Current Challenges and new paradigms in RSV Disease in Elder Adults

Dr. Bassam Mahboub

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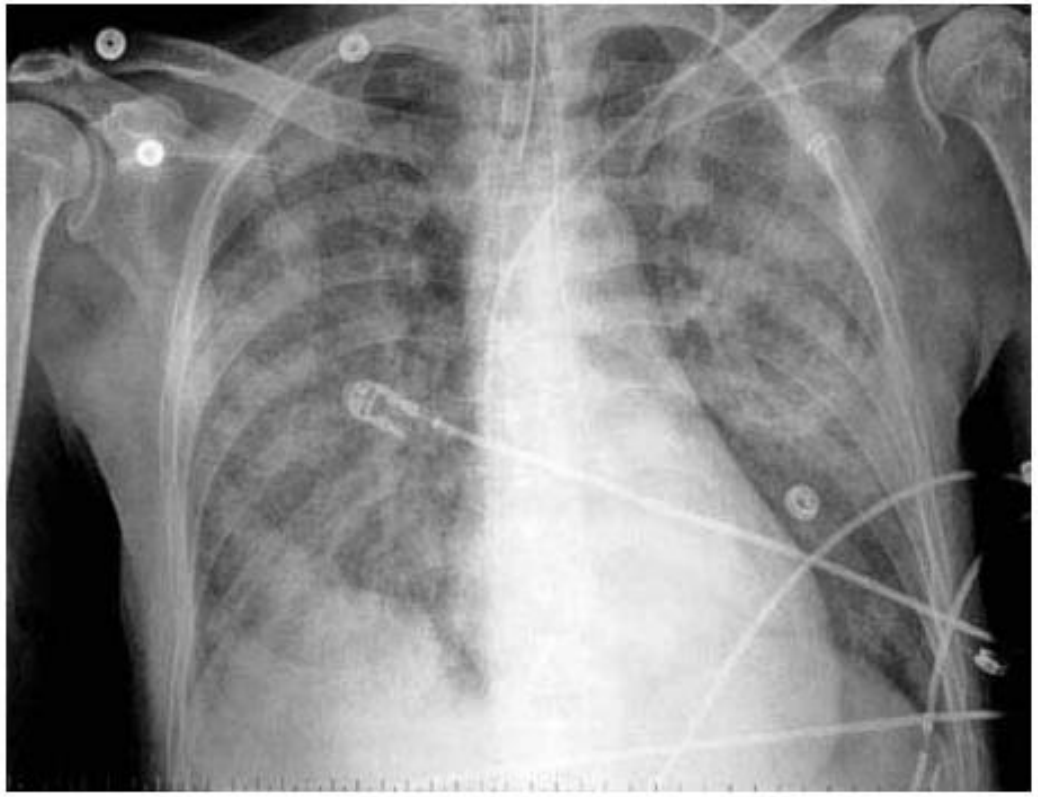
Contents

RSV case study

CASE STUDY

- Ahmad, a 55-year-old male with a history of chronic obstructive pulmonary disease (COPD).
- Recent upper respiratory tract infection symptoms, presented to the emergency department with acute dyspnea, cough, and fever for the past two days.
- On admission, the patient was tachypneic, hypoxic, and in respiratory distress.
- Upon examination, the patient appeared lethargic and cyanotic:
- RR =35 breaths per minute , O2 Sat: 85% on room air and 100% FiO2 via non-rebreather mask.
- Lung auscultation revealed diffuse crackles and decreased breath sounds bilaterally.
- Arterial blood gas analysis demonstrated severe hypoxemia with a partial pressure of oxygen (PaO2) of 55 mmHg and a partial pressure of carbon dioxide (PaCO2) of 50 mmHg.

- The patient was promptly admitted to the intensive care unit (ICU) for mechanical ventilation
- Chest X-ray and computed tomography (CT) scan of the chest revealed diffuse bilateral infiltrates consistent with ARDS.
- **The polymerase chain reaction (PCR) assay confirmed the presence of RSV RNA.**



CHEST X-ray

Treatment Management

- He was started on empiric broad-spectrum antibiotics to cover potential bacterial co-infections and oseltamivir (Tamiflu) for antiviral therapy against RSV.
- Lung-protective ventilation strategies were implemented, including low tidal volume ventilation and positive end-expiratory pressure (PEEP) titration to optimize oxygenation.
- Clinical Course: Over the next few days, the patient's respiratory status gradually improved with supportive care and antiviral therapy.
- He was successfully weaned off mechanical ventilation after seven days of intensive care and transferred to the general medical ward for further monitoring and rehabilitation.

RSV TOTAL CASES

- The number of positive RSV from adults (above 16 years of age)
- Total: 385 cases from Jan 2021 to Oct 2023

RSV Burden of Disease in Older Adults

RSV Is a Common Cause of Respiratory Disease in Older Adults[1]

Population

- RSV can lead to **serious outcomes** in older adults[2]
- **~79 million** older adults are at risk for RSV in the US[3,4]

Clinical Manifestations

- Symptoms of URTD include **rhinorrhea, nasal congestion, and cough**[1]

- LRTD can lead to more severe illness, including **bronchiolitis, pneumonia, hypoxia, and acute respiratory failure**[1]

RSV is spread via respiratory droplets[1]
Lack of long-term immunity can lead to frequent reinfection[1]

LRTD, lower respiratory tract disease; RSV, respiratory syncytial virus; URTD, upper respiratory tract disease.

1. Jain H, et al. Respiratory syncytial virus infection. In: *StatPearls*. NCBI Bookshelf version. StatPearls Publishing; 2023. Accessed January 5, 2024. https://www.ncbi.nlm.nih.gov/books/NBK459215 **2.** Respiratory syncytial virus infection. RSV Surveillance and Research. CDC. Updated: July 17, 2023. Accessed January 5, 2024. https://www.cdc.gov/rsv/research/index.html **3**. United States Census Bureau. Annual estimates of the resident population for selected age groups by sex for the United States: April 1, 2020 to July 1, 2022. Accessed January 1, 2024. https://www.census.gov/data/tables/time-series/demo/popest/2020s-national-detail.html **4**. Carvajal JJ, et al. *Front Immunol*. 2019;10:2152. doi:10.3389/fimmu.2019.02152

Older Adults Have Increased Risk of RSV Infection[1]

Factors linked to increased susceptibility to RSV in older adults

Declining immune system[1]

- Decreased production of B and T cells
- Dysfunctional and terminally differentiated memory cells

Decreased lung function[3]

- Reduced strength of respiratory muscles and diaphragm
- Decreased levels of protective mucus, lung compliance, and elastin

Frailty[2]

- Age-associated decline in physiologic function

Comorbid conditions[2]

- Chronic heart disease
- Pulmonary disease
- Diabetes

RSV, respiratory syncytial virus.

1. Stephens LM, Varga SM. *Vaccines (Basel).* 2021;9(6):624. doi:10.3390/vaccines9060624 **2.** Melgar M, et al. *MMWR Morb Mortal Wkly Rep.* 2023;72(29):793-801. **3.** Talbot HK, et al. *Infect Dis Clin Pract.* 2016;24(6):295-302.

