Gripe y VRS, estado del arte y novedades en población adulta

IX Jornada del Programa de vacunaciones de la Región de Murcia

R.A.E.
1. m. o f. Capacidad, habilidad para hacer algo.

Manuel Méndez Díaz
DGSP Aragón
18/11/2022

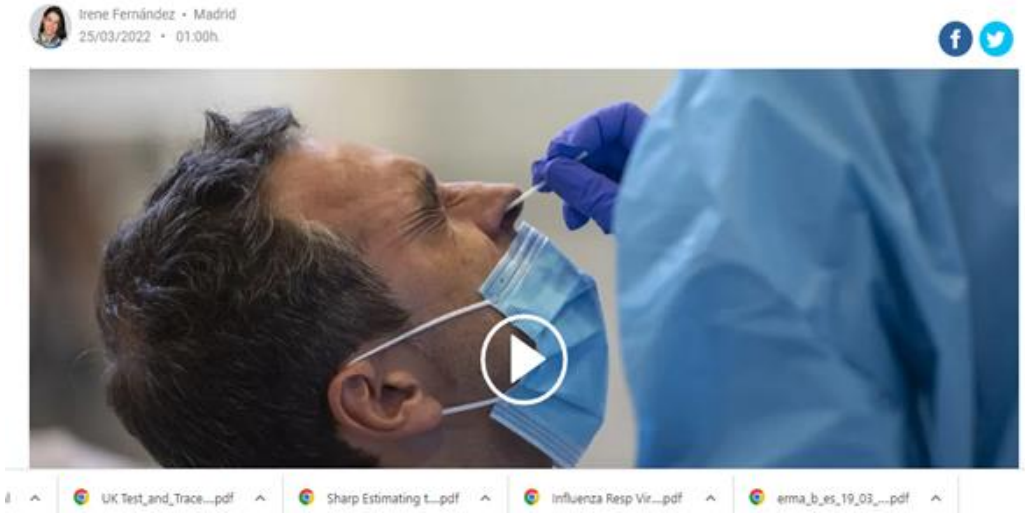
The New York Times

evos lineamientos de la CDC | Las vacunas y la menstruación | Variantes BA.4 y BA.5 | Reinfeccior

¿Una 'tripledemia'? La influenza y otras infecciones regresan mientras aumentan los casos de COVID-19

Los casos de gripe son más altos de lo normal para esta época y se espera que aumenten en las próximas semanas. Un tercer virus, el VSR, afecta a los hospitales pediátricos en algunos lugares de Estados Unidos.

Médicos critican 'gripalizar' la covid y apuestan por lo contrario: "Medidas covid para los virus respiratorios"



https://www.nytimes.com/es/2022/10/26/espanol/riesgo-gripe-covid-tripledemia.html

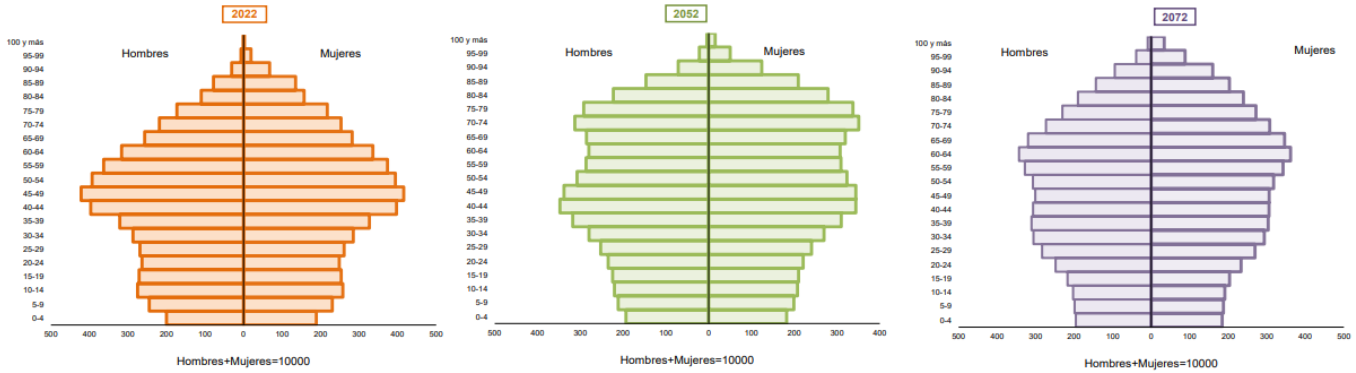
¿En qué consiste la 'tripledemia' de COVID-19, gripe y virus respiratorio sincitial?

