Hospital onset COVID-19 mortality in Scotland

7 March to 30 June 2020

A management information publication for Scotland

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About this release

This release by National Antimicrobial Resistance and Healthcare Associated Infection (ARHAI) Scotland, part of NHS National Services Scotland, under the Health Protection Scotland (HPS) COVID-19 response, provides data for COVID-19 hospital onset mortality in Scotland for the period 7 March to 30 June 2020.

Deaths occurring in patients with COVID-19 are an important measure of patient outcome. Therefore, monitoring COVID-19 mortality in hospital patients and publishing the data is critical to improve care of patients, inform the development of infection prevention and control measures, shape policy and guide research. Further information on the epidemiology of COVID-19 in healthcare settings can be found on the Health Protection Scotland website.

A report on COVID-19 hospital onset cases is published weekly and is available from: https://beta.isdscotland.org/find-publications-and-data/population-health/covid-19/hospital-onset-covid-19-cases-in-scotland/

Main points

- This report describes patients diagnosed in hospital with COVID-19 who die from all causes within 28 days.
- More than a quarter of patients diagnosed in hospital died within 28 days. A third of patients with a probable or definite hospital onset died within 28 days.
- The difference is mainly due to differences in demographics. Probable or definite hospital onset COVID-19 cases were older. Cases diagnosed in the first two days of admission were younger. Older cases are likely to be sicker and have more underlying ill health.
- Mortality data were adjusted for age, sex and month of diagnosis. There was no difference observed between the hospital onset categories.
- Older patients in hospital have an increased risk of infection. This includes COVID-19. These patients are more likely to die from other causes. The causes can not be identified using all-cause mortality.
- Preventing hospital transmission of SARS-CoV-2 is critical. This will reduce morbidity and mortality from COVID-19. This is more so for older hospital patients. Infection prevention and control, and early detection and management is vital. This will reduce the spread of SARS-CoV-2 in hospital settings.

Table 1: Number of COVID-19 deaths by onset status in Scotland overall: specimen dates up to 30 June 2020.[1,2,3]

Hospital onset status	Mortality within 28 days (n)	Mortality within 28 days (%)	Total Cases
Non-hospital onset (day 1 or 2 of admission)	919	26.1%	3,515
Indeterminate hospital onset (days 3-7)	73	24.3%	300
Probable hospital onset (days 8-14)	96	35.3%	272
Definite hospital onset (days 15+)	332	31.6%	1,051
Scotland	**1,420**	**27.6%**	**5,138**

1. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) data, the Rapid Admission Preliminary Inpatient Data (RAPID) data or local admission data, and National Records of Scotland (NRS).
2. The data used has not been adjusted for potential factors that may affect mortality e.g. severity of COVID-19 disease and patient comorbidities.
3. Cases diagnosed in the community (not during an inpatient stay) were excluded from these analyses

Background

National Antimicrobial Resistance and Healthcare Associated Infection (ARHAI) Scotland, part of National Services Scotland works closely with Public Health Scotland to deliver under the Health Protection Scotland (HPS) COVID-19 response. Local and national monitoring in hospital settings is required to reduce COVID-19 infections.

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Further Information

Find out more in the full report and on the COVID-19 pages on the HPS website.

The next release of this publication will be 26 November 2020 (subject to additional cases in the intervening period).