RSV Is Highly Contagious and Can Lead to Serious Consequences in Older Adults[1]

~1,400,000
Outpatient visits per year[2]*

~119,000
ED admissions per year[2]*

60,000-160,000
Hospitalizations per year[3†]

6,000-10,000
Deaths per year[3†]

CDC Risk Factors for Severe RSV[4]

- COPD
- Asthma
- Congestive heart failure
- Coronary artery disease
- Cerebrovascular disease
- Diabetes mellitus
- Chronic kidney disease
- Immune compromise
- Long-term care facility resident
- Frail individuals
- Advanced age

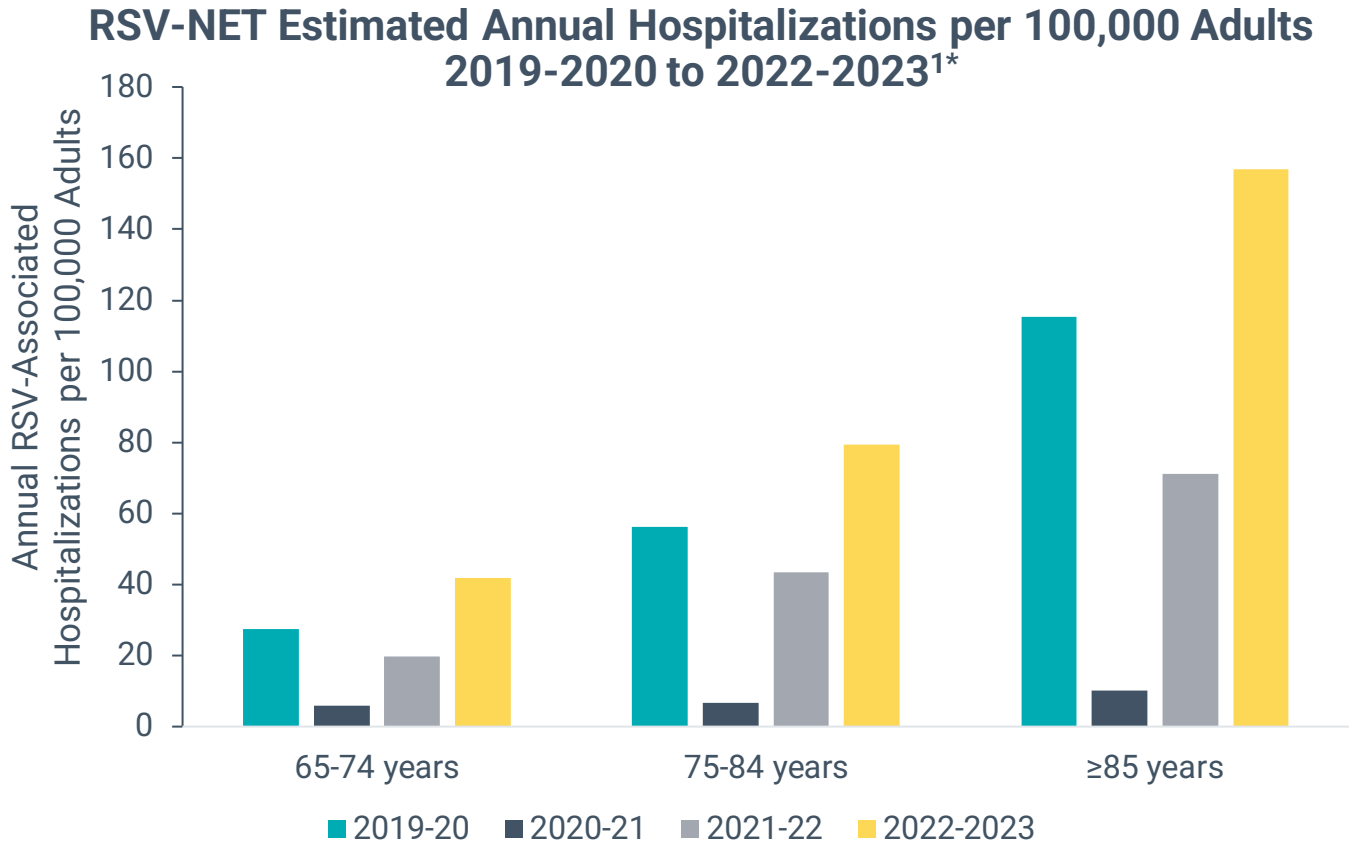
*A pooled annual RSV-associated incidence rate per 100,000, adjusted for RSV underdetection, was applied to the 2022 US Census population to estimate the expected number of annual US cases among adults 65 years of age and older.

†Among adults 65 years of age and older in the US.

CDC, Centers for Disease Control and Prevention; COPD, chronic obstructive pulmonary disease; ED, emergency department; RSV, respiratory syncytial virus.

1. Carvajal JJ, et al. *Front Immunol*. 2019;10:2152. **2.** McLaughlin JM, et al. *Open Forum Infect Dis*. 2022;9(7):ofac300. doi:10.1093/ofid/ofac300 **3.** Respiratory syncytial virus infection. RSV Surveillance and Research. CDC. Updated: July 17, 2023. Accessed January 5, 2024. https://www.cdc.gov/rsv/research/index.html **4.** Melgar M, et al. *MMWR Morb Mortal Wkly Rep*. 2023;72(29):793-801.

Among Older Adults, RSV Hospitalization Rates Rise With Age



5.6 days
is the average length of stay among adults aged 60 years and older hospitalized with RSV[3]

Reduced hospitalizations during the 2020-21 and 2021-22 RSV seasons are related to impacts of the COVID-19 pandemic[4,5]

*RSV-NET collects surveillance data on laboratory-confirmed, RSV-associated hospitalizations, including those resulting in ICU admission or death. Data are collected and reported from a network of sites in acute-care hospitals across 58 counties in 12 states during the October 1-April 30 season each year.[2]

ICU, intensive care unit; RSV, respiratory syncytial virus; RSV-NET, Respiratory Syncytial Virus Hospitalization Surveillance Network.

1. Centers for Disease Control and Prevention. RSV-NET Interactive Dashboard. Last updated December 27, 2023. Accessed January 1, 2024. https://www.cdc.gov/rsv/research/rsv-net/dashboard.html **2.** Centers for Disease Control and Prevention. RSV-NET overview and methods. Last reviewed October 25, 2022. Accessed January 1, 2024. https://www.cdc.gov/rsv/research/rsv-net/overview-methods.html. **3.** Pastula ST, et al. *Open Forum Infect Dis*. 2017;4(1). doi:10.1093/ofid/ofw270 **4.** Chuang YC, et al. *Infect Drug Resist*. 2023;16:661-675. **5.** Hamid S, et al. *MMWR Morb Mortal Wkly Rep*. 2023;72(14):355-361.

Adults 60 Years of Age and Older Can Experience Potentially Serious Consequences of RSV

In a study of 645 adults aged 60 and older hospitalized with RSV:

18%
were admitted to the ICU

~50%
had confirmed pneumonia

1 in 6
were readmitted within 30 days

31%
received home health services at discharge

26%
died within 1 year after admission

ICU, intensive care unit; RSV, respiratory syncytial virus.
Ackerson B, et al. *Clin Infect Dis.* 2019;69(2):197-203.

RSV Burden May Be Underestimated

Underestimation of RSV burden is likely due to limitations in testing for the disease[1,2]

Lack of routine testing in clinical practice
- Results have no significant impact on treatment decision-making

Undetected disease
- Timing and type of diagnostic methods
- Non-specific symptoms

Inappropriate surveillance platforms
- Studies utilizing influenza platforms when seasonality and presentation are different

Inadequate resources to support testing
- Limited staff, time and financial resources to support non-essential activities

61%

of a national network of family physicians and general internists surveyed between February 2017 and March 2017 (n=317) do not test for RSV due to **lack of available treatments**[3]

57%

rarely consider RSV as a **potential pathogen** because they believe it is less severe than influenza[3]

