GRADE tables: Comparison of RSV pre-fusion F protein (Abrysvo) vaccine with placebo in adults aged 60 years and over

NCIRS is conducting GRADE in support of the Australian Technical Advisory Group on Immunisation (ATAGI) and making results available on the Centre's website. Please read this material as a supplement to the Australian Immunisation Handbook Respiratory Syncytial Virus (RSV) chapter.

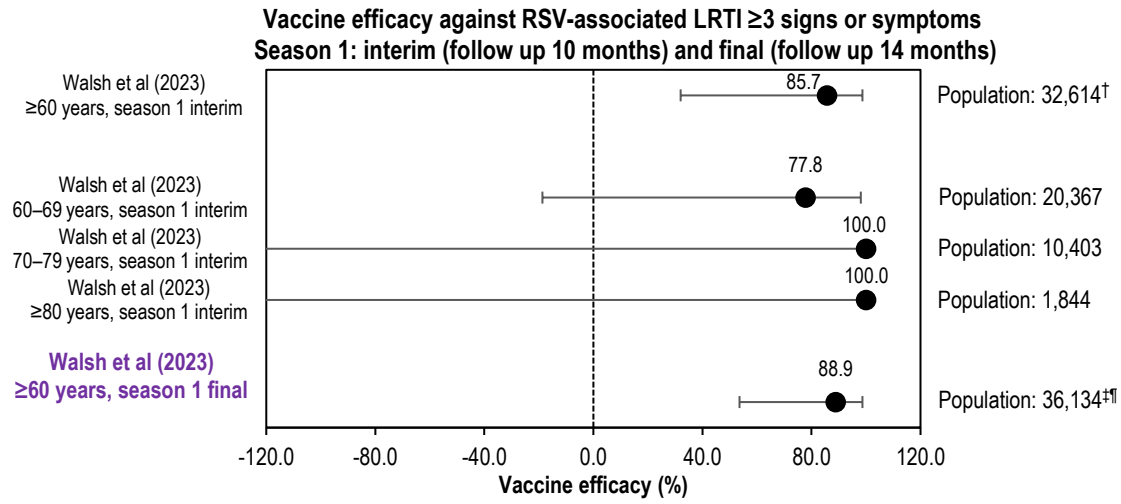
Note: This GRADE includes published and unpublished data. Where unpublished data have been used, they have been redacted.

Pfizer RSV pre-fusion F protein (Abrysvo) vaccine compared with placebo or no vaccine in adults aged 60 years and over

Patient or population: Adults aged ≥60 years

Intervention: Pfizer RSV pre-fusion F protein (Abrysvo) vaccine

Comparison: Placebo or no vaccine

Outcomes	Impact	№ of participants (studies)	Certainty of the evidence (GRADE)	Interpretation
CRITICAL OUTCOMES				
RSV-associated lower respiratory tract illness (LRTI) ≥3 signs or symptoms, lasting >1 day Assessed with: reverse transcriptase-polymerase-chain-reaction (RT-PCR) assay within 7 days of acute respiratory infection (ARI) symptom onset Follow-up: 14 months			⊕⊕⊕◯ Moderate[a]	Pfizer RSV pre-fusion F protein vaccine likely results in a large reduction in laboratory-confirmed RSV-associated LRTI with at least 3 signs or symptoms following single dose vaccination when compared with placebo.

Pfizer RSV pre-fusion F protein (Abrysvo) vaccine compared with placebo or no vaccine in adults aged 60 years and over

Patient or population: Adults aged ≥60 years
Intervention: Pfizer RSV pre-fusion F protein (Abrysvo) vaccine
Comparison: Placebo or no vaccine

Outcomes	Impact	№ of participants (studies)	Certainty of the evidence (GRADE)	Interpretation
continued **RSV-associated lower respiratory tract illness (LRTI) ≥3 signs or symptoms, lasting >1 day**	Notes: All vaccine efficacy estimates shown were based on receipt of 1 dose of Abrysvo. 96.66% CIs used for interim season 1 LRTI vaccine efficacy. 95% CIs used for final season 1 LRTI vaccine efficacy. ‡The season 1 final analysis included data from a complete first RSV season for all participants (all sites in both the Northern and Southern Hemisphere) [redacted] The season 1 final analysis is for adults aged ≥60 years and was not stratified by age. [redacted] Total participants aged ≥60 years = 32,614 (season 1 interim) and 36,134 (season 1 final) (1 RCT)[1]			

Pfizer RSV pre-fusion F protein (Abrysvo) vaccine compared with placebo or no vaccine in adults aged 60 years and over

Patient or population: Adults aged ≥60 years

Intervention: Pfizer RSV pre-fusion F protein (Abrysvo) vaccine

Comparison: Placebo or no vaccine

Outcomes	Impact	№ of participants (studies)	Certainty of the evidence (GRADE)	Interpretation
Severe RSV-associated LRTI, cases hospitalised for RSV-LRTI, requiring new or increased oxygen supplementation, or requiring new or increased mechanical ventilation Follow-up: 14 months	**Season 1 interim analysis (follow up: 10 months)** Walsh, et al (2023): Insufficient data on this outcome Note: An insufficient number of severe LRTI cases (hospitalisation and illness warranting use of oxygenation or mechanical ventilation) had occurred for interim analysis at the time of data cut off.	32,614† (1 RCT)[1]	N/A	N/A
	[redacted]	[redacted]	[redacted]	[redacted]