Los expertos alertan de una pandemia en la que confluyan la COVID-19, la gripe y el VRS. También apuntan que la mayoría de los casos que se puedan dar serán leves.

Mar Aguilar
08/11/2022 3 minutos de lectura

La población entre 20 y 64 años, que actualmente supone el 60,7% del total, pasaría a representar el 53,1% en 2052. En 2072 se recuperaría en parte, hasta el 54,7%.

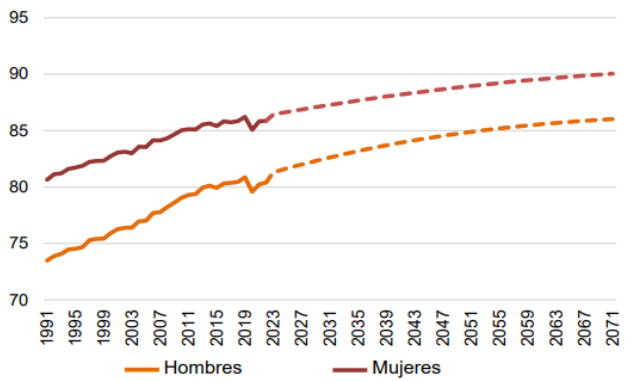
Pirámides de población de España (años 2022, 2052 y 2072)



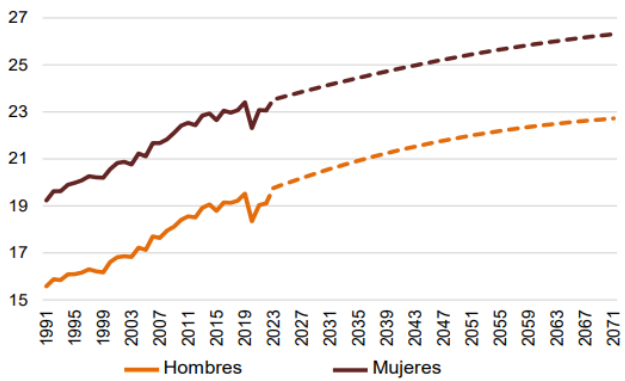
El porcentaje de población de 65 años y más, que actualmente se sitúa en el 20,1% del total, alcanzaría un máximo del 30,4% en torno a 2050. A partir de entonces empezaría a descender.

Esperanza de vida observada (1991-2021) y proyectada (2022-2071)