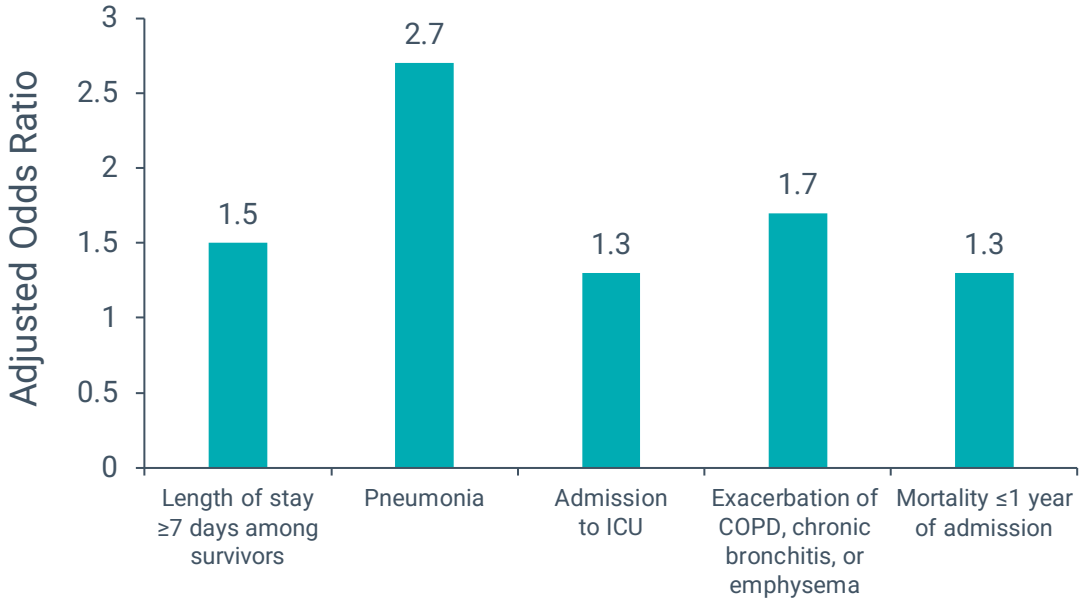
RSV, respiratory syncytial virus.

1. Tin Tin Htar M, et al. *Epidemiol Infect.* 2020;148:e48. doi:10.1017/S0950268820000400 **2.** Rozenbaum MH, et al. *Infect Dis Ther.* 2023;12(2):677-685 **3.** Hurley LP, et al. *Vaccine*. 2019;37(4):565-570.

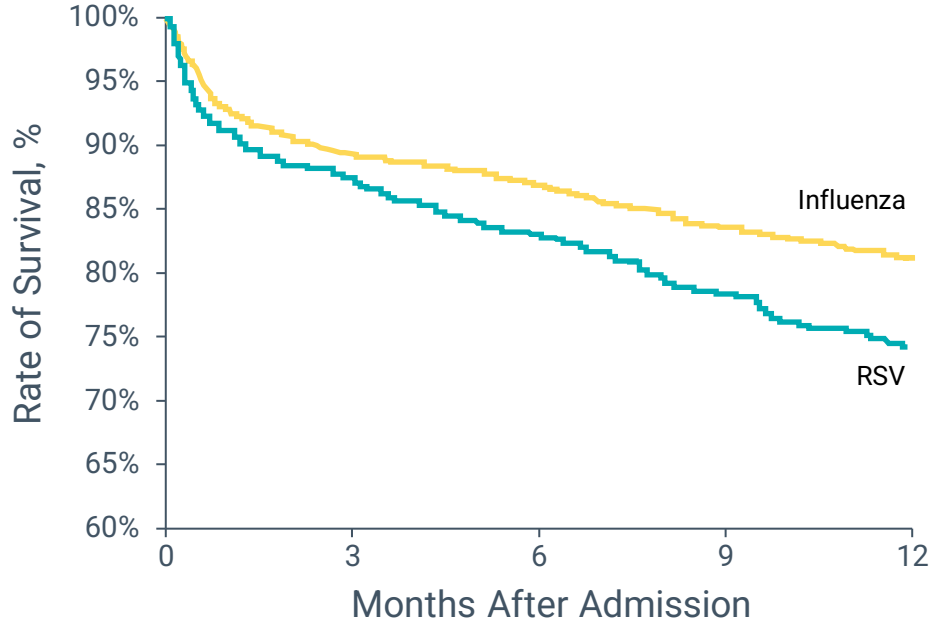
RSV Infection May Result in Greater Morbidity and Mortality Than Influenza Among Hospitalized Older Adults

In a US study of 2,523 hospitalized adults aged 60 and older:

In adjusted analysis, RSV was associated with increased severity in selected outcomes compared with influenza*



1-year survival was 74.2% for RSV-infected patients and 81.2% for influenza-infected patients (*P*<0.001)



*Adults hospitalized with RSV were slightly older and had greater frequency of baseline comorbidities, including cardiopulmonary disease, than those hospitalized with influenza virus infection.

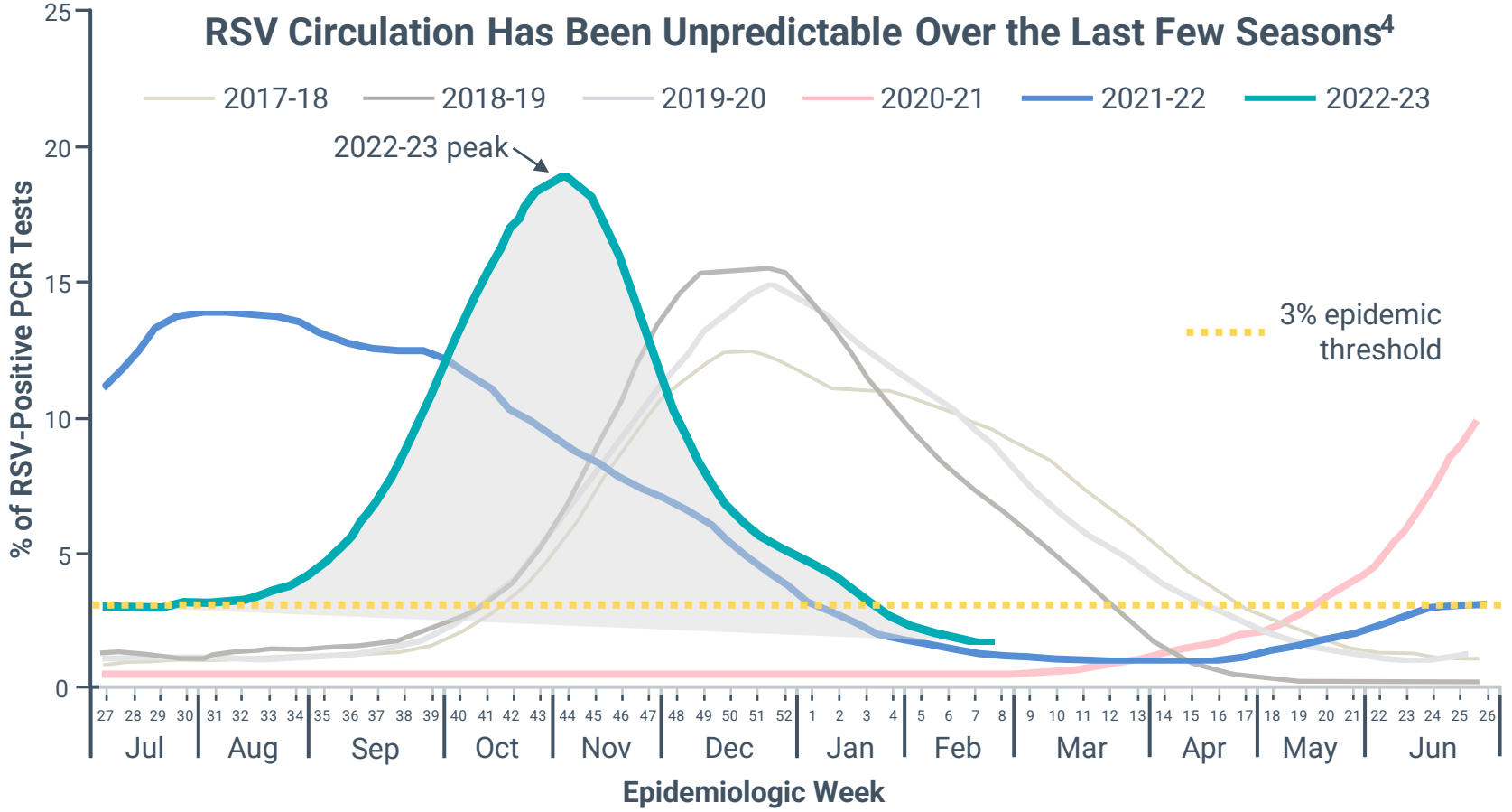
COPD, chronic obstructive pulmonary disease; ICU, intensive care unit; RSV, respiratory syncytial virus, US, United States.