Pfizer RSV pre-fusion F protein (Abrysvo) vaccine compared with placebo or no vaccine in adults aged 60 years and over

Patient or population: Adults aged ≥60 years
Intervention: Pfizer RSV pre-fusion F protein (Abrysvo) vaccine
Comparison: Placebo or no vaccine

Outcomes	Impact	№ of participants (studies)	Certainty of the evidence (GRADE)	Interpretation
Serious adverse events (SAEs): 'any' Assessed with: patient report, confirmed by study investigators Follow-up: 14 months	**Season 1 interim analysis** Walsh 2023: 2.3% (95% CI: 2.1–2.5) (n=396) of participants in the vaccine group and 2.3% (95% CI: 2.0–2.5) (n=387) of participants in the placebo group reported any SAE. Note: In the vaccine group 0.02% (n=3) (95% CI: 0.0–0.1) of participants reported SAEs considered by investigator to be related to the study intervention.* There were no related SAEs reported in the placebo group (95% CI: 0.0–0.0). * Two severe events: 1 delayed allergic reaction 7 hours after injection, which resolved in 5 days; 1 SAE of Miller Fisher syndrome 8 days after injection, resolved after 92 days. * One life threatening event of Guillain-Barré syndrome (GBS) within 7 days of receiving study intervention; resolving as of the data cutoff date.	34,284 (1 RCT)[1]	⨁⨁⨁⨁ High	Pfizer RSV pre-fusion F protein vaccine results in little to no difference in any SAEs when compared with placebo. Note however, clinical trials are not powered to detect rare SAEs.

Pfizer RSV pre-fusion F protein (Abrysvo) vaccine compared with placebo or no vaccine in adults aged 60 years and over				
Patient or population: Adults aged ≥60 years **Intervention:** Pfizer RSV pre-fusion F protein (Abrysvo) vaccine **Comparison:** Placebo or no vaccine				
Outcomes	**Impact**	**№ of participants (studies)**	**Certainty of the evidence (GRADE)**	**Interpretation**
continued **Serious adverse events (SAEs): 'any'**	[redacted]	[redacted]		

Pfizer RSV pre-fusion F protein (Abrysvo) vaccine compared with placebo or no vaccine in adults aged 60 years and over

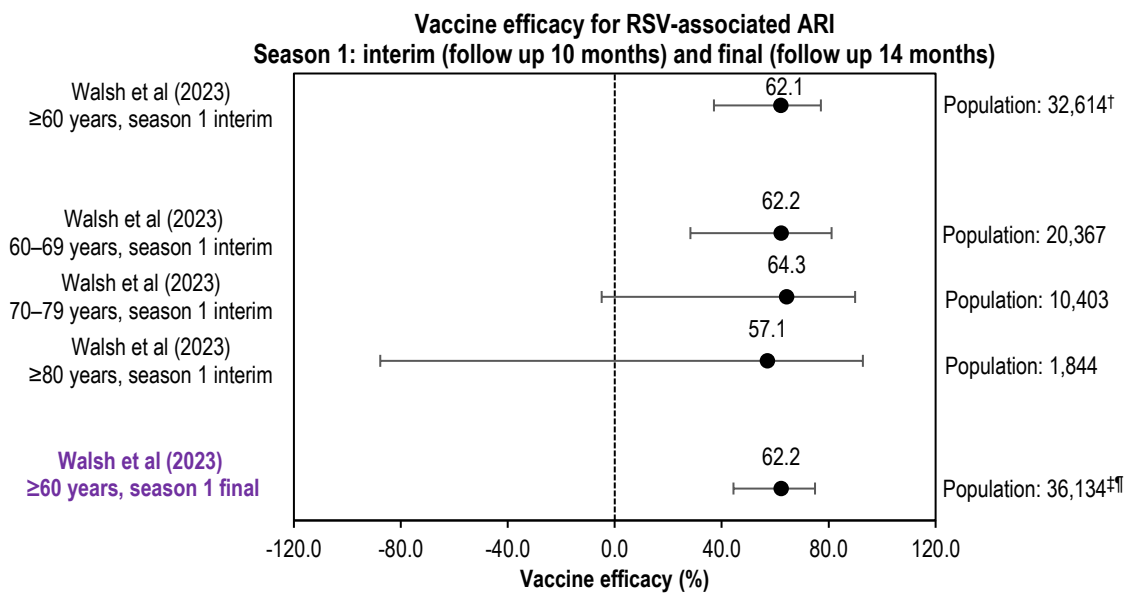
Patient or population: Adults aged ≥60 years
Intervention: Pfizer RSV pre-fusion F protein (Abrysvo) vaccine
Comparison: Placebo or no vaccine

