

To: 5.1.2e | 5.1.2e @ecdc.europa.eu]
From: 5.1.2e
Sent: Mon 9/21/2020 8:48:10 AM
Subject: could you please have a quick look: inquiry if it would stand a chance to be considered by eurosurveillance
Received: Mon 9/21/2020 8:48:13 AM
[20200803 manuscript PCR sensitivity.docx](#)
[20200803 supplementary PCR sensitivity \(1\).docx](#)

Dear 5.1.2e

Could you have a look at the attached manuscript to see whether eurosurveillance would consider it to send out for review? It is a really important study addressing an issue from daily practice: the sometimes low sensitivity of the SARS2 PCR. Unfortunately the bigger journals (Impact factor >10) don't seem to understand it or grasp the importance. The attached version was the first submission (to Science while similar approaches things were published at the same time in cell, nature med etc.))
Therefore I want to take the liberty to ask you whether it would make sense to submit it to eurosurveillance? It is of direct public health relevance. See below an excerpt of the cover letter.

Just so you know (and I know you do): no pressure, I accept of course Eurosurveillance's objective decision * which I know you always give.

Best wishes 5.1.2e

From the cover letter:

"After seven months into the COVID-19 pandemic, an accurate determination of the clinical sensitivity of SARS-CoV-2 molecular detection in routine respiratory samples is still a lacking, pivotal pillar of an adequate clinical and public health response that urgently needs to be addressed. Here, we determined the sensitivity of SARS-CoV-2 RT-PCR in URT samples based on Bayesian modelling of diagnostic outcomes of a large heterogeneous cohort of COVID-19 patients.

Control of the SARS-CoV-2 pandemic aims at reduction of the basic reproduction number (R_0) through physical distancing and early case-finding followed by case isolation and quarantining of close contacts, the so -called track and trace strategy. Especially when countries have succeeded in flattening of the epidemic curve through (partial) societal lockdown, the track and trace policy is essential to keep the R_0 below 1 and the extent of virus circulation under control. Worldwide, track and trace policies are based on molecular detection (RT-PCR) of SARS-CoV-2 RNA in URT samples. A thorough understanding of the (lack of) sensitivity of the SARS-CoV-2 RT-PCR on URT is a crucial aspect of an adequate track and trace policy .

To date, the precise sensitivity of RT-PCR on URT samples remains uncertain, because the very few studies addressing this issue have important limitations, such as insufficiently described methods thereby casting doubt on the validity of study outcomes, the use of cohorts of limited size and without a proper representation of the clinical variety in COVID-19, or the use of a doubtful gold standard. We determined the clinical sensitivity in relation to the number of days post symptom onset and different patient characteristics. Our results have important implications for both hospital-based care and public health, and could provide a solid foundation for SARS-CoV-2 testing, tracing and isolation guidelines..