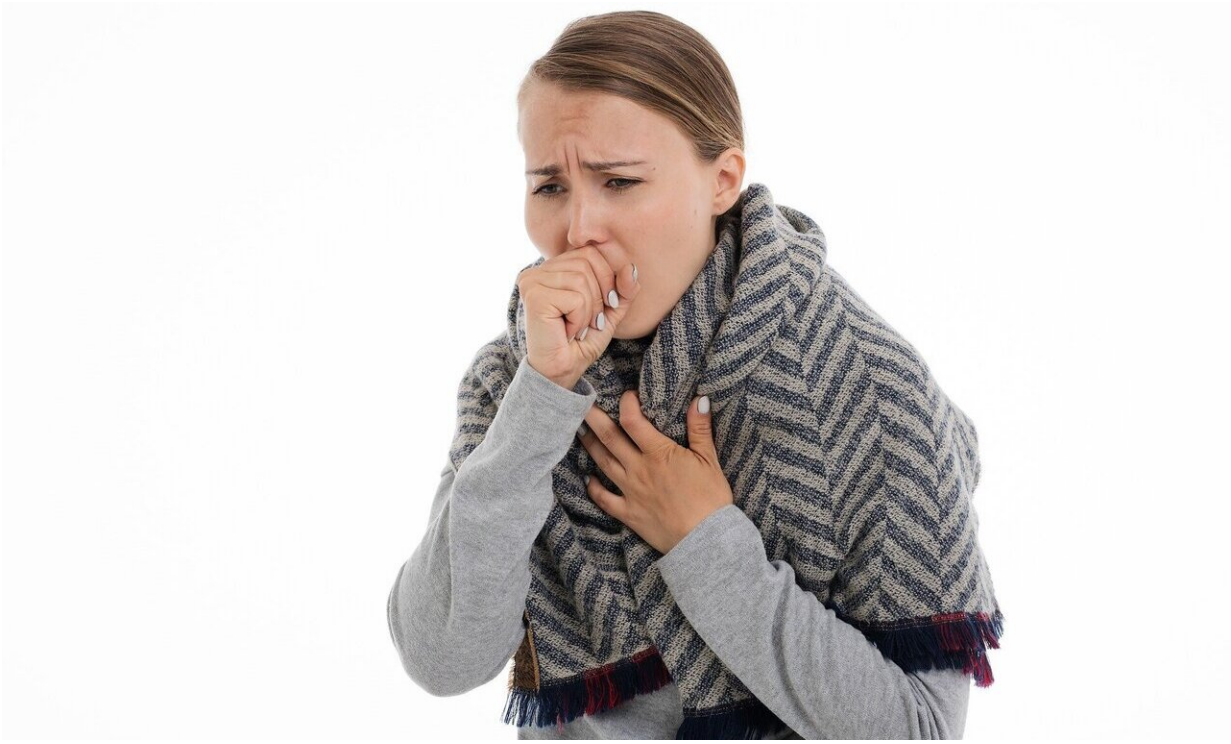

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Higher numbers of people with coughs and fevers in the coming months will place a significant strain on the UK's COVID-19 testing system and capacity must be immediately scaled up, finds a new modeling study led by UCL and Liverpool School of Tropical Medicine.

The study, currently published by Wellcome Open, quantified baseline cough or fever cases in the UK and looked at the impact this will have on COVID-19 laboratory testing services.

The researchers based their estimates on the incidence of cough and fever cases in 2018-2019, using data gathered as part of the UCL-led Bug Watch community cohort study. A total of 873 participants were included in the analysis providing a total follow-up time of 23,111 person-weeks.

Senior author, Dr. Robert Aldridge (UCL Institute of Health Informatics), said: "Our results show that a high incidence of cough and fever between October 2020 and February 2021 will place a significant strain on UK testing capacity. If capacity is exceeded to the extent predicted in our results, a significant proportion of COVID-19 positive cases are likely to remain untested and this will impact on our ability to provide public health advice in a timely manner to cases and their contacts in order to stop the spread of disease."

The research team predicted that cases of coughs and fevers would rise to 444,660 a day by December from 155,000 cases a day in August.

The researchers found that when only 40% of these predicted cases request tests, current capacity would be sufficient for the whole year, however as this proportion increases, they show current capacity becomes insufficient for predicted demand. When 60% request tests, demand in December 2020 and January 2021 exceeds current capacity by 58,308 and 9,121 tests per day.

If 80% of people predicted to have coughs and fevers requested test, demand would exceeds current capacity for five consecutive months from October 2020 to February 2021, with a peak of 147,240 tests per day above capacity expected in December 2020.

The authors assumed that the baseline incidence of cough or fever during the study period of 2018-19 is representative of 2020-2021. While social distancing and bans on mass gatherings may be impacting upon the incidence of the respiratory pathogens which cause these symptoms, they expect the reopening of schools and universities in the UK in September and increased use of restaurants, bars and other public spaces to maintain baseline cough or fever incidence at levels comparable to 2018-19.

First author, Max Eyre (Liverpool School of Tropical Medicine & Lancaster University) added: "Prompt identification of cases is critical for effective contact tracing and it is imperative that the UK's testing capacity is scaled up immediately to ensure that there is sufficient capacity to respond to this predicted rise in testing demand and ensure that detection of COVID-19 cases is not compromised.

"Delays in testing, due to lack of capacity, may also disincentivise people from getting tested and may result in unnecessarily extended self-isolation of COVID-19 negative households."

During the 2018-2019 Bug Watch study there were a total of 585 episodes of cough or fever, with participants experiencing 431 episodes of cough, 57 incidences of fever and 97 episodes with both cough and fever symptoms.

More information: Max T. Eyre et al. Impact of baseline cases of cough and fever on UK COVID-19 diagnostic testing rates: estimates from the Bug Watch community cohort study, *Wellcome Open Research* (2020). DOI: 10.12688/wellcomeopenres.16304.1

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