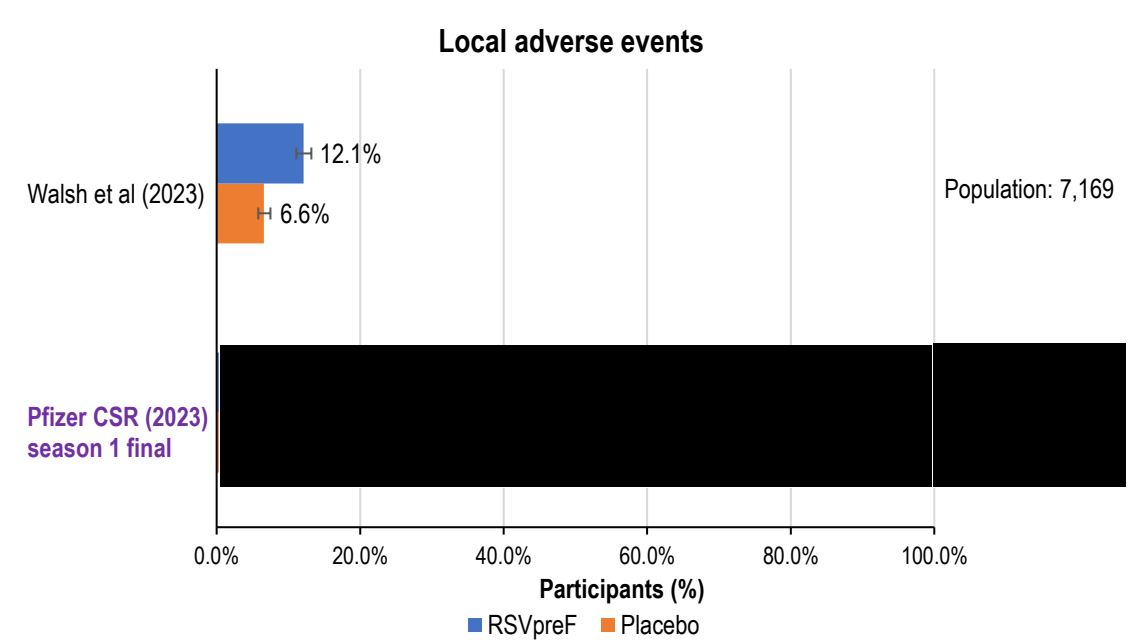
Outcomes	Impact	№ of participants (studies)	Certainty of the evidence (GRADE)	Interpretation
IMPORTANT OUTCOMES				
RSV A-associated LRTI ≥3 signs or symptoms, lasting >1 day Assessed with: RT-PCR) assay within 7 days of ARI symptom onset Follow-up: 14 months	**Season 1 interim analysis** Walsh (2023): Vaccine efficacy RSVpreF vs placebo, adults aged ≥60 years: 66.7% (96.66% CI: −393.78–99.6)	32614† (1 RCT)[1]	⨁◯◯◯ Very low[b]	Pfizer RSV pre-fusion F protein vaccine may result in a moderate reduction in laboratory-confirmed RSV A-associated LRTI with at least 3 signs or symptoms following a single dose of vaccination compared with placebo, but the evidence is very uncertain.
	Season 1 final analysis (follow up: 14 months) Walsh (2025)[3]: Vaccine efficacy RSVpreF vs placebo, adults aged ≥60 years: 80.0% (95% CI: −78.7–99.6)	[redacted]		Pfizer RSV pre-fusion F protein vaccine may result in a large reduction in laboratory-confirmed RSV A-associated LRTI with at least 3 signs or symptoms compared with placebo, but the evidence is very uncertain.

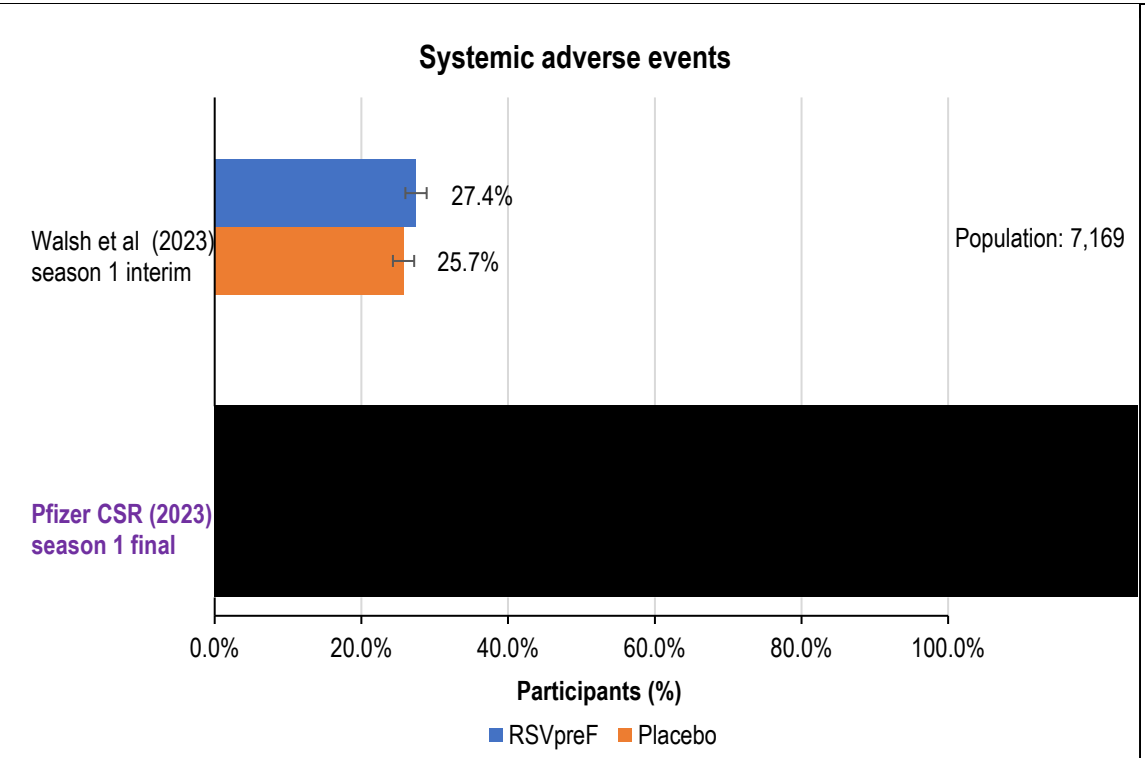
Pfizer RSV pre-fusion F protein (Abrysvo) vaccine compared with placebo or no vaccine in adults aged 60 years and over