Esperanza de vida al nacer



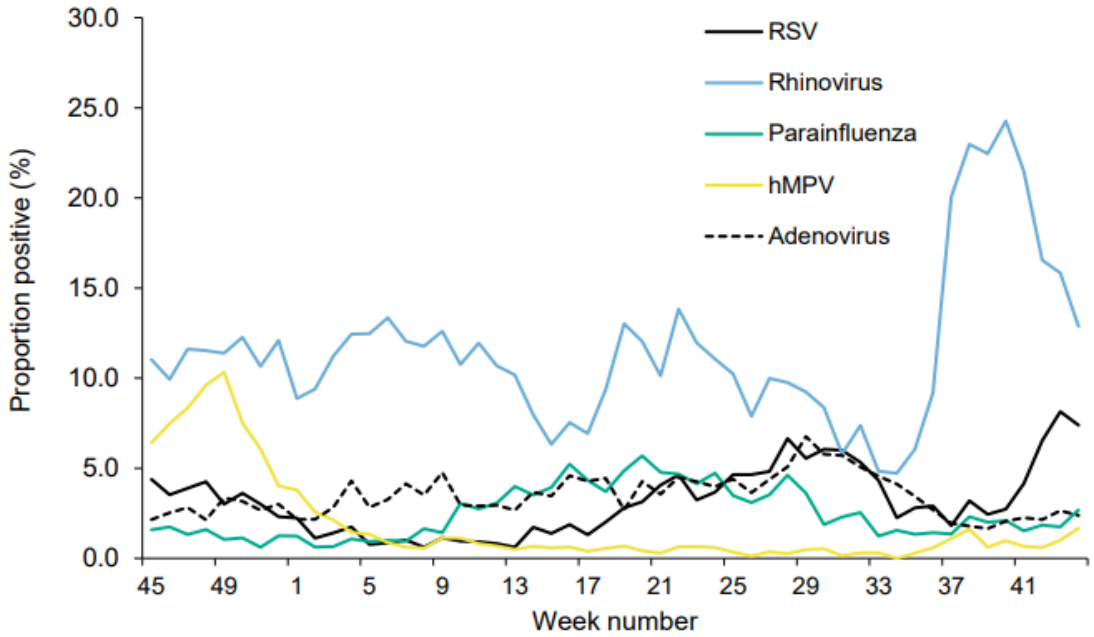
Esperanza de vida a los 65 años



INE. Proyecciones de Población 2022-2072. Nota de prensa 13 de octubre de 2022

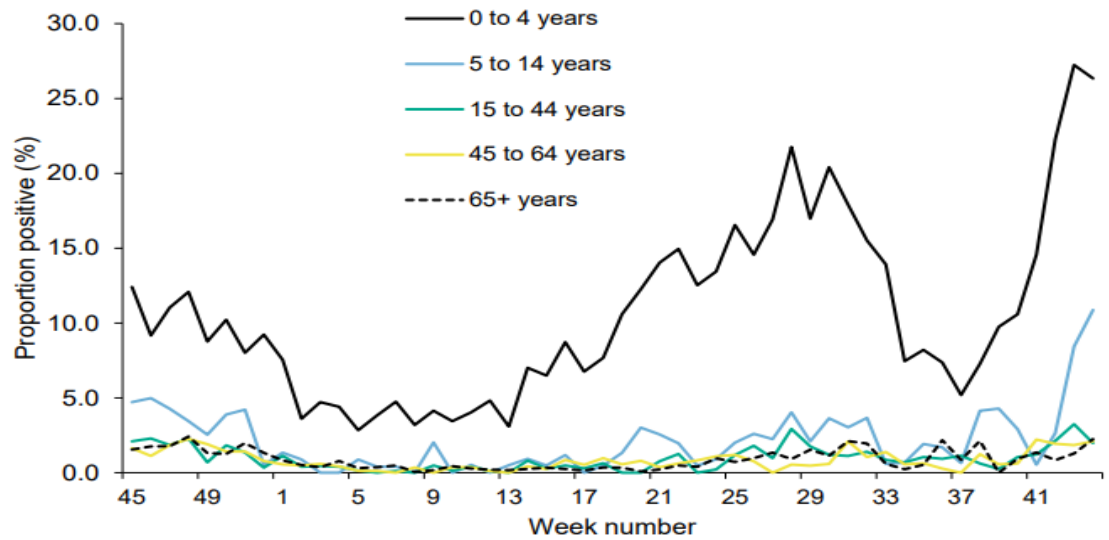
El VRS no es solo cosa de niños

Figure 12: Respiratory DataMart weekly positivity (%) for other respiratory viruses, England



Weekly National Influenza and COVID-19 Report: week 45 report (up to week 44 data)

Figure 16: Respiratory DataMart weekly positivity (%) for RSV by age, England



All patients aged 65 years or over admitted to English hospitals between 2nd August 2010 and 30th July 2017
respiratory admissions (J00–J99)

