

In brief

Incidental COVID-19

21 January 2022

Summary

- Patients with COVID-19 may be asymptomatic and diagnosed with COVID-19 after admission to hospital.
- COVID-19 may be the direct cause for hospitalisation, have an indirect effect (on principal diagnosis and on delivery of care), or be incidental to the reason for hospitalisation.
- The percentage of hospitalisations classified as incidental COVID-19 varies. Internationally, it has been reported as between 12% and 63%.
- Internationally, reporting is often split by COVID-19 positive patients in hospitals or intensive care units admitted for COVID-19 and those admitted for other reasons.
- Many jurisdictions do not differentiate between patients admitted to hospitals with a principal diagnosis of COVID-19 and patients admitted to hospitals for other causes but with a positive COVID-19 result (incidental COVID-19).

Evidence

Definition

- [Incidental SARS-CoV-2](#) or “not COVID-19 associated” hospitalisations may refer to identifying patients who did not have a reason for SARS-CoV-2 testing outside of a hospital testing policy.¹
- A study from [South Africa](#) labelled patients as “incidental COVID” if they were “diagnosed as the result of hospital admission procedures, rather than having the typical clinical profile or meeting a case definition for COVID-19”.²
- A [Centers for Disease Control and Prevention report](#) defines an incidental positive SARS-CoV-2 test result as “asymptomatic or mild infection unrelated to the reason for hospitalization”.³
- The [NHS publishes a weekly breakdown](#) of the total number of COVID-19 patients in hospital and the number who are being treated “primarily” for COVID-19.⁴

Reporting on proportion of incidental COVID-19

Peer reviewed literature

- A report from Los Angeles County Public Health found that SARS-CoV-2 infection was incidental to the reason for hospitalisation in 12% of COVID-19-classified hospital discharges between August and October 2020.¹
- In a [study from Turkey](#), 42 patients were incidentally diagnosed with COVID-19 after admission and hospitalised for both COVID-19 and primary disease treatment.⁵
- In a cohort of [fully vaccinated patients with breakthrough SARS-CoV-2 infection](#) in Yale New Haven Health System, 46% were asymptomatic and admitted to hospital for a non-COVID-19-related diagnosis.⁶

- A study from South Africa reported that during the omicron variant outbreak, 63% of COVID-19 positive patients admitted to a hospital were labelled as “incidental COVID”.²

Grey literature

- A Centers for Disease Control and Prevention report found that among 915 paediatric patients with COVID-19 infections admitted to six hospitals in the United States between July and August 2021, 177 (19.3%) had incidental positive COVID-19 test results.³
- The Governor’s update on COVID-19 in [New York State, United States](#) provides a breakdown of COVID-19 positive hospitalisations based on the reasons for admission. As of 11 January 2022, 58% of the COVID-19 positive hospitalisations were admitted due to COVID-19 or complications of COVID-19; and 42% were admitted where COVID-19 was not included as one of the reasons for admission. For [paediatric hospitalisations](#) with a diagnosis of COVID-19, from 26 December 2021 to 1 January 2022, 59.4% were admitted for COVID-19 and 40.6% were admitted for other reasons but with positive COVID-19 results.^{7, 8}
- According to a press release by the Governor of [New Jersey, United States](#) on 10 January 2022, of 6,000 individuals with confirmed COVID-19 positive cases, 2,963 had a principal diagnosis of COVID-19. The remaining 3,037 (50.6%) were admitted for reasons other than COVID-19.⁹
- [Ontario, Canada](#) recently changed its reporting on COVID-19 hospitalisations. The publicly available dataset provides a [breakdown of COVID-19 positive hospital admissions](#), including percentage of COVID-19 positive patients in hospitals or intensive care units admitted for COVID-19 and percentage of COVID-19 positive patients in hospitals or intensive care units admitted for other reasons. As of 11 January 2022, 46.04% COVID-19 positive hospital admissions were for other reasons.^{10, 11}
- The [NHS England](#) provides a supplementary analysis of confirmed COVID-19 patients who are being treated primarily for COVID-19 and distinguishes between “those being primarily treated ‘for’ COVID and those ‘with’ COVID but for whom the primary reason for being in hospital was non-COVID related”. As of 4 January 2022, 13,045 beds were being occupied by confirmed COVID-19 patients across England and 8,200 (63%) were being treated primarily for COVID-19.¹²

Policy

- NHS England states that patients with COVID-19 but being admitted for other reasons still require segregated treatment areas away from patients without COVID-19.¹²
- Many jurisdictions do not differentiate between patients admitted to hospitals with a principal diagnosis of COVID-19 and patients admitted to hospitals for other causes but with a positive COVID-19 result (incidental COVID-19) in their infection prevention and control or COVID-19 management policies or guidelines.
- There are [news reports](#) of a surge in hospitalised patients with positive COVID-19 results especially since the Omicron outbreak, and the principal versus incidental COVID-19 hospitalisations requiring the same amount of infection control measures and resources. There are concerns that regardless of being a principal cause or incidental finding for hospitalisations, COVID-19 may exacerbate underlying health conditions and worsen the disease progression of hospitalised patients.^{4, 13, 14}

To inform this brief, PubMed and Google searches were conducted using terms related to incidental, diagnosis, hospitalisation, and COVID-19 on 12 January 2022.

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