Patient or population: Adults aged ≥60 years
Intervention: Pfizer RSV pre-fusion F protein (Abrysvo) vaccine
Comparison: Placebo or no vaccine

Outcomes	Impact	№ of participants (studies)	Certainty of the evidence (GRADE)	Interpretation
RSV B-associated LRTI ≥3 signs or symptoms, lasting >1 day Assessed with: RT-PCR assay within 7 days of ARI symptom onset Follow-up: 14 months	**Season 1 interim analysis** Walsh (2023): Vaccine efficacy RSVpreF vs placebo, adults aged ≥60 years: 90.0% (96.66% CI: 21.8–99.8)	32614† (1 RCT)[1]	⨁⨁◯◯ Low[c]	Pfizer RSV pre-fusion F protein vaccine may result in a large reduction in laboratory-confirmed RSV B-associated LRTI with at least 3 signs or symptoms following a single dose of vaccination compared with placebo.
	Season 1 final analysis (follow up: 14 months) Walsh (2025)[3]: Vaccine efficacy RSVpreF vs placebo, adults aged ≥60 years: 91.7% (95% CI: 43.7–99.8)	[redacted]	⨁⨁⨁◯ Moderate[a]	Pfizer RSV pre-fusion F protein vaccine likely results in a large reduction in laboratory-confirmed RSV B-associated LRTI with at least 3 signs or symptoms compared with placebo.

RSV-associated ARI, at least one or more of new or increased symptoms Assessed with: RT-PCR assay within 7 days of ARI symptom onset Follow-up: 14 months	 Notes: All vaccine efficacy estimates shown were based on receipt of 1 dose of Abrysvo. 95% CIs used for interim and final season 1 ARI vaccine efficacy ‡The season 1 final analysis included data from a complete first RSV season for all participants (all sites in both the Northern and Southern Hemisphere) [redacted] The season 1 final analysis is for adults aged ≥60 years and was not stratified by age. [redacted] Total participants aged ≥60 years = 32,614 (season 1 interim) and 36,134 (season 1 final) (1 RCT)[1]	⊕⊕⊕◯ Moderate[a]	Pfizer RSV pre-fusion F protein vaccine likely results in a moderate reduction in laboratory-confirmed RSV-associated ARI following a single dose of vaccination compared with placebo.

Local adverse events (AEs): any Assessed with: patient report by electronic diary Follow-up: 7 days	 Total participants = 7,169 (season 1 interim) (1 RCT)[1]	⨁⨁⨁⨁ High	Pfizer RSV pre-fusion F protein vaccine results in a moderate increase in local AEs when compared with placebo.

Systemic AEs: any Assessed with: patient report by electronic diary Follow-up: 7 days	 Total participants = 7,169 (season 1 interim) (1 RCT)[1, 2]	⊕⊕⊕⊕ High	Pfizer RSV pre-fusion F protein vaccine results in little to no difference in systemic AEs compared with placebo.

Explanations

a. Downgraded for serious imprecision due to wide CI (>25% difference to the point estimate of one of the bounds of the CIs).

b. Downgraded for extremely serious imprecision due to extremely wide CI that crosses 0.

c. Downgraded for very serious imprecision due to very wide CI.

Footnotes

†There was a potential numerical discrepancy identified in Walsh 2023 with respect to the total population included for vaccine efficacy calculation in the interim analysis. After excluding for participant withdrawal (vaccine n=869; placebo n=941, Figure 1 Walsh 2023), the population available for study inclusion was: vaccine n=16346 and placebo n=16128. However, the total number included in the evaluable efficacy population was: vaccine n=16306 (0.2% participants lost, n=40) and placebo n=16308 (1% participants gained, n=180). These discrepancies have not been explained in the publication or in the available Clinical Study Report from Pfizer though efficacy estimates are likely to be unaffected.