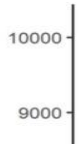
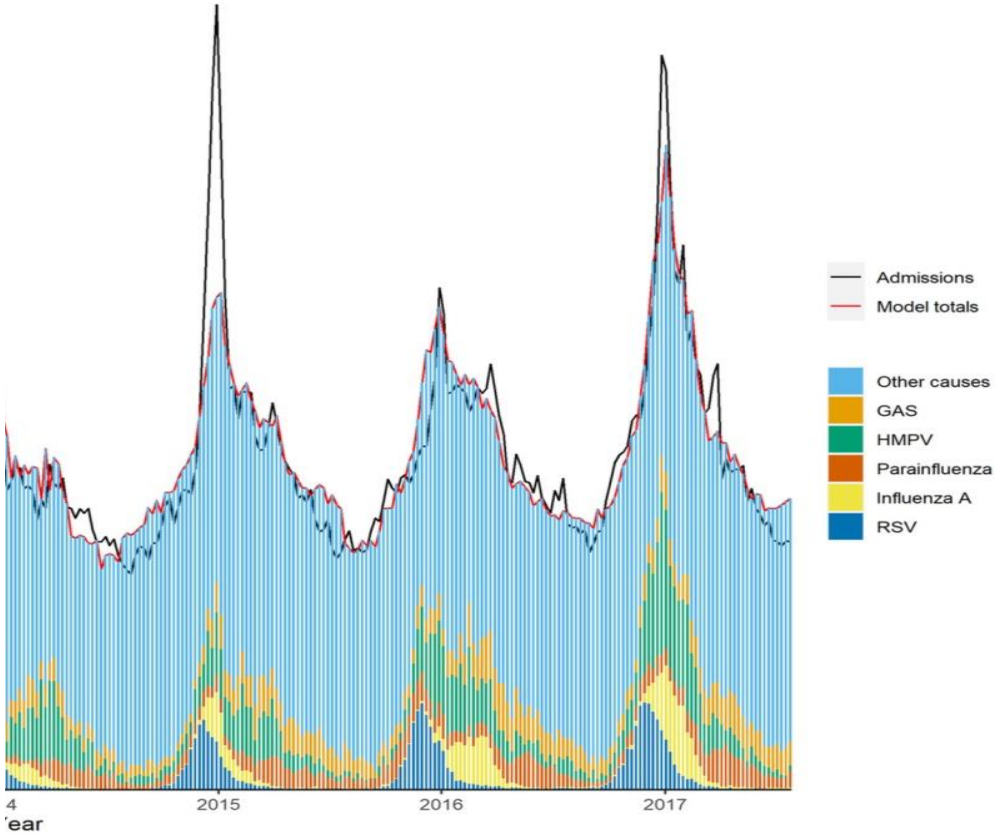


TABLE 3. Mean seasonal respiratory (J00–J99) admissions attributable to each pathogen by age group

