



Systematic Review

Rate of Hospitalizations and Mortality of Respiratory Syncytial Virus Infection Compared to Influenza in Older People: A Systematic Review and Meta-Analysis

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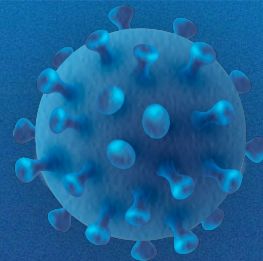
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RESPIRATORY VIRUS
SUMMIT

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Background

- ❑ Unlike influenza, the epidemiological impact of RSV infection in older adults has only recently gained importance
- ❑ Clinical presentation ranges from a mild cold to a **serious respiratory illness** with complications comparable to those caused by influenza and other respiratory viruses, especially in hospitalised RSV patients aged >60 years and in those with underlying health conditions .



Importance of **vaccination** for RSV in older people

Aim and Objectives

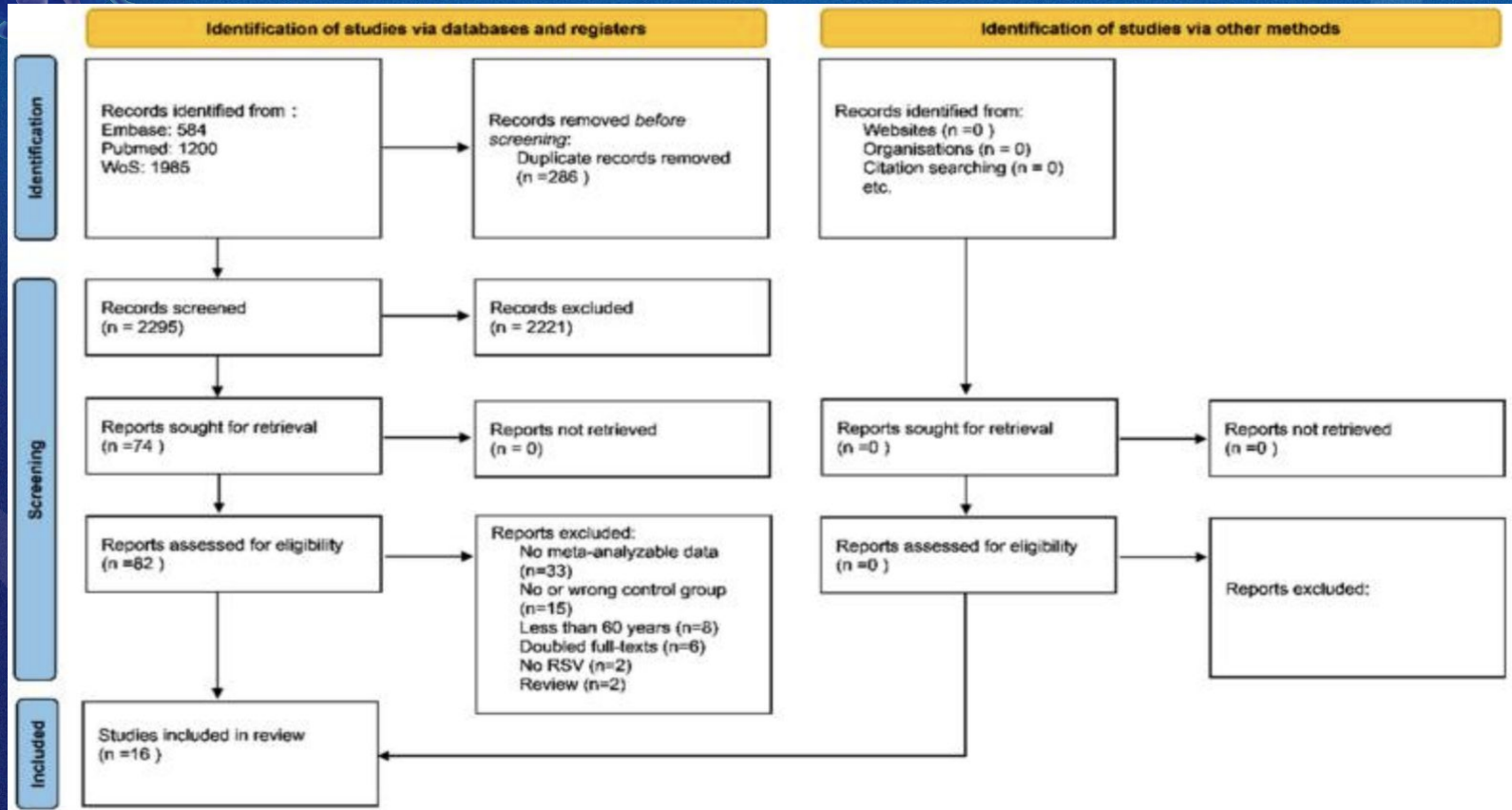
The data regarding the impact of RSV are still limited for older people



Compare the rate of hospitalization and mortality between RSV and influenza in this population.