‡The season 1 final analysis included data from a complete first RSV season for all participants (all sites in both the Northern and Southern Hemisphere) [redacted] The season 1 final analysis is for adults aged ≥60 years and was not stratified by age.

[redacted]

Abbreviations: AE=adverse event; ARI=acute respiratory illness; CI=confidence interval; CSR=clinical study report; e-diary=electronic diary; LRTI=lower respiratory tract illness; RCT=randomised controlled trail; RSV=respiratory syncytial virus; SAE=serious adverse event.

GRADE Working Group grades of evidence

High certainty: We are very confident that the true effect lies close to that of the estimate of the effect.

Moderate certainty: We are moderately confident in the effect estimate: the true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.

Low certainty: Our confidence in the effect estimate is limited: the true effect may be substantially different from the estimate of the effect.

Very low certainty: We have very little confidence in the effect estimate: the true effect is likely to be substantially different from the estimate of effect.

GRADE evidence profile

Evidence profile: A single dose of Pfizer RSV pre-fusion F protein (Abrysvo) vaccine compared with placebo or no vaccine in adults aged >60 years

Certainty assessment							Impact	Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
RSV-associated lower respiratory tract illness (LRTI) ≥3 signs or symptoms, lasting >1 day (follow-up: 14 months; assessed with: reverse transcriptase-polymerase-chain-reaction [RT-PCR] assay within 7 days of acute respiratory illness [ARI] symptom onset)									
1	Randomised trials	Not serious	N/A	Not serious	Serious[a]	None	**Season 1 – interim analysis** In the phase 3 trial,[1] vaccine efficacy against RSV-associated LRTI with ≥3 signs or symptoms from 15 days to 10 months following vaccination was 85.7% (96.66% CI: 32.0–98.7) in those aged ≥60 years. Age stratified vaccine efficacy (VE) • Adults aged ≥60 years: 85.7% (96.66% CI: 32.0–98.7) • Adults aged 60–69 years: 77.8% (96.66%CI: −18.7–98.1) • Adults aged 70–79 years: 100% (96.66% CI: −573–100.0) • Adults aged ≥80 years: 100% (96.66% CI: −191.2–100.0)	⊕⊕⊕◯ Moderate	CRITICAL

Certainty assessment							Impact	Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
							continued **Season 1 – final analysis** In the phase 3 trial,[1] vaccine efficacy against RSV-associated LRTI with ≥3 signs or symptoms from 15 days to 14 months following vaccination was 88.9% (95% CI: 53.6–98.7) in those aged ≥60 years.		
Severe RSV-associated LRTI, cases hospitalised for RSV-LRTI, requiring new or increased oxygen supplementation, or requiring new or increased mechanical ventilation (follow-up: 14 months)									
1	Randomised trials	Not serious	N/A	Not serious	N/A	None	**Season 1 – interim analysis** At interim analysis of the phase 3 trial,[1] an insufficient number of severe LRTI cases (hospitalisation and illness warranting use of oxygenation or mechanical ventilation) had occurred for analysis at the time of data cut off.	N/A	CRITICAL
1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Certainty assessment							Impact	Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Serious adverse events (SAEs): any (follow-up: 14 months; assessed with: patient report, confirmed by study investigators)									
1	Randomised trials	Not serious	N/A	Not serious	Not serious	None	**Season 1 – interim analysis** At interim analysis of the phase 3 trial,[1] in the vaccine arm there were 396/17215 SAEs (2.3% [95% CI: 2.1–2.5]) compared with 387/17069 (2.3% [95% CI: 2.0–2.5) in the placebo arm. [redacted]	⊕⊕⊕⊕ High	CRITICAL

Certainty assessment							Impact	Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
RSV A-associated LRTI ≥3 signs or symptoms, lasting >1 day (follow-up: 14 months; assessed with: RT-PCR assay within 7 days of ARI symptom onset)									
1	Randomised trials	Not serious	N/A	Not serious	Extremely serious[b]	None	**Season 1 – interim analysis** In the phase 3 trial,[1] vaccine efficacy against RSV-A associated LRTI with ≥3 signs or symptoms from 15 days to 10 months following vaccination was 66.7% (96.66% CI: −393.7–99.6) in adults aged ≥60 years. **Season 1 – final analysis** In the phase 3 trial,[3] vaccine efficacy against RSV-A associated LRTI with ≥3 signs or symptoms from 15 days to 14 months following vaccination was 80.0% (95% CI, −78.7–99.6) in adults aged ≥60 years.	⨁◯◯◯ Very low	IMPORTANT

Certainty assessment							Impact	Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
RSV B-associated LRTI ≥ 3 signs or symptoms, lasting >1 day (follow-up: 14 months; assessed with: RT-PCR assay within 7 days of ARI symptom onset)									
1	Randomised trials	Not serious	N/A	Not serious	Very serious[c]	None	**Season 1 – interim analysis** In the phase 3 trial,[1] vaccine efficacy against RSV-B associated LRTI with ≥3 signs or symptoms from 15 days to 10 months following vaccination was 90.0% (96.66% CI: 21.8–99.8) in adults aged ≥60 years.	⨁⨁◯◯ Low	IMPORTANT
1	Randomised trials	Not serious	N/A	Not serious	Serious[a]	None	**Season 1 – final analysis** In the phase 3 trial,[3] vaccine efficacy against RSV-B associated LRTI with ≥3 signs or symptoms from 15 days to 14 months following vaccination was 91.7% (96.66% CI: 43.7–99.8) in adults aged ≥60 years.	⨁⨁⨁◯ Moderate	IMPORTANT

