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

- Incident 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

In brief documents are not an exhaustive list of publications but aim to provide an overview of what is already known about a specific topic. This brief has not been peer-reviewed and should not be a substitute for individual clinical judgement, nor is it an endorsed position of NSW Health.
COVID-19 Critical Intelligence Unit: Incidental COVID-19

• 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.
References


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