

## Critical Appraisal

Because the case definition of respiratory syncytial virus (RSV) was critical to this review, studies were organized by the sensitivity of the laboratory techniques for RSV detection, based on a sensitivity ranking from Talbot and Falsey [1]. For this systematic literature review, we ranked studies that tested all patients by polymerase chain reaction (PCR)-based methods and/or serology as best defining the RSV case definition, followed by studies that used a mix of laboratory methods that included PCR and/or serology but not for all patients, and studies that did not test any patients with PCR or serology. Other studies that used statistical modeling of the winter virus seasons and diagnosis, discharge, or death certificate codes were excluded from this review. The size of the older adult population within studies was also noted (large, > 300; medium, 101-300; small, 50-100; and very small < 50).

**S2 Table. Critical Appraisal of Cohort Studies Reporting RSV Epidemiology and Health Care Resource in Older Adults**

Reference	Reliable RSV Test	Question Focused	Tells How Many Asked vs. Did <sup>a</sup>	Clear Outcomes	Separate Older Age Group	CI's	Prospective or Retrospective	SC vs. MC	Nationally Representative	Sample Size
<b>RSV Incidence/Prevalence in Older Adults Unselected for Chronic Health Conditions</b>										
<b>All-Year RSV Testing</b>										
<b>Outpatient Setting</b>										
Fowlkes et al. [2]	Yes	Yes	Yes	Yes	Yes	Yes	P <sup>b</sup>	MC	Yes	Large
<b>Mix of Clinical Settings (Outpatient and Inpatient)</b>										
Widmer et al. [3]	Yes	Yes	Yes	Yes	Yes	Yes	P	MC	No	Large
<b>Hospitalized Setting</b>										
Sumino et al. [4]	Yes	Yes	Yes	Yes	No	No	P <sup>b</sup>	SC	No	Medium
Walker and Ison [5]	Yes	Yes	NA <sup>c</sup>	Yes	Yes	No	R	MC	No	Medium
Jain et al. [6]	Yes	Yes	Yes	Yes	Yes	Yes	P	MC	No	Large
<b>Intensive Care Unit Setting</b>										
Wiemken et al. [7]	Yes	Yes	NA <sup>b</sup>	Yes	No	No	P	MC	No	Large
<b>RSV Testing in Influenza Season</b>										
<b>Outpatient Setting</b>										
Zimmerman et al. [8]	Yes	Yes	No	Yes	Yes	No	P	SC	No	Medium
<b>Mix of Clinical Settings (Outpatient and Inpatient)</b>										
McClure et al. [9]	Yes	Yes	No	Yes	Yes	Yes	P	MC	No	Large
Sundaram et al. [10]	Yes	Yes	Yes	Yes	No	No	P	MC	No	Large
<b>Hospitalized Setting</b>										
Widmer et al. [11]	Yes	Yes	Yes	Yes	Yes	Yes	P	MC	No	Large
<b>RSV Testing All Winter</b>										
<b>Hospitalized Setting</b>										
Branche et al. [12]	Yes	Yes	No	Yes	Yes	No	P	SC	No	Large

Reference	Reliable RSV Test	Question Focused	Tells How Many Asked vs. Did <sup>a</sup>	Clear Outcomes	Separate Older Age Group	CI's	Prospective or Retrospective	SC vs. MC	Nationally Representative	Sample Size
<b>RSV Incidence/Prevalence in Older Adults Selected for Absence or Presence of Chronic Health Conditions</b>										
<b>Healthy Elderly</b>										
<b>Mix of Clinical Settings (Outpatient and Inpatient)</b>										
Falsey et al. [13]	Yes	Yes	Yes	Yes	Yes	No	P	MC	No	Large
<b>Chronic Cardiopulmonary Disorders</b>										
<b>Mix of Clinical Settings (Outpatient and Inpatient)</b>										
Falsey et al. [13]	Yes	Yes	Yes	Yes	Yes	No	P	MC	No	Large
Glezen et al. [14]	Mixed	Yes	No	Yes	Yes	No	P	MC	No	Medium
<b>Nursing Home Residents</b>										
Falsey et al. [15]	Yes	Yes	Yes	Yes	Yes	No	P	MC	No	Large
Falsey et al. [13]	Yes	Yes	Yes	Yes	Yes and no <sup>d</sup>	Yes	P	MC	No	Large
<b>Patients With COPD</b>										
Beckham et al. [16]	Yes	Yes	No	Yes	No	No	R	MC <sup>c</sup>	No	Medium
Camargo et al. [17]	Yes	Yes	No	Yes	No	No	P	MC	No	Small
Mehta et al. [18]	Mixed	Yes	No	Yes	No	No	R <sup>e</sup>	Can't say	Can't say	Large
Martinello et al. [19]	Less so	Yes	Yes	Yes	No	Yes	P	SC	No	Small
<b>Patients With Asthma</b>										
Falsey et al. [13]	Yes	Yes	Yes	Yes	Yes	No	P	MC	No	Large
<b>Patients With Lung Transplants</b>										
Weinberg et al. [20]	Yes	Yes	No	Yes	No	No	P	SC	No	Small
Milstone et al. [21]	Mixed	Yes	No	Yes	No	No	P	SC	No	Small

Reference	Reliable RSV Test	Question Focused	Tells How Many Asked vs. Did <sup>a</sup>	Clear Outcomes	Separate Older Age Group	CI's	Prospective or Retrospective	SC vs. MC	Nationally Representative	Sample Size
<b>Mortality</b>										
<b>Nonnational Mortality, Inpatient, and Outpatient Settings</b>										
Widmer et al. [3]	Yes	Yes	Yes	Yes	No	No	P	MC	No	Large
Falsey et al. [13]	Yes	Yes	Yes	Yes	Yes	No	P	MC	No	Large
Lee et al. [22]	Yes	Yes	No	Yes	No	No	P	SC	No	Small
Widmer et al. [11]	Yes	Yes	Yes	Yes	No	No	P	MC	No	Large
Walker and Ison [5]	Yes	Yes	NA	Yes	Yes	No	R	MC	No	Medium
<b>Health Care Resource Use</b>										
Lee et al. [22]	Yes	Yes	Yes	Yes	Yes	No	Can't say	SC	No	Very small
Walker and Ison [5]	Yes	Yes	NA <sup>f</sup>	Yes	Yes	No	R	MC	No	Medium
Widmer et al. [3]	Yes	Yes	Yes	Yes	Yes	Yes	P	MC	No	Very small
Widmer et al. [11]	Yes	Yes	Yes	Yes	Yes	No	P	MC	No	Very small
Falsey et al. [13]	Yes	Yes	Yes	Yes	Yes	Yes	P	MC	No	Large

CI's = confidence intervals; COPD = chronic obstructive pulmonary disease; MC = multicenter; NA = not applicable; P = prospective; R = retrospective; RSV = respiratory syncytial virus; SC = single center.

<sup>a</sup> The study indicates how many of the people asked to take part did so, in each of the groups being studied.

<sup>b</sup> Implied, not stated overtly in Walker and Ison [5].

<sup>c</sup> Two cohorts.

<sup>d</sup> Patients were either older or high risk; the mean age of the high-risk cohort was 70 Falsey et al. [13].

<sup>e</sup> Two prospectively followed cohorts; COPD subset analyzed retrospectively.

<sup>f</sup> Retrospective.

## References

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