Certainty assessment							Impact	Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
RSV-associated ARI, at least one or more of new or increased symptoms (follow-up: 14 months; assessed with: reverse-transcriptase-polymerase-chain-reaction (RT-PCR) assay within 7 days of ARI symptom onset)									
1	Randomised trials	Not serious	N/A	Not serious	Serious[a]	None	**Season 1 – interim analysis** In the phase 3 trial,[1] vaccine efficacy against RSV-associated ARI from 15 days to 10 months following vaccination was 62.1% (95% CI: 37.1–77.9) in adults aged ≥60 years. Age stratified VE • Adults aged 60–69 years: 62.2% (95% CI: 28.3–81.1) • Adults aged 70–79 years: 64.3% (95% CI: −4.9–89.9) • Adults aged ≥80 years: 57.1% (95% CI: −87.7–92.8) **Season 1 – final analysis** In the phase 3 trial,[1] vaccine efficacy against RSV-associated ARI from 15 days to 10 months following vaccination was 62.2% (95% CI: 44.4–74.9) in adults aged ≥60 years.	⨁⨁⨁◯ Moderate	IMPORTANT

Certainty assessment							Impact	Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Local adverse events (AEs): any (follow-up: 7 days; assessed with: patient report by electronic diary)									
1	Randomised trials	Not serious	N/A	Not serious	Not serious	None	**Season 1 – interim analysis** In the phase 3 trial,[1] there was a higher proportion of solicited local reactions reported in the vaccine group (12.1% [95% CI: 11.1–13.3]) compared with the placebo group (6.6% [95% CI: 5.8–7.5]). [redacted]	⊕⊕⊕⊕ High	IMPORTANT

Certainty assessment							Impact	Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Systemic adverse events (AEs): any (follow-up: 7 days; assessed with: patient report by electronic diary)									
1	Randomised trials	Not serious	N/A	Not serious	Not serious	None	**Season 1 – interim analysis** In the phase 3 trial,[1] there was little to no difference in the proportion of solicited systemic AEs in the vaccine group (27.4% [95% CI: 26.0-28.9]) compared with the placebo group (25.7% [95% CI, 24.3-27.2]). [redacted]	⨁⨁⨁⨁ High	IMPORTANT

Explanations

a. Downgraded for serious imprecision due to wide CI (>25% difference to the point estimate of one of the bounds of the CIs)

b. Downgraded for extremely serious imprecision due to extremely wide CI that crosses 0

c. Downgraded for very serious imprecision due to very wide CI

Abbreviations: AE=adverse event; ARI=cute respiratory illness; CI=confidence interval; LRTI=lower respiratory tract illness; RCT=randomised controlled trail: RSV=respiratory syncytial virus

Evidence to Decision Framework: A single dose of Pfizer RSV pre-fusion F protein (Abrysvo) vaccine compared with placebo or no vaccine in adults aged >60 years

Should Abrysvo (Pfizer; Respiratory Syncytial Virus pre-fusion F protein vaccine [RSVPreF]) be recommended for adults aged ≥60 years to prevent respiratory syncytial virus (RSV) disease?	
Population	Adults aged ≥60 years
Intervention	Abrysvo (Pfizer) RSV vaccine
Comparison	Placebo
Main outcomes	*Efficacy* • RSV (laboratory confirmed) lower respiratory tract illness (LRTI) – Critical • RSV (laboratory confirmed) severe LRTI – Critical • RSV – Subtype A (laboratory confirmed) LRTI – Important • RSV – Subtype B (laboratory confirmed) LRTI – Important • RSV (laboratory confirmed) acute respiratory infection (ARI) – Important *Safety* • Serious adverse events (SAEs) – Critical • Systemic adverse events (AEs) – Important • Local AEs – Important
Setting	Global middle- to high-income settings (e.g. Europe, Canada, the US, Australia)
ASSESSMENT	
Problem *Is the problem a priority?*	

Don't know	Varies	No	Probably no	Probably yes	Yes

- RSV is increasingly recognised as a significant respiratory viral illness which causes morbidity and mortality in older adults, including those aged ≥60 years. RSV hospitalisation rates increase with age in older adults.[4, 5] Analysis of the Australian Institute of Health and Welfare National Hospital Morbidity Database (AIHW, unpublished NCIRS analysis) indicates that between 2016 and 2019 the rate of RSV-coded hospitalisations for adults aged ≥60 years was 101 per 100,000 and increased to 194 per 100,000 for those aged ≥75 years. These numbers are likely underestimated due to testing and administrative coding limitations. By comparison, the hospitalisation rate in Australian adults aged ≥65 years for influenza was 287.5 per 100,000 for Australian adults aged ≥65 years for influenza.[6]

- There is also an increasing trend in in-hospital death rates with age, with the highest in-hospital death rate (2016–2019) in older adults aged ≥80 years (7.2 [95% CI: 2.8–11.4] per 100,000 population).
- Priority groups, such as First Nations people and those with comorbidities, have an increased risk of severe RSV disease compared with the non-Indigenous and general population.[5, 7-10]

Desirable effects

How substantial are the desirable anticipated effects?

