


LETTER TO EDITOR

What should be the criteria for determining asymptomatic status in COVID-19?

S. Saurabh ^{1*} and C. Vohra²

¹From the Department of Community Medicine and Family Medicine, All India Institute of Medical Sciences (AIIMS), Basni, Jodhpur, Rajasthan 342005, India and ²All India Institute of Medical Sciences (AIIMS), Basni, Jodhpur, Rajasthan 342005, India

*Address correspondence to S. Saurabh, Department of Community Medicine and Family Medicine, All India Institute of Medical Sciences (AIIMS), Basni, Jodhpur, Rajasthan 342005, India. email: drsumansaurabh@gmail.com; saurabhs@aiimsjodhpur.edu.in

We read with interest the letter by Dr Jolobe.¹ WHO interim guideline on COVID-19 treatment describes an asymptomatic case ‘as a person infected with SARS-CoV-2 who does not develop symptoms’.² We concur with Dr Jolobe in that there has not been a universally agreed definition of ‘asymptomatic SARS-CoV-2 infection’. It has primarily been a diagnosis of exclusion wherein a SARS-CoV-2 infected individual without any of the known symptoms of COVID-19 is usually considered ‘asymptomatic’. We feel that an explicit definition of ‘asymptomatic SARS-CoV-2 infection’ is needed, which specifies which symptoms to exclude.

Also, the exact process of ascertainment of asymptomatic status in studies merits attention with regard to content of questionnaires or data collection formats and the process of patient interview. In the data collection formats developed during the early part of the COVID-19 pandemic, ‘anosmia’ had not been explicitly mentioned as a symptom for workup of suspected COVID-19 cases. For example, in the format developed by National Centre for Disease Control (NCDC), New Delhi, India in March 2020,³ which was used in our studies,^{4,5} ‘anosmia’ had not been explicitly mentioned. However, there was the option to record ‘any other symptom’. We were able to ascertain ‘anosmia’ and ‘ageusia’ (loss of taste) as part of self-reported symptoms by some patients. However, inclusion of specific symptoms in the data collection formats helps in their complete elicitation as the interviewer is more likely to specifically ask about them.

Further, on simply asking ‘what symptoms did you have?’ the patient is more likely to reveal those symptoms which they consider important in the context of COVID-19 or the recently developed symptoms. When a leading question is asked, such as ‘do you have loss of smell?’ or ‘do you have fatigue?’ then

patients are more likely to subsequently reveal the mild symptoms which had been missed in the first place. Apart from generalized symptoms such as ‘fatigue’ or ‘myalgia’, it also needs to be clarified whether SARS-CoV-2 infected individuals with symptoms not involving the respiratory system, such as ‘polyuria’, should be considered asymptomatic or symptomatic.

In the data collection format used by us, ‘general weakness’ had been a listed symptom which also captured ‘fatigue’. Since ‘fatigue’ is a non-specific symptom of viral infection, it is unlikely to increase the index of suspicion of COVID-19 by itself. However, it may be of clinical importance along with other respiratory symptoms. All symptoms work within a Bayesian framework of increasing or decreasing the likelihood of a clinical diagnosis over and above the pre-test probability.⁶ Within this framework, some symptoms would be of more clinical value in increasing the probability of COVID-19 diagnosis. However, with the widespread availability of rRT-PCR test, testing is sometimes done first to determine SARS-CoV-2 positivity and a detailed assessment of symptoms is done later. WHO case definition considers any SARS-CoV-2 infected individual to be a ‘COVID-19 case’.⁷ Therefore, the consideration of ‘symptomatic’ vs. ‘asymptomatic’ is of scant relevance when epidemiological data reporting is considered.

In the initial phase of the pandemic, there had been a delayed recognition of purely asymptomatic individuals and terms, such as pauci-symptomatic⁸ and mild COVID-19,⁹ were widely used. The term ‘pre-symptomatic’ was also often used with the understanding that most of the asymptomatic individuals will eventually develop symptoms.¹⁰ The use of these terms was also guided by caution, since emergence of any mild symptom could refute the asymptomatic classification of SARS-

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CoV-2 infected individuals. However, with the evolution of the COVID-19 pandemic, there has been an increasing recognition of the existence and transmission potential of asymptomatic infected individuals. It would now be best to consider that clinical manifestation of SARS-CoV-2 infection manifests as a spectrum, ranging from purely asymptomatic to severely ill. A strict dichotomy between asymptomatic and symptomatic might now be less necessary given the emerging consensus of adoption of universal infection prevention precautions. Nevertheless, asymptomatic SARS-CoV-2 infection has both clinical and epidemiological significance. Therefore, we suggest that it should be explicitly defined in terms of which symptoms to exclude and should not be merely based on clinician's judgement at the point of assessment. This would allow proportions of asymptomatics to be comparable across varied settings. Emerging evidence regarding COVID-19 symptoms should be incorporated in formats for clinical assessment of SARS-CoV-2 infected individuals.

We suggest that individuals truly without any symptoms and only with a CT finding or a subsequent sero-positivity should continue to be considered 'asymptomatic'. We feel that these findings of laboratory or radiological investigation should not be regarded as 'symptoms' of the patient.

Conflict of interest. None declared.

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