PICO question	Inclusion
P	≥60 years
I	RSV
C	Influenza or healthy controls
O	Incidence of hospitalization and/or mortality
S	Prospective, retrospective

Results: PRISMA Flow chart

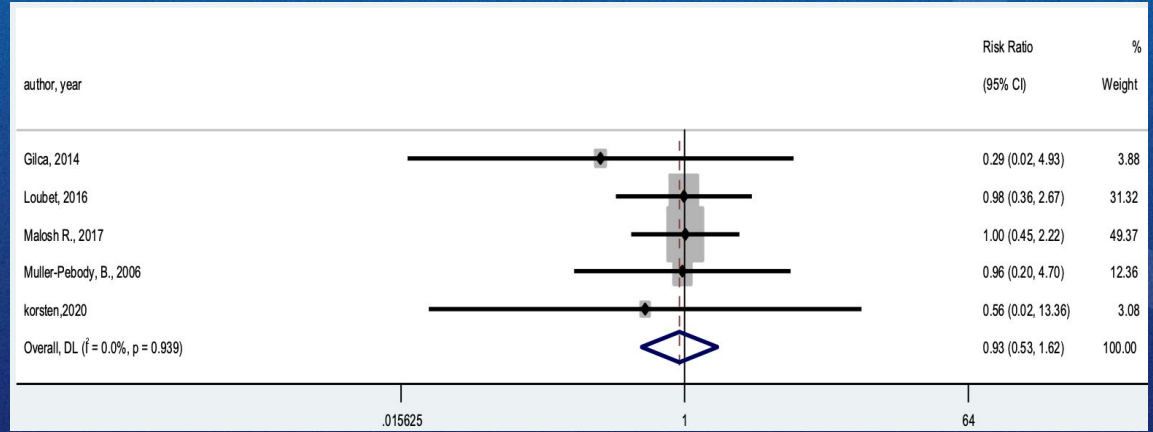


Results: characteristics of the studies

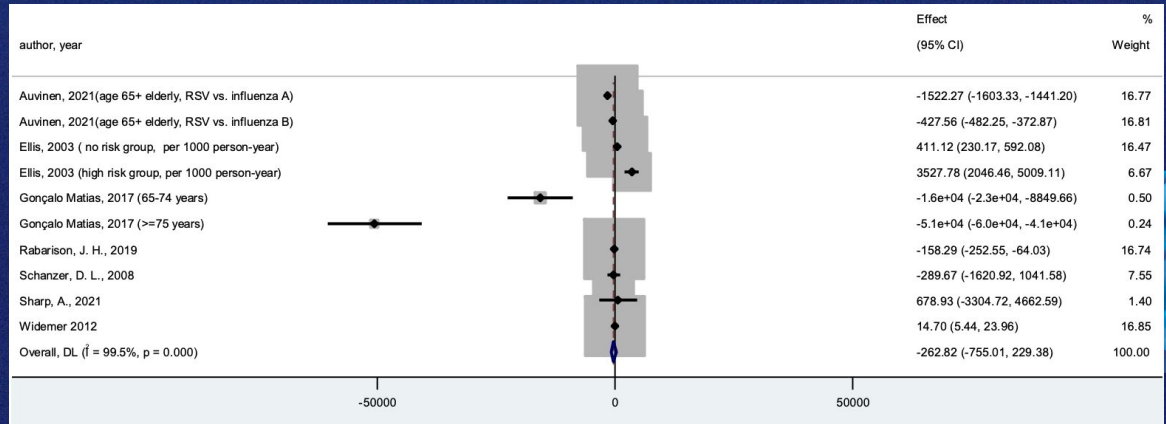
Author, Year	Type of Study	Size	Age	Diagnosis of RSV and Influenza	(Months)	NOS
Ackerson, 2019	Retrospective	2523	78	PCR and culture	12	8
Auvinen, 2021	Prospective	974	76	PCR	48	8
Ellis, 2003	Retrospective	10,581	65+	Antigen tests and cultures	48	7
Falsey, 2005	Prospective	146	72	RT-PCR, Serologic test, viral culture	48	8
Falsey, 2021	Prospective	604	65.6	PCR	3	8
Gilca, 2014	Prospective	210		Luminex RVP FAST assay	48	7
Gonçalo Matias, 2017	Retrospective	64,456	65+	Weekly influenza update	144	7
Korsten, 2020	Prospective	1040	75	PCR	48	8
Loubet, 2016	Prospective	1452	74	PCR	12	8
Malosh, 2017	Prospective	426		PCR	24	8
Muller-Pebody, 2006	Prospective	551,633	65+	ICD-10	36	7
Rabarison, 2019	Retrospective	375		PCR	60	8
Schanzer, 2008	Retrospective	103,262		Hospitalization Morbidity Database (HMDB)14	60	7
Sharp, 2021	Retrospective	21,787	65–74	Antigen detection, culture, and genomic/pcr/lcr detection	84	8
Tseng, 2017	Prospective	2586	60+	PCR	48	8
Widmer, 2019	Prospective	20	65+	PCR	26	8
Total	9 studies: prospective; 7 studies: retrospective	762,084	73.4	9 studies: PCR; 7 studies: others	48 (range: 3–84)	