Don't know	Varies	Large	Moderate	Small	Trivial

- Abrysvo (Pfizer) RSV vaccine results in significant reductions in RSV lower respiratory tract infection (LRTI) in those aged ≥60 years.
- The impact against severe LRTI is uncertain due to a very small number of severe LRTI cases during the study period.
- Regarding protection against specific RSV subtypes, there is uncertainty around the protection against RSV A and moderate certainty of protection against RSV B subtypes and variability over time which may be related to dominant strains in the season studied. Effectiveness against RSV subtypes will require ongoing monitoring for strain changes over time.

Undesirable effects

How substantial are the undesirable anticipated effects?

Don't know	Varies	Large	Moderate	Small	Trivial

- There is a moderate increase in local AEs, and little to no difference in systemic AEs with Abrysvo (Pfizer) RSV vaccine compared with placebo.
- Most post-vaccination AEs are mild to moderate in severity and resolve within 1 to 2 days.
- Little to no differences are seen in total SAEs between vaccine and placebo groups.
- There were a very small number of rare adverse events of special interest (AESIs) including autoimmune inflammatory neurologic conditions and atrial fibrillation in vaccine recipients. These were low and not statistically significant between vaccine and placebo recipients. Low event numbers do not allow determination if rates of these AEs are significantly raised compared with control groups. As clinical trials are not powered to detect rare SAEs, clarification of whether these are true safety signals will require large post-marketing surveillance studies.

Balance of effects

Does the balance between desirable and undesirable effects favour the intervention or the comparison?

Don't know	Varies	Favours comparison	Probably favours comparison	Does not favour either comparison or intervention	Probably favours intervention	Favours intervention

- The balance of effects probably favours vaccination with Abrysvo (Pfizer) RSV vaccine.
- The vaccine is efficacious and there is a high burden of disease, particularly as age increases.

- The undesirable effects from vaccination are typical common post-vaccination local adverse events and are relatively brief.
- Systemic adverse events are balanced between intervention and placebo. Rare AESIs require further investigation to determine whether there is a risk associated with vaccination.

Certainty of evidence

What is the overall certainty of the evidence of effects?

No Included Studies	Very low	Low	Moderate	High

- The overall certainty of evidence is moderate.
- 3 outcomes had high certainty evidence (all were safety outcomes).
- 3 outcomes with moderate certainty of evidence: vaccine efficacy against lower respiratory tract diseases (non-severe), acute respiratory infection and RSV B subtype.
- 2 outcomes had very low certainty of evidence due to imprecision around the efficacy estimate for severe RSV-associated LRTI and RSV A subtype LRTI.
- The majority of these outcomes were downgraded due to imprecision around estimates.

Values

Is there important uncertainty about or variability in how much people value the main outcomes?

Important uncertainty	Possibly important uncertainty or variability	Probably no important uncertainty or variability	No important uncertainty or variability

- There is possibly important uncertainty. While some people will value protection against RSV disease, other people and providers may be less familiar with RSV infection than other vaccine preventable respiratory viral infections such as influenza.[11]
- Uncertainty is likely to reduce with increased public and provider awareness of RSV over time.

Acceptability

Is the intervention acceptable to key stakeholders?

Don't know	Varies	No	Probably no	Probably yes	Yes

- RSV vaccination for adults aged ≥60 years is likely to be acceptable to key stakeholders based on good uptake of influenza vaccine (which provides protection against a similar respiratory viral illness), with an estimated 62.5% of adults aged 65–74 year and 68.5% aged ≥75 years vaccinated in 2021.[12]

Equity

What would be the impact on health inequities?

Don't know	Varies	Increased	Probably increased	Probably no impact	Probably reduced	Reduced

- The potential impact on health inequities is likely to vary dependent on program design and uptake.

- As the burden of RSV infection and severe outcomes is higher in First Nations people,[5] RSV vaccination could reduce health inequities if there was adequate uptake of the vaccine within this population. This population often has higher rates of comorbid conditions who would be expected to benefit more from vaccination.
- Similarly, RSV vaccination could address the increased burden of disease in those with medical comorbidities who have increased risk of RSV hospitalisation.[7-10]
- A lower age-based recommendations in these priority populations than the general population would be one way to address these health inequities. A universal vaccination program in which standard and higher risk individuals were eligible from the same age may have no impact on (or worsen) heath inequities.

Feasibility

Is the intervention feasible to implement?

Don't know	Varies	No	Probably no	Probably yes	Yes

- RSV vaccine should be feasible to implement using the vaccine delivery system already in use including through primary care and pharmacist vaccination.
- Potential challenges include training requirements for a new vaccine on the National Immunisation Program, adequate resourcing for distribution to a large number of individuals, the need to ensure there was no detrimental impact on other older adult vaccination programs such as influenza, zoster and pneumococcal vaccines, and potential for further doses of RSV vaccine if required in the future.

