

# Community asymptomatic COVID-19 laboratory testing related hospital admission

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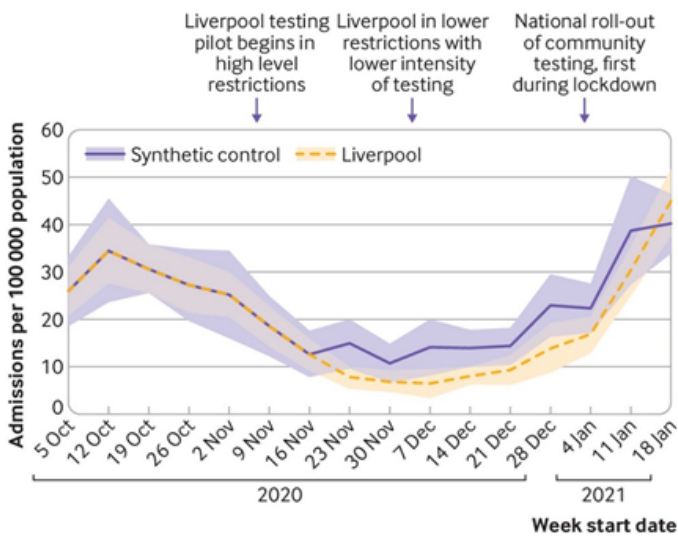
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## Editorial

Hospital admission laboratory screening for asymptomatic COVID-19 has been used in COVID-19 pandemic management, particularly mitigation of the healthcare staff,<sup>1,2</sup> whereas more than half of community-COVID-19 transmission may originate from asymptomatic persons.<sup>1</sup> Trend for the average COVID-19 hospital admission rates in Liverpool, United Kingdom across the middle layer super output areas (MSOAs), a standard geographical units in England compared with a synthetic control group during October 5, 2020 and January 17, 2021, using Hospital Episode Statistics provided by the National Health Service (NHS) Digital System (average population of 7,200 individuals), as demonstrated hospital admissions was low in Liverpool than in the synthetic control group that continued throughout December 2020 then rising abruptly in January 2021 coincided with the expansion of the community COVID-19 testing in other areas and matched that of the synthetic control group (Figure 1).<sup>2</sup> COVID-19-symptom-based testing has demonstrated to be not sensitive but specific.<sup>3,4</sup> Variation of in incidence of asymptomatic COVID-19 ranged from 18 to 81 %<sup>5-7</sup> due to different laboratory screening among countries' policies.<sup>8</sup>



**Figure 1** Demonstrating Trend in weekly covid-19 hospital admission rates in middle layer super output areas (MSOAs) in Liverpool city compared with a synthetic control group constructed from the weighted average of MSOAs outside Liverpool City Region without community testing. Community testing pilot for SARS-CoV-2 was introduced in Liverpool on 6 November 2020.<sup>2</sup>

In conclusion, at the hospital level, in those patients with any symptoms having low COVID-19 suspicion should be considered among the strategies of COVID-19 laboratory testing.

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## Conflict of interest

There are no conflicting interests declared by the authors.

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## References

- Cihlar JL, Harris BD, Wright PW, et al. Universal admission laboratory screening for severe acute respiratory coronavirus 2 (SARS-CoV-2) asymptomatic infection across a large health system. *Infect Control Hosp Epidemiol.* 2022;1-7.
- Zhang X, Barr B, Green M, et al. Impact of community asymptomatic rapid antigen testing on COVID-19 related hospital admissions : synthetic control study. *BMJ.* 2022;379:e071374
- Rivett L, Sridhar S, Sparkes D, et al. Screening of healthcare workers for SARS-CoV-2 highlights the role of asymptomatic carriage in COVID-19 transmission. *Elife.* 2020;9:e58728.
- Requena Me´ndez A, Mougkou A, Hedberg P, et al. SARS-CoV-2 testing in patients with low COVID-19 suspicion at admission to a tertiary care hospital, Stockholm, Sweden, March to September 2020. *Euro Surveill.* 2022;27 (7):2100079.
- Nikolai LA, Meyer GC, Kreamsner PG, et al. Asymptomatic SARS coronavirus 2 infection : invisible yet invincible. *Int J Infect Dis.* 2020;100:112-116.
- Mizumoto K, Kagaya K, Zarebski A, et al. Estimating the asymptomatic proportion of coronavirus disease 2019 (COVID-19) cases on board the Diamond Princess cruise ship, Yokohama, Japan. *Euro Surveill* 2020;25(10):2000180.
- Cassini I, Navazzi F, Giardina F, et al. Performance of VivaDiag COVID-19 IgM/IgG rapid test is inadequate for diagnosis of COVID-19 in acute patients referring to emergency room department. *J Med Virol.* 2020;92 (10):1724-1727.
- Gao Z, Xu Y, Sun C, et al. A systematic review of asymptomatic infections with COVID-19. *J Microbiol Immunol Infect.* 2021;54(1):12-16.