

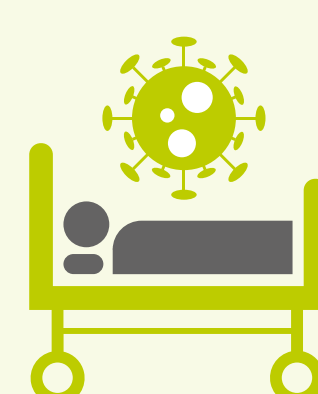
# Long-term outcomes following hospital admission for pandemic COVID-19 versus seasonal influenza: a cohort study

Previous comparative analyses of hospital admission for COVID-19 (pandemic phase) versus seasonal influenza have evaluated a narrow set of health outcomes up to 6 months following infection

Analyses of both the acute and long-term risks of a comprehensive set of health outcomes following hospital admission for COVID-19 (pandemic phase) versus seasonal influenza have not previously been conducted

### STUDY AIM:

To examine the acute and long-term risks and burdens of a comprehensive array of 94 health outcomes, health-care utilisation and death for an 18-month period following hospital admission for pandemic COVID-19 (March '20–June '22) or seasonal influenza (Oct '15–Feb '19) in the US



### METHODS:



Data were obtained from the health-care databases of the US Department of Veterans Affairs

### Study populations:

#### COVID-19



81,280 participants admitted to hospital between 1 March 2020 – 30 June 2022

#### Seasonal influenza



10,985 participants admitted to hospital between 1 October 2015 – 28 February 2019

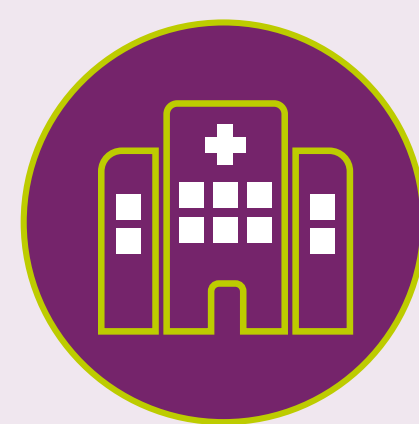
### Risks and burdens evaluated over 18 months:



- prespecified set of 94 individual health outcomes
- ten organ systems
- overall burden across all organ systems
- death
- hospital readmission
- admission to intensive care

## COMPARISON OF KEY FINDINGS

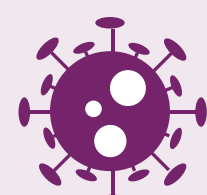
The rates of death and adverse health outcomes were high for both **seasonal influenza** and **pandemic COVID-19**, although the long-term risks of these outcomes was higher with COVID-19 in nearly every organ system, except for the pulmonary system where the burden was higher with seasonal influenza



	Seasonal influenza group	Pandemic COVID-19 group	Excess rate in the COVID-19 group
Cumulative death rate at 540 days	<b>19.84</b> per 100 persons (95% CI 19.07–20.59)	<b>28.46</b> per 100 persons (95% CI 28.14–28.78)	<b>8.62</b> per 100 persons (95% CI 7.55–9.44)
Percentage of prespecified health outcomes with increased risk	<b>6.4%</b> (6/94 including 3/4 pulmonary outcomes)	<b>68.1%</b> 64/94 including 1/4 pulmonary outcomes	Not reported
Cumulative rates of adverse health outcomes across all organ systems	<b>536.90</b> per 100 persons (95% CI 527.38–544.90)	<b>615.18</b> per 100 persons (95% CI 605.17–624.88)	<b>78.72</b> per 100 persons (95% CI 66.15–91.24)
Total number of DALYs across all organ systems	<b>242.66</b> per 100 persons (95% CI 236.75, 247.67)	<b>287.43</b> per 100 persons (95% CI 281.10–293.59)	<b>45.03</b> per 100 persons (95% CI 37.15–52.90)

There was a higher burden of health loss in the **post-acute** than the **acute phase** for both viruses

Pandemic COVID-19 also had an increased risk of **hospital readmission** and **admission to intensive care** compared to seasonal influenza:



EXCESS RATE PER 100 PERSONS IN THE COVID-19 GROUP 100

Hospital readmission



(95% CI 16.10–24.86)

Admission to intensive care



(95% CI 6.68–11.82)

The substantial cumulative burden of health loss in both (seasonal influenza and pandemic COVID-19) groups calls for greater prevention of hospital admission for these two viruses and for greater attention to the care needs of people with long-term health effects due to either seasonal influenza or SARS-CoV-2 infection