ATAGI RECOMMENDATION

- A single dose Abrysvo (Pfizer) RSV vaccine is recommended for all adults aged ≥75 years, First Nations peoples aged ≥60 years, and people aged ≥60 years with medical conditions that put them at increased risk of severe RSV disease.

JUSTIFICATION AND CONSIDERATIONS

Additional considerations

- The increased burden of RSV with age suggests in the general population the benefit of vaccination is likely to be greater in older adults e.g. adults aged ≥75 years.
- First Nations individuals and those with medical risk factors for severe RSV disease have increased RSV disease burden and are recommended for vaccination from 60 years of age, which is at an earlier age than the general population.
- Due to a lower burden of disease among adults aged 60–74 years in the general population, protective efficacy from vaccination may be lower in non-First Nations individuals and those without comorbidities aged between 60 and 74 years compared with adults aged ≥75 years.
- Post-marketing safety surveillance is recommended after introduction of RSV vaccine onto the National Immunisation Program (NIP) to monitor for safety signals and AESIs including autoimmune inflammatory neurologic conditions and atrial fibrillation.

Justification

- Abrysvo (Pfizer) RSV vaccine is efficacious at preventing RSV disease in adults aged ≥60 years, with high levels of efficacy against LRTI, and moderate levels of efficacy against milder disease (e.g. ARI) during the first season after vaccination.
- Due to the high burden of disease, which increases with age,[4, 5] and the lack of a current vaccine, introduction of a national vaccination program in older adults is likely to have substantial clinical benefit.
- Post-vaccination local AEs are moderately increased.
- First Nations people and individuals with comorbid conditions, including cardiovascular conditions, chronic respiratory conditions, immunocompromising conditions, chronic kidney disease and diabetes mellitus, are at increased risk of severe RSV disease.[7-10]
- Rare AESIs in clinical trials are noted but require post-marketing surveillance studies to establish if any links exist to vaccination.
- The body of evidence suggests that in comparison to no vaccine, the benefits of Abrysvo (Pfizer) RSV vaccine are likely to outweigh the higher frequency of non-serious AEs following immunisation.

References

1. Walsh EE, Perez Marc G, Zareba AM, Falsey AR, Jiang Q, Patton M, et al. Efficacy and safety of a bivalent RSV prefusion f vaccine in older adults. New England Journal of Medicine 2023;388(16):1465-1477.
2. Pfizer. Clinical Study Report (CSR) (2): Through End of Season 1 – Study C3671013. 23 June, 2023.
3. Walsh EE, Eiras D, Woodside J, et al. Efficacy, immunogenicity, and safety of the bivalent RSV Prefusion F (RSVpreF) Vaccine in older adults over 2 RSV seasons. Clinical Infectious Diseases 2025. https://doi.org/10.1093/cid/ciaf061
4. Nazareno AL, Muscatello DJ, Turner RM, Wood JG, Moore HC, Newall AT. Modelled estimates of hospitalisations attributable to respiratory syncytial virus and influenza in Australia, 2009-2017. Influenza Other Respiratory Viruses 2022;16(6):1082-1090.
5. Saravanos GL, Sheel M, Homaira N, et al. Respiratory syncytial virus-associated hospitalisations in Australia, 2006-2015. Medical Journal of Australia 2019;210(10):447-453.
6. Moa AM, Menzies RI, Yin JK, MacIntyre CR. Modelling the influenza disease burden in people aged 50-64 and >/=65 years in Australia. Influenza Other Respir Viruses. 2022;16(1):132-141.
7. Branche AR, Saiman L, Walsh EE, et al. Incidence of respiratory syncytial virus infection among hospitalized adults, 2017-2020. Clin Infect Dis. 2022;74(6):1004-1011.
8. Loubet P, Lenzi N, Valette M, et al. Clinical characteristics and outcome of respiratory syncytial virus infection among adults hospitalized with influenza-like illness in France. Clin Microbiol Infect. 2017;23(4):253-259.
9. Prasad N, Walker TA, Waite B, et al. Respiratory syncytial virus-associated hospitalizations among adults with chronic medical conditions. Clinical Infectious Disiseases 2021;73(1):e158-e163.
10. Wyffels V, Kariburyo F, Gavart S, et al. A real-world analysis of patient characteristics and predictors of hospitalization among US medicare beneficiaries with respiratory syncytial virus infection. Advance Therapies 2020;37(3):1203-1217.
11. Hurley LP, Allison MA, Kim L, et al. Primary care physicians' perspectives on respiratory syncytial virus (RSV) disease in adults and a potential RSV vaccine for adults. Vaccine 2019;37(4):565-570.
12. Hull B, Hendry A, Dey A, et al. Annual Immunisation Coverage Report [Internet]. National Centre for Immunisation Research and Surveillance; 2022. Available from: https://ncirs.org.au/sites/default/files/2022-12/NCIRS%20Annual%20Immunisation%20Coverage%20Report%202021_FINAL.pdf (accessed September 2023).