Outcome: Hospitalization

Hospitalization cumulative incidence between RSV and influenza

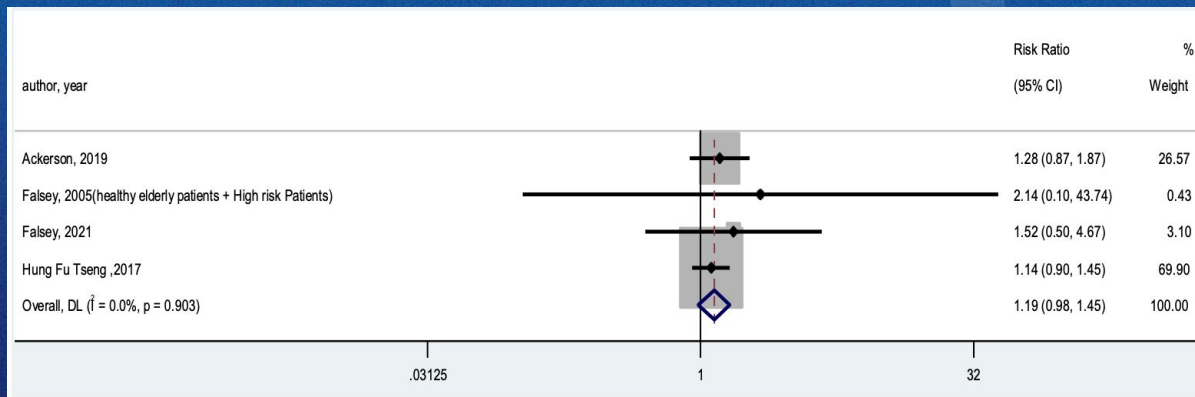


Hospitalization incidence rate (per 100,000 persons/year) between RSV and influenza.

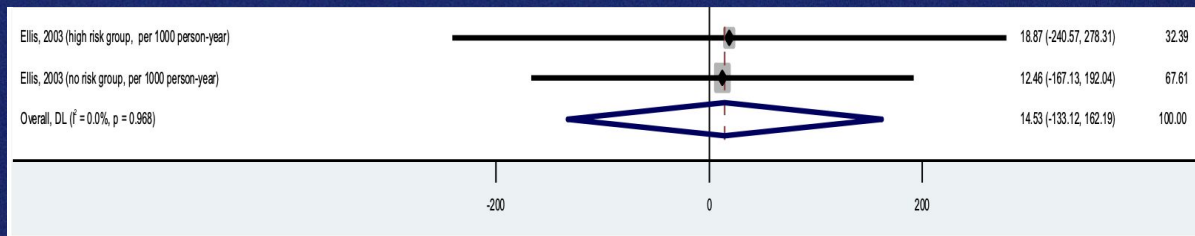


Outcome: Mortality

Mortality cumulative incidence between RSV and influenza



Mortality incidence rate (per 100,000 persons/year) between RSV and influenza.





Take Home Messages

- ❑ RSV is highly prevalent in older people and associated with negative outcomes
- ❑ The rate of hospitalization and mortality was similar between RSV and influenza in older adults
- ❑ Our systematic review supports the importance of vaccination for RSV in older people
- ❑ Future studies confirming our findings in the light of public health interventions are needed.

Thanks

