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To the Editor-in-Chief

Journal of Infectious Diseases

January 3, 2022

Dear Editor:

On behalf of my colleagues, I am pleased to submit to the *Journal of Infectious Diseases* a manuscript entitled, “Aligning staffing schedules with testing and isolation strategies reduces the risk of COVID-19 outbreaks in carceral and other congregate settings: A simulation study.” All authors have met the International Committee of Medical Journal Editors (ICMJE) criteria for authorship and have approved the commentary for submission. No persons other than the authors listed have contributed significantly to its preparation.

COVID-19 outbreaks in congregate settings remain a serious threat to the health of disproportionately affected populations. We developed a novel individual-based model accounting for individual infectiousness over time, staff work schedules, and testing and isolation schedules to simulate community transmission of SARS-CoV2 to staff in a congregate facility and subsequent transmission within the facility that could cause an outbreak. We found that systematic testing strategies in which staff are tested on the first day of their workweek prevented up to 16% more transmission events than testing strategies unrelated to staff schedules. To our knowledge, this is the first analysis to investigate the influence of the timing of staff testing on the efficacy of screening testing strategies. Furthermore, our analyses reiterate and quantify the importance of implementing timely isolation following testing, limiting test turnaround time, and increasing test frequency in high transmission scenarios.

We fill a critical gap in understanding of how to effectively implement COVID-19 screening testing of staff in congregate settings such as carceral facilities, homeless shelters, schools, and nursing homes to curb COVID-19 transmission. These findings have important policy implications for ongoing screening testing strategies that seek to improve the early identification and isolation of SARS-CoV2 infections to prevent widespread transmission. The analytic approach, findings, and implications fit well with the objectives of the *Journal of Infectious Diseases*, and we believe they would be of interest to a broad audience including policy-makers, public health practitioners, and infectious disease modelers.

Per request of the CDC COVID-19 Response and the urgency to share our findings with public health officials and scientists involved in developing effective testing strategies in congregate-settings, our manuscript was previously submitted to a preprint service (DOI: 10.1101/2021.10.22.21265396).

The contents of this commentary are our original work and have not been published prior to our submission to *Journal of Infectious Diseases*. There are no financial disclosures or conflicts of interest from any authors. We have listed a number of recommended reviewers suitable to assess the findings and methodology of the submitted manuscript below.

We greatly appreciate your time in reviewing this submission and considering our manuscript for publication. If any questions should arise regarding this submission or during the review process, please feel free to contact me at [choover@berkeley.edu](mailto:choover@berkeley.edu) or +1 (615) 476-5362, or any of the co-authors listed below.

Sincerely,



Christopher Hoover, PhD MPH

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Computational epidemiologist with expertise evaluating testing strategies to limit SARS-CoV2 transmission

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Epidemiological modeler with expertise modeling respiratory pathogens in congregate settings such as prisons

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