Ackerson B, et al. *Clin Infect Dis.* 2019;69(2):197-203.

The CDC Recommends Offering RSV Vaccination Year-Round to Eligible Adults Aged 60 Years and Older Who Remain Unvaccinated, Based on Shared Clinical Decision-Making[1]

Did you know RSV season typically starts in September and **can go as long as May?**[2]

December 14, 2023
The CDC alerted providers to low RSV vaccination rates and recommended immediate immunization of eligible patients[3]



CDC, Centers for Disease Control and Prevention; PCR, polymerase chain reaction; RSV, respiratory syncytial virus.

1. Centers for Disease Control and Prevention. Healthcare providers: August 30, 2023. Accessed January 24, 2024. https://www.cdc.gov/vaccines/vpd/rsv/hcp/older-adults.html **2.** Centers for Disease Control and Prevention. RSV surveillance & research. Updated October 28, 2022. Accessed January 16, 2024. https://www.cdc.gov/rsv/research/index.html **3.** Centers for Disease Control and Prevention. Urgent Need to Increase Immunization Coverage for Influenza, COVID-19, and RSV and Use of Authorized/Approved Therapeutics in the Setting of Increased Respiratory Disease Activity During the 2023 – 2024 Winter Season. December 13, 2023. Accessed January 23, 2024. https://emergency.cdc.gov/han/2023/han00503.asp **4.** Hamid S, et al. *MMWR Morb Mortal Wkly Rep*. 2023;72(14):355-361.

ABRYSVO-RSV Vaccine Overview

ABRYSVO – RSV Vaccine Overview

Indication For Older Adult Vaccination

ABRYSVO is a vaccine indicated for Active immunization of individuals 60 years of age and older for the prevention of lower respiratory tract disease caused by RSV.

Select Safety Information

- Do not administer ABRYSVO to individuals with a history of a severe allergic reaction (e.g., anaphylaxis) to any component of ABRYSVO
- Appropriate medical treatment must be available in case of an anaphylactic reaction
- Syncope (fainting) may occur in association with administration of injectable vaccines, including ABRYSVO. Procedures should be in place to avoid injury from fainting

RSV, respiratory syncytial virus.

ABRYSVO (Respiratory Syncytial Virus Vaccine) Prescribing Information. UAE., August 2023.

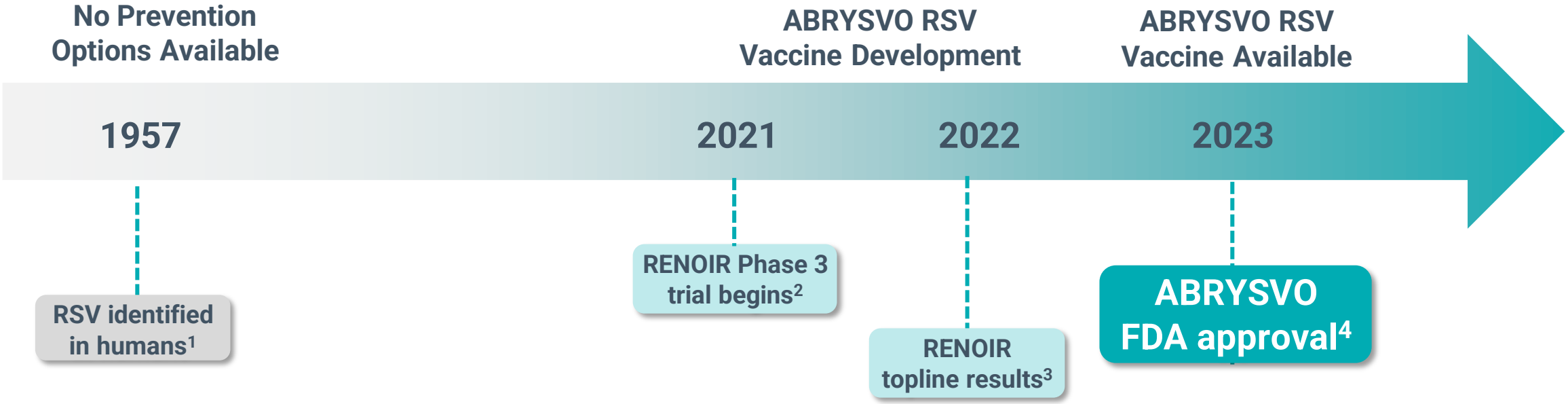
ABRYSVO- RSV Vaccine : Mechanism of Action[1-3]

- Main features:[1,2]
  - A subunit vaccine, not the whole pathogen
  - Contains equal proportions of RSV preF A and RSV preF B

preF, prefusion F; RSV, respiratory syncytial virus.

1. ABRYSVO (Respiratory Syncytial Virus Vaccine) Prescribing Information. UAE., August 2023. **2.** McLellan JS. *Curr Opin Virol.* 2015;11:70-75. **3.** Mukhamedova M. *Immunity.* 2021;54(4):769-780.e6.

Decades After RSV Was First Identified, Vaccines to Protect Older Adults From RSV Were Approved in 2023, Including ABRYSVO

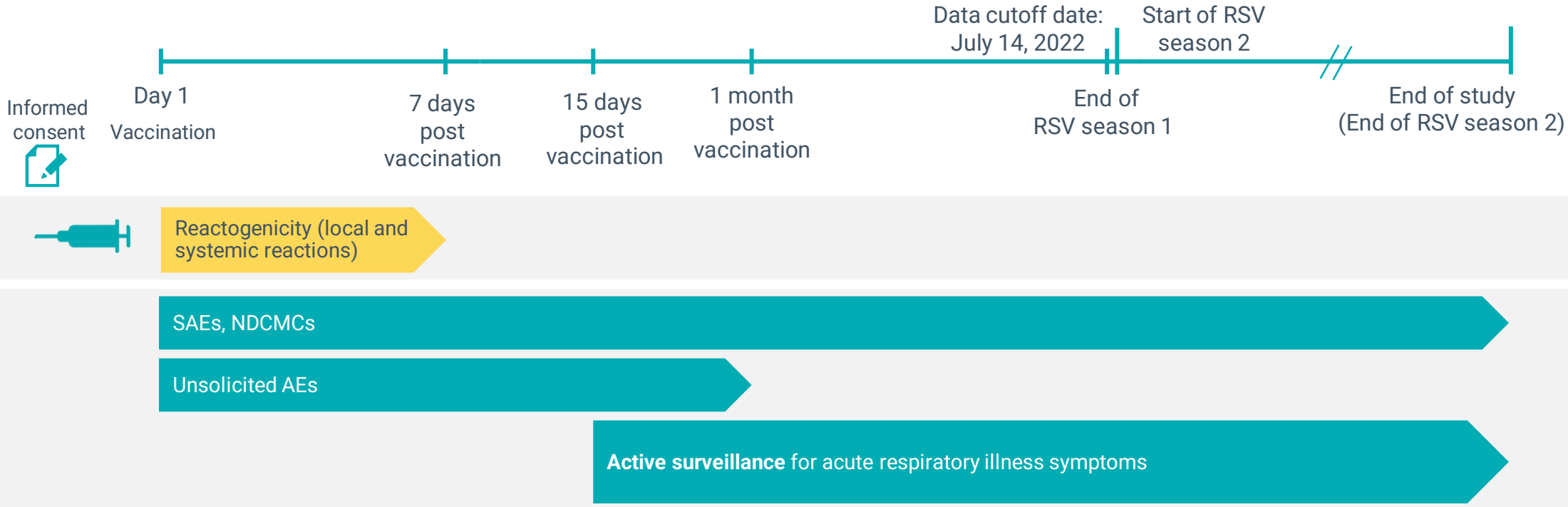


FDA, Food and Drug Administration; RSV, respiratory syncytial virus.

