Preprocedural COVID-19 Testing for High Risk Procedures

To the Editor:

We read with great interest the study published in this issue of CHEST by Abbas et al\(^1\) that indicated that mandatory preprocedural COVID-19 testing for asymptomatic patients does not necessarily decrease infection rate among health care workers (HCW). Although it highlights the rate of symptomatic infection among the HCWs, the rate of asymptomatic infection among HCWs remains unknown. It is well-known that an age above 50 years, obesity, diabetes mellitus, heart conditions, and other chronic conditions are at high risk of severe infections.\(^2\) Because we do not have the demographics, comorbid conditions, and the vaccination status of the HCWs in this study, we would like to raise the awareness that the results should be interpreted with caution because the research may be done with the HCWs who are at low risk of serious infections. Further, given that the rate of positivity in Florida during the study was 8.5% (2% to 24%),\(^1\) the study may not be applicable for areas with higher infectivity rates. Major institutions across the United States still recommend mandatory preprocedural COVID 19 testing for asymptomatic patients who undergo procedures in a hospital setting that require anesthesia or deep sedation.\(^3\)\(^-\)\(^5\) We agree with Abbas et al\(^1\) that not mandating the test can reduce the burden on the health care symptoms and patients, but it may pose a risk to the HCWs. Until more data are available, replacing the reverse transcription polymerase chain reaction tests with rapid tests, extending the validity of preprocedure test results in specific scenarios may reduce the burden.\(^5\)

Because asymptomatic positive patients are a potential threat to HCWs with risk factors, more research is needed before loosening up the testing recommendation.

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References
To determine whether these HCWs could have been asymptomatic carriers who transmitted infection to other personnel and patients, we tracked all patients for 30 days after bronchoscopy. As mentioned in our study, 114 patients (17.2%) were tested in the 30 days after the procedure, and only one patient (0.8%) tested positive 27 days after the procedure.¹

Most of HCWs who worked in the bronchoscopy suite were vaccinated towards the end of study period, with majority completing their second vaccine dose in January and February 2021, which made it unlikely that vaccine offered significant protection from COVID during study period.

As you are aware, preprocedural COVID tests are done randomly without any consideration of patients’ exposure or symptom status and relied solely on the day of the procedure. It is very well possible that the test results could be false-negative if the patient is asymptomatic or during the presymptomatic phase. According to one study, the likelihood of false-negative nucleic acid amplification testing is 100% on the day of infection (day 1) and 67% on the day before symptom onset (day 4).² With regards to rapid antigen testing, although convenient, the sensitivity depends heavily on viral load, which typically is low early in infection. For a cycle threshold of 25 to 35 cycles on nucleic acid amplification testing, sensitivity of rapid antigen testing varies from 45% to 70%.³

We are concerned that the preprocedural COVID testing might provide a false sense of reassurance to HCWs and would like to emphasize that donning adequate personal protective equipment and vaccination is the biggest deterrent in protecting HCWs from COVID-19 infection. Last, we agree with Palaniswamy et al that a case-by-case decision should be made for which patients should get preprocedure COVID testing and that we should move away from current guidelines that all patients who undergo bronchoscopy should get preprocedure COVID testing.

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References

Misclassification of Safety Net Hospitals With National Data

To the Editor:

We compliment the recent retrospective study in CHEST (July 2021) by Williamson et al.¹ Using the Healthcare Cost and Utilization Project’s (HCUP) National Inpatient Sample (NIS), the authors investigated the association of safety net hospital status (SNH) on outcomes of acute respiratory failure. SNH status was based on the percentage of patients in each hospital whose primary insurance was either Medicaid or who were uninsured, a method loosely based on prior HCUP methods.²,³ The authors defined high-burden SNHs as those in the top tertile (>66th percentile) and low-burden SNHs as those in the bottom tertile (<33rd percentile) of percentage of patients with Medicaid or who were uninsured. The authors observed that admission to a high-burden SNHs was associated with higher odds of death and odds of tracheostomy.

The authors’ findings are significant, especially given inequities and disparities identified during the COVID-19 pandemic. However, their approach in defining the exposure variable, SNH, deviates from past standards published by HCUP and likely results in misclassification of some hospitals.³ Previous methodologic evaluations of SNHs by Sutton et al² and Reiter et al² defined SNHs as hospitals in the top quartile for percentage of Medicaid and uninsured patients within a given state. Using state-specific cutoffs for the top quartile is critical due to the wide variability in percentage of Medicaid and uninsured patients from state to state.