

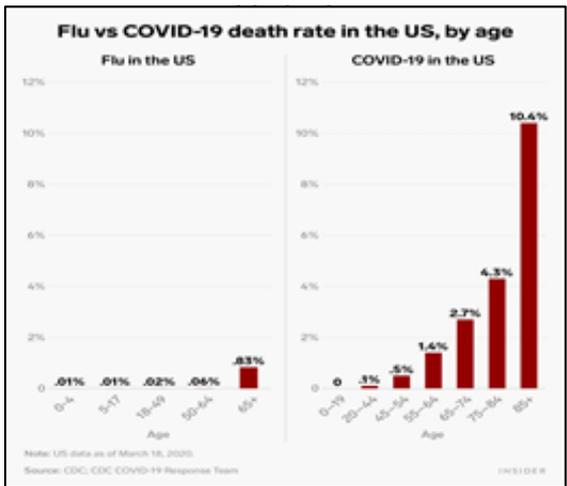
An Imperative of Flu Vaccination: A Systematic Review of the Clinical Characteristics of Influenza-COVID-19 Co-Infection

Karan Varshney, MPH, Rutvin Kyada, MPH, Jenna Adalbert, BS

Introduction

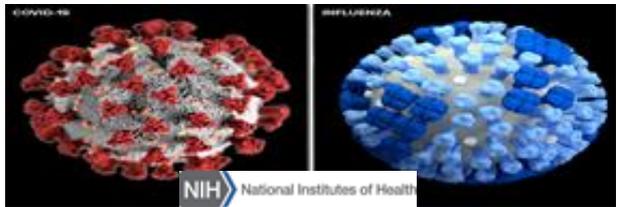
COVID-19 and influenza are deadly respiratory pathogens with high mortality rates, each posing a major threat across the globe; death rates are shown in the figure below. The two infections present similarly, and are difficult to distinguish clinically. Furthermore, there is currently little known regarding the effects of co-infection with these pathogens, particularly on patient morbidity and mortality.

Hence, we systematically reviewed the literature to describe the clinical characteristics of influenza-COVID-19 co-infection.

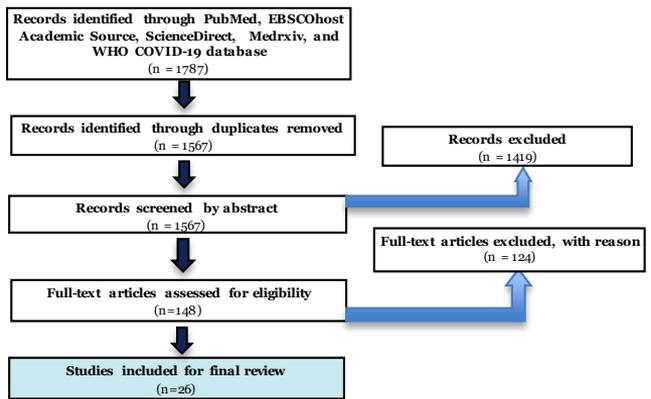


Clinical Relevance

Vaccination for influenza is critical to reduce co-infection mortality risk. Given the similar clinical presentation of these pathogens, we emphasize the NIH's recommendation that co-screening is appropriate based on symptoms.



Methods: Workflow



Results

- In total, there were 544 co-infected patients. In addition to COVID-19 infection, 85.8% of patients were infected with Influenza A, and 14.2% were infected with Influenza B; a single patient was infected with both strains of influenza.
- 13.8% of patients had at least 1 comorbidity, with the most common comorbidities being hypertension and diabetes.
- For cases with known outcomes, the case fatality rate for individuals co-infected with COVID-19 and influenza appears to be high at 16.9%.

Patient Characteristics (n= 544)	
Mean Age	59.5 years (SD=8.7)
Males / Females	47.4% / 52.6%
+ comorbidity	13.8%
COVID-19 outcomes	
Died	16.9%
Remained in critical care	0.6%

Conclusions

Co-infection with COVID-19 and Influenza manifests with symptoms similar to infection with either of these pathogens. Our work suggests that co-infection may increase mortality risk, though more research is still required.

Limitations: 1) lack of controls in studies 2) only involved patients in clinical settings, which may have shown higher mortality rates because individuals with severe forms of disease may have been overrepresented

References available upon request. Please contact the corresponding author at: kvarshney@deakin.edu.au