1. Gonik B. *Glob Health Sci Pract.* 2019;7(4):515-520. **2.** ClinicalTrials.gov identifier: NCT05035212. Accessed January 1, 2024. **3.** Pfizer. Pfizer Announces Positive Top-Line Data from Phase 3 Trial of Older Adults for its Bivalent Respiratory Syncytial Virus (RSV) Vaccine Candidate. August 25, 2022. Accessed January 12, 2024. https://www.pfizer.com/news/press-release/press-release-detail/pfizer-announces-positive-top-line-data-phase-3-trial-older **4.** Pfizer. U.S. FDA Approves ABRYSVO™, Pfizer's Vaccine for the Prevention of Respiratory Syncytial Virus (RSV) in Older Adults. May 31, 2023. Accessed January 2, 2024. https://www.pfizer.com/news/press-release/press-release-detail/us-fda-approves-abrysvotm-pfizers-vaccine-prevention

RENOIR Pivotal Trial Data

RENOIR: An Ongoing Multicenter, Randomized, Double-Blind, Placebo-Controlled Trial in Adults Aged 60 Years and Older[1,2]



At the interim analysis, ABRYSVO was evaluated over the 1st RSV season after injection (August 31, 2021, through July 14, 2022)

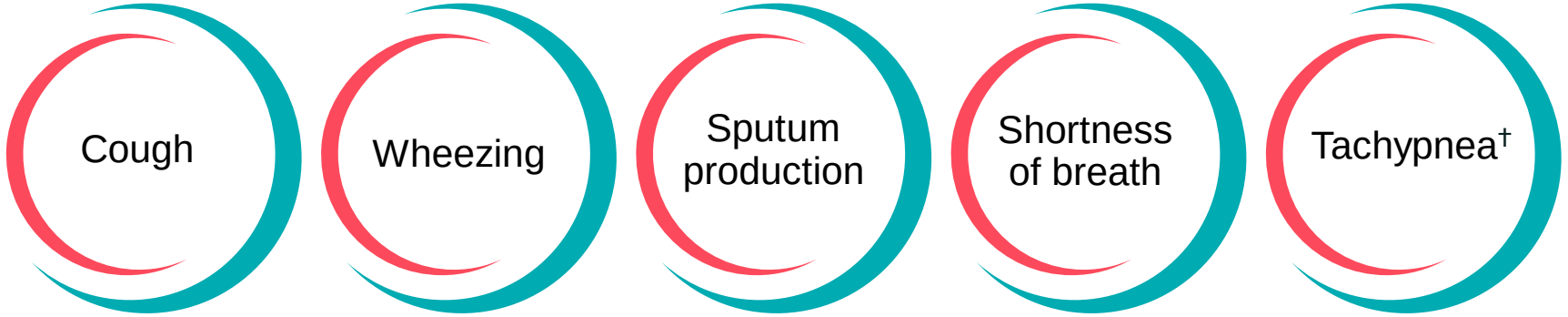
AE, adverse events; NDCMC, newly diagnosed chronic medical condition; RSV, respiratory syncytial virus; SAE, serious AE.

1. Gurtman A. Safety and efficacy of bivalent RSV prefusion F vaccine in adults ≥ 60 years of age. Presented at: Advisory Committee on Immunization Practices meeting; October 20, 2022. https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-10-19-20/03-rsv-adults-gurtma-508.pdf **2.** Walsh EE, et al. *N Engl J Med*. 2023;388(16):1465-1477.

The Objective of the RENOIR Trial Was to Assess Vaccine Efficacy by Relative Risk Reduction of the Endpoints

- Primary efficacy endpoint
  - Relative risk reduction (vs placebo) of first episode of RSV-LRTD in the first RSV season*
- Definitions used in endpoints:

LRTD:
≥2 or ≥3 (new or increased) lower respiratory tract symptoms*



*As determined by positive RT-PCR test within 7 days of symptom onset and lasting more than 1 day during the same illness. †≥25 breaths/min or 15% increase from resting baseline.
RSV-LRTD, RSV-associated lower respiratory tract disease; RSV, respiratory syncytial virus; RT-PCR, reverse transcriptase polymerase chain reaction.
ABRYSVO (Respiratory Syncytial Virus Vaccine) Prescribing Information. UAE., August 2023.

The Trial Population Was Representative of the Older Population at Risk for RSV

Characteristic	ABRYSVO n=17,215* n (%)	Placebo n=17,069* n (%)
Male Sex—no.%	8,800 (51.1)	8,601 (50.4)
Age group—no. %		
60-69 years†	10,757 (62.5)	10,680 (62.6)
70-79 years	5,488 (31.9)	5,431 (31.8)
≥80 years	970 (5.6)	958 (5.6)
Country—no.%		
United States	10,319 (59.9)	10,182 (59.7)
Argentina	3,660 (21.3)	3,657 (21.4)
Japan	1,159 (6.7)	1,156 (6.8)
The Netherlands	687 (4.0)	681 (4.0)
Canada	509 (3.0)	506 (3.0)
South Africa	495 (2.9)	497 (2.9)
Finland	386 (2.2)	390 (2.3)
Race or Ethnic group—no.%‡		
White	13,475 (78.3)	13,360 (78.3)
Black	2,206 (12.8)	2,207 (12.9)
Asian	1,352 (7.9)	1,333 (7.8)
Multiracial	44 (0.3)	36 (0.2)
Race not reported	56 (0.3)	50 (0.3)
Unknown	28 (0.2)	32 (0.2)

*The safety population consisted of all enrolled participants who received RSV preF vaccine or placebo. Percentages may not total 100 because of rounding. †This age group includes one 59-year-old participant. ‡Race or ethnic group was reported by the participants.

preF, prefusion F; RSV, respiratory syncytial virus.

Walsh EE, et al. *N Engl J Med.* 2023;388(16):1465-1477.

52% of Participants Had ≥1 Prespecified High-Risk Condition

Prespecified high-risk condition	ABRYSVO n=17,215* n (%)	Placebo n=17,069* n (%)
≥1 Prespecified high-risk condition	8,867 (51.5)	8,831 (51.7)
Diabetes	3,224 (18.7)	3,284 (19.2)
Heart disease†	2,221 (12.9)	2,233 (13.1)
Lung disease‡	1,956 (11.4)	2,040 (12.0)
Liver disease	335 (1.9)	329 (1.9)
Renal disease	502 (2.9)	459 (2.7)
Current tobacco use	2,642 (15.3)	2,571 (15.1)
≥1 Chronic cardiopulmonary condition	2,595 (15.1)	2,640 (15.5)
Asthma	1,541 (9.0)	1,508 (8.8)
COPD	1,012 (5.9)	1,080 (6.3)
Congestive heart failure	293 (1.7)	307 (1.8)
No prespecified high-risk condition	8,348 (48.5)	8,238 (48.3)

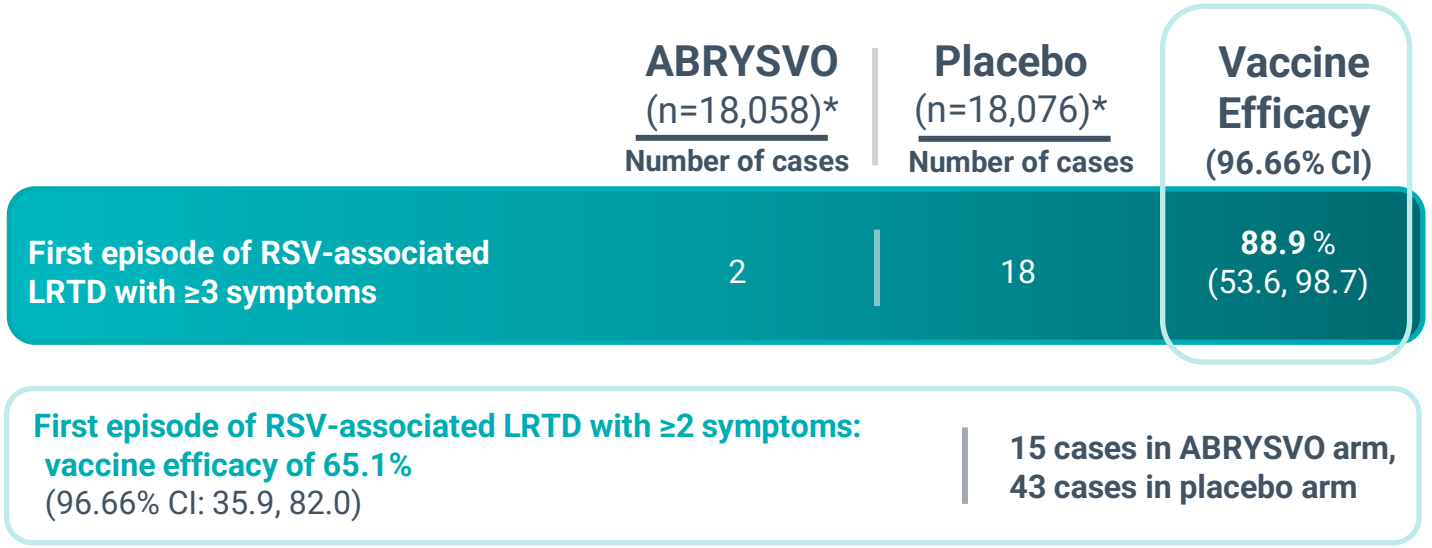
*The safety population consisted of all enrolled participants who received RSV preF protein vaccine or placebo. Percentages may not total 100 because of rounding. †This category includes congestive heart failure and other heart diseases. ‡This category includes COPD and other lung diseases.

COPD, chronic obstructive pulmonary disease; preF, prefusion F; RSV, respiratory syncytial virus.

Walsh EE, et al. *N Engl J Med.* 2023;388(16):1465-1477.

ABRYSVO- RSV Vaccine Provided Powerful Protection Against RSV[1,2]

PRIMARY ENDPOINTS IN AN RSV CLINICAL TRIAL OF ~36,134 ADULTS AGED 60 YEARS AND OLDER*



Symptoms include cough, wheezing, sputum production, shortness of breath, and tachypnea[2]

*Evaluable efficacy population. Median duration of efficacy follow-up was 7 months.[2]

CI, confidence interval; RSV-LRTD, respiratory syncytial virus-associated lower respiratory tract disease.

1. Walsh EE, et al. *N Engl J Med.* 2023;388(16):1465-1477. **2.** ABRYSVO (Respiratory Syncytial Virus Vaccine) Prescribing Information. UAE., August 2023.

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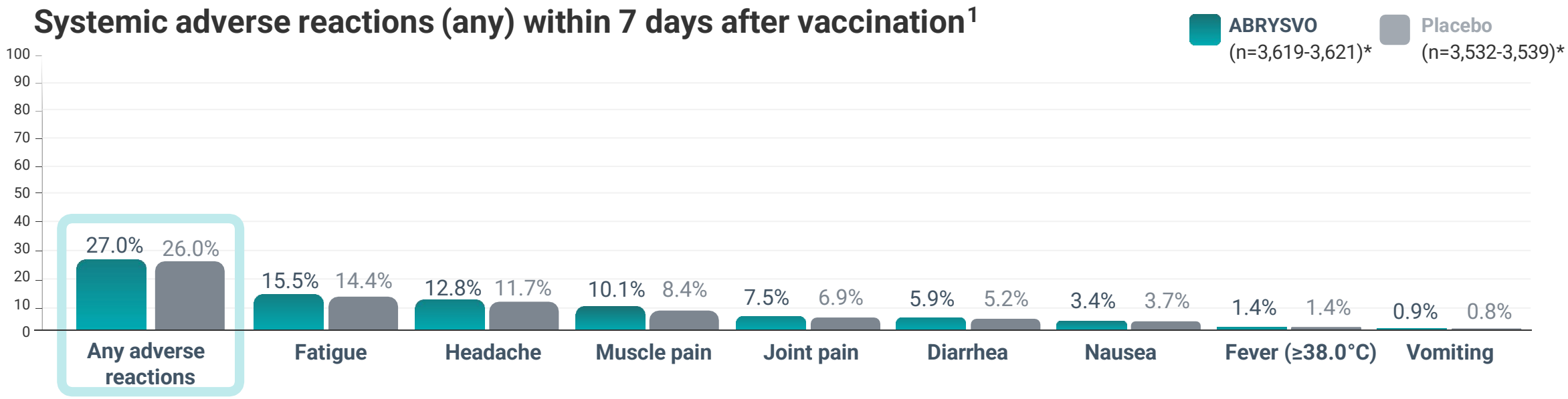
Similar Rates of Systemic AEs Observed Between ABRYSVO and Placebo Groups



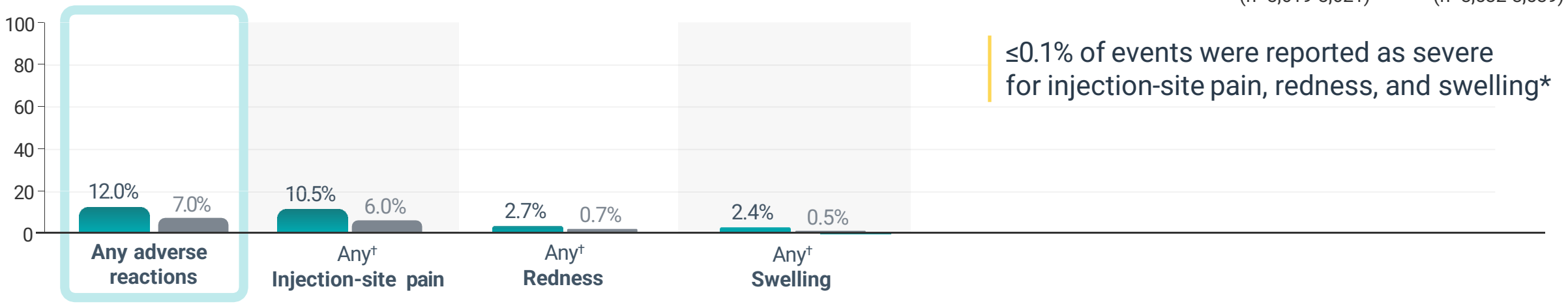
*Solicited local and systemic reactions were monitored in 7,169 participants from a subset of sites who provided e-diary data for a specific reaction after vaccination.

1. Walsh EE, et al. *N Engl J Med.* 2023;388(16):1465-1477..

88% of Patients Reported No Local Reactions With ABRYSVO- RSV Vaccine

The majority of local reactions after ABRYSVO vaccination were mild or moderate and had a median duration of 1-2 days[1,2]

Local adverse reactions[1,2]



≤0.1% of events were reported as severe for injection-site pain, redness, and swelling*

A US survey of more than 55,000 adults in April/May 2021 evaluating respiratory vaccines showed that more than half of patients cite side effects as the key concern when getting a vaccine[3]

*Severe is defined as preventing daily activity.

†"Any" includes all participants who reported a reaction as mild, moderate, or severe during day 1 to day 7 after vaccination.

1. Walsh EE, et al. *N Engl J Med*. 2023;388(16):1465-1477. **2.** ABRYSVO (Respiratory Syncytial Virus Vaccine) Prescribing Information. UAE., August 2023. **3.** Joyce MC, et al. *BMC Public Health*. 2022;22(1):2351. doi:10.1186/s12889-022-14824-z

Serious Adverse Events

SAEs were reported by 2.3% of participants in both the ABRYSVO and placebo groups

3 SAEs were reported and assessed as possibly related to vaccination:

- Guillain-Barre Syndrome
- Miller Fisher Syndrome
- Hypersensitivity

SAE, serious adverse event.

ABRYSVO (Respiratory Syncytial Virus Vaccine) Prescribing Information. UAE., August 2023.

Clinical Data Included in the CDC's *MMWR* Publication

Additional efficacy, safety, and tolerability data from RENOIR study

Additional interim season 2 and RSV-associated medically attended LRTD data are not included in the USPI

VACCINE EFFICACY, % (95% CI)	RSV-associated LRTD	RSV-associated medically attended LRTD
Season 1	88.9 (53.6-98.7)	84.6 (32.0-98.3)
Season 2 (interim)	78.6 (23.2-96.1)	——*
Combined seasons 1 and 2 (interim)†	**84.4** (59.6-95.2)	**81.0** (43.5-95.2)

- In patients who received ABRYSVO, 4.3% experienced a serious AE, 1% experienced severe reactogenicity, and 3 patients experienced inflammatory neurologic events
- In patients who received placebo, 4.1% experienced a serious AE and 0.7% experienced severe reactogenicity

Evidence regarding safety of the Pfizer vaccine consisted of data from 2 randomized, double-blind, placebo-controlled clinical trials, including the same ongoing phase 3 trial, and a phase 1/2 trial with 91 participants aged ≥65 years who received either the vaccine formulation used in phase 3 or placebo

Season 1 and season 2 vaccine efficacy estimates reflect efficacy data from 2 RSV seasons, from August 2021 through January 2023

The data presented are based on RSV-LRTD with ≥3 lower respiratory signs or symptoms. Medically attended RSV-associated LRTD was defined as LRTD prompting any healthcare visit, such as hospitalization, visits to the emergency room or urgent care, primary care or specialist office visit, telehealth contact, or other visit

*Season 2 interim analysis underpowered to estimate efficacy
†Combined season 1 and season 2 (interim) vaccine efficacy estimates reflect efficacy against first events occurring any time during season 1 or season 2

Please see the complete publication in *Morbidity and Mortality Weekly Report* for details

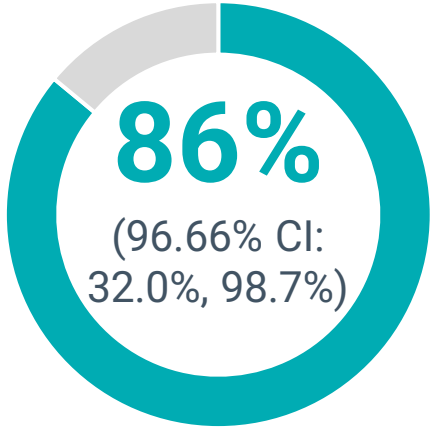
AE, adverse event; CDC, Centers for Disease Control and Prevention; CI, confidence interval; LRTD, lower respiratory tract disease; MMWR, Morbidity and Mortality Weekly Report; RSV, respiratory syncytial virus; USPI, US Prescribing Information..

Melgar M, et al. *Morb Mortal Wkly Rep*. 2023;72(29):793-801.

The RENOIR Trial Demonstrated the Efficacy and Safety of ABRYSVO (RSV Vaccine) in Adults Aged 60 and Older[1]

RENOIR included both healthy and high-risk adults 60 years of age and older[1]

ABRYSVO provided powerful protection against RSV[1]



reduction in RSV-LRTD with ≥3 symptoms

67% reduction in RSV-LRTD with ≥2 symptoms (96.66% CI: 28.8%, 85.8%)

Similar rates of systemic AEs observed between ABRYSVO and placebo groups[1]

The most common solicited local and systemic adverse reactions (≥10%) were fatigue (15.5%), headache (12.8%), pain at the injection site (10.5%), and muscle pain (10.1%)[1]

AE, adverse event; CI, confidence interval; RSV, respiratory syncytial virus; RSV-LRTD, RSV-associated lower respiratory tract disease.

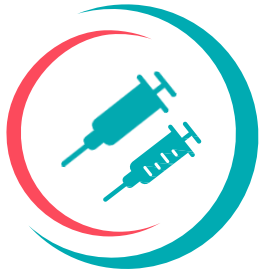
1. Walsh EE, et al. *N Engl J Med*. 2023;388(16):1465-1477.

RSV Vaccination Recommendation

ABRYSVO: CDC-Recommended for the Prevention of RSV in Adults Aged 60 Years and Older Based on Shared Clinical Decision-Making[1]

CDC Recommendation

- Adults aged 60 years and older may receive a single dose of the vaccine based on discussions with their healthcare provider[1]
- The CDC recommends offering RSV vaccination year-round to eligible adults who remain unvaccinated based on shared clinical decision-making[1,2]



Coadministration

- The CDC provided clinical guidance to healthcare providers stating that they can coadminister those vaccines for which a patient is eligible in the same visit, including RSV, COVID-19, and influenza vaccines[3]
- Available data on immunogenicity of coadministration of RSV vaccines and other vaccines are currently limited[1]

CDC, Centers for Disease Control and Prevention; GMC, geometric mean antibody concentration; RSV, respiratory syncytial virus; Tdap, Tetanus, Diphtheria, and Pertussis.

1. Melgar M, et al. *MMWR Morb Mortal Wkly Rep*. 2023;72(29):793-801. **2.** Centers for Disease Control and Prevention. Healthcare providers: August 30, 2023. Accessed January 24, 2024. https://www.cdc.gov/vaccines/vpd/rsv/hcp/older-adults.html **3.** Centers for Disease Control and Prevention. Increased respiratory syncytial virus (RSV) activity in parts of the southeastern United States: new prevention tools available to protect patients. September 5, 2023. Accessed January 5, 2024. https://emergency.cdc.gov/han/2023/han00498.asp.

ABRYSVO Can Help Protect Adults 60 Years and Older Against RSV[1]

Sarah is a 62-year-old female with diabetes and COPD. She is visiting her primary care physician's office for a regular checkup.

Is Sarah eligible for vaccination with ABRYSVO?

- *Sarah's age and underlying medical conditions increase her risk for severe RSV[2]*

According to the CDC, adults 60 years of age and older may receive a single dose of RSV vaccine, using shared clinical decision-making[3]

Sarah may receive a single dose of ABRYSVO

Image used is for representation purposes only.

CDC, Centers for Disease Control and Prevention; COPD, chronic obstructive pulmonary disease; RSV, respiratory syncytial virus.

1. ABRYSVO (Respiratory Syncytial Virus Vaccine) Prescribing Information. UAE., August 2023. **2.** Centers for Disease Control and Prevention. Respiratory syncytial virus infection; for healthcare providers. Updated: November 7, 2023. Accessed January 1, 2024. https://www.cdc.gov/rsv/clinical/index.html#print **3.** Centers for Disease Control and Prevention. Advisory Committee on Immunization Practices Recommendations. Updated: June 23, 2023. Accessed January 1, 2024. https://www.cdc.gov/vaccines/acip/recommendations.html

ABRYSVO Can Help Protect Adults 60 Years and Older Against RSV[1]

John is a 75-year-old male who is frail. He is visiting his pharmacy for his annual influenza shot.

Is John also eligible to receive ABRYSVO?

- *John's age and frailty increase his risk for severe RSV[2]*
- *Coadministration with other adult vaccines during the same visit is acceptable[3]*

According to the CDC, adults 60 years of age and older may receive a single dose of RSV vaccine, using shared clinical decision-making[4]

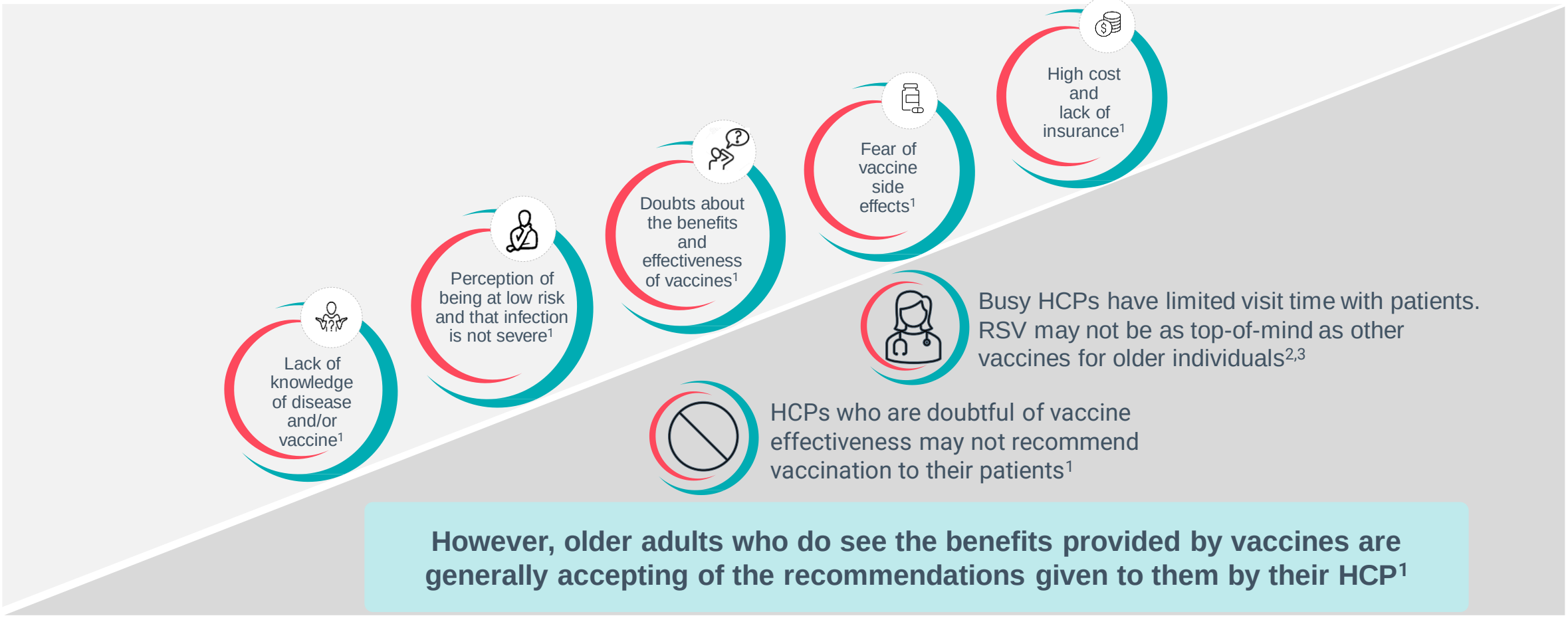
John may receive a single dose of ABRYSVO

Image used is for representation purposes only.

CDC, Centers for Disease Control and Prevention; RSV, respiratory syncytial virus.

1ABRYSVO (Respiratory Syncytial Virus Vaccine) Prescribing Information. UAE., August 2023. **2.** Centers for Disease Control and Prevention. Respiratory syncytial virus infection; for healthcare providers. Updated: November 7, 2023. Accessed January 1, 2024. https://www.cdc.gov/rsv/clinical/index.html#print **3.** Centers for Disease Control and Prevention. Respiratory syncytial virus vaccine information statement. Updated: October 19, 2023. Accessed January 1, 2024. https://www.cdc.gov/vaccines/hcp/vis/vis-statements/rsv.pdf **4.** Centers for Disease Control and Prevention. Advisory Committee on Immunization Practices Recommendations. Updated: June 23, 2023. Accessed January 1, 2024. https://www.cdc.gov/vaccines/acip/recommendations.html

Barriers to Older Adult Vaccination



HCP, health care provider; RSV, respiratory syncytial virus.

1. Eiden AL, et al. *Hum Vaccin Immunother*. 2022;18(6):2127290. doi:10.1080/21645515.2022.2127290 **2.** Appel A. *Am Fam Physician*. 2011;84(9):977-978. **3.** Surie D, et al. *Morb Mortal Wkly Rep*. 2023;72(40):1083-1088.

Choose RSV Vaccine to Protect Your Adults Patients Aged 60 Years and Older From the Threat of RSV

Similar rates of systemic AEs observed between ABRYSVO and placebo groups in a clinical trial of older adults[1,2]

Powerful protection against RSV in older adults[1]*

- 88.9 % vaccine efficacy against RSV-LRTD with ≥3 symptoms (96.66% CI: 53.6, 98.7)
- 65.1% vaccine efficacy against RSV-LRTD with ≥2 symptoms (96.66% CI: 35.9, 82.0)

ABRYSVO is recommended by the CDC for adults 60 years of age and older, using shared clinical decision-making[3]

- The CDC recommends offering RSV vaccination year-round to eligible adults who remain unvaccinated[4]

Administered with Pfizer's convenient, needle-free reconstitution kit[1†]

ABRYSVO is the only RSV vaccine approved for both adults aged 60 years and older and infants (from birth through 6 months) via maternal immunization (at 24-36 weeks of gestation)[1]

*Shown in an ongoing multinational, multicenter, randomized, double-blind, placebo-controlled clinical trial of ~ 36,134 adults aged 60 years and older. Evaluable efficacy population: ABRYSVO, n= 18,058; placebo, n=18,076. At the interim analysis, median duration of efficacy follow-up was 7 months. Vaccine efficacy (VE), against RSV-LRTD, defined as the relative risk reduction of first episode of RSV-LRTD in the ABRYSVO group compared to the placebo group in the first RSV season, was assessed.[1]

†Needle required for intramuscular injection is not included.

AE, adverse event; CDC, Centers for Disease Control and Prevention; CI, confidence interval; HCP, healthcare provider; RSV-LRTD, respiratory syncytial virus-associated lower respiratory tract disease.

1. ABRYSVO (Respiratory Syncytial Virus Vaccine) Prescribing Information. UAE., August 2023. **2.** Walsh EE, et al. *N Engl J Med.* 2023;388(16):1465-1477. **3**. Centers for Disease Control and Prevention. Advisory Committee on Immunization Practices Recommendations. Updated: June 23, 2023. Accessed January 1, 2024. https://www.cdc.gov/vaccines/acip/recommendations.html **4.** Centers for Disease Control and Prevention. Healthcare providers: RSV vaccination for adults 60 years of age and over. August 30, 2023. Accessed January 16, 2024. https://www.cdc.gov/vaccines/vpd/rsv/hcp/older-adults.html

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Prescribing information

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Further information is available upon request

Pfizer Gulf FZ-LLC-Dubai Branch
Sheikh Zayed road, Al Moosa Tower 2
P. O. Box: 29553, Dubai, UAE
Tel: +971-4-3322286, Fax: +971-4-3320212

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