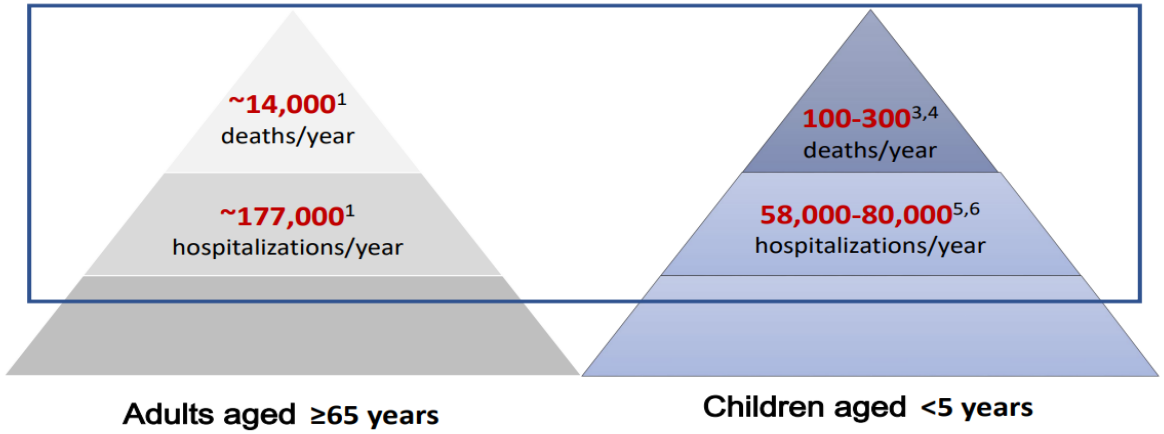
Organism	Age group	Admissions(mean)	Admissions(95 CI)	Rate/100,000(mean)	Rate(95% CI)
Pneumococcus	65–74	22 610	15 626–29 595	448	310–587
	75+	43 641	22 779–64 503	1010	527–1493
HMPV	65–74	5023	3554–6492	99	70–128
	75+	16 781	12 387–21 174	387	286–488
GAS	65–74	4815	912–8718	95	18–172
	75+	-	-	-	-
RSV	65–74	3565	2632–4498	71	52–90
	75+	10 808	7997–13 620	251	186–316
Parainfluenza	65–74	2540	358–4722	50	7–93
	75+	6784	142–13 427	157	3–310
Influenza A	65–74	2273	1721–2824	45	34–56
	75+	5141	3564–6718	119	82–155



y (J00–J99) admissions attributable to each pathogen, age

Sharp A, et al. **Estimating the burden of adult hospital admissions due to RSV and other respiratory pathogens in England.** Influenza Other Respir Viruses. 2022 Jan;16(1):125-131.

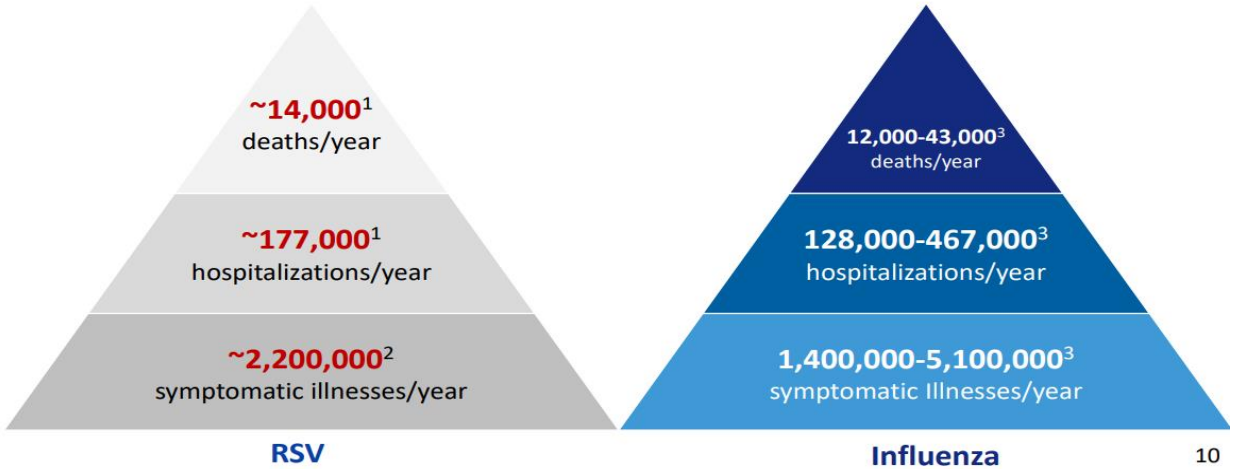
Burden of hospitalization and death: Older adults and children <5



[1]Falsey et al, NEJM (2005); [2]Adapted from Falsey et al, NEJM (2005); [3]Thompson et al, JAMA, 2003; [4]Hansen et al, JAMA Network Open, 2022; [5]Hall et al, NEJM, 2009; [6]McLaughlin et al, J Infect Dis, 2022

6

Among adults ≥65 years of age in the United States, RSV is associated with a similar burden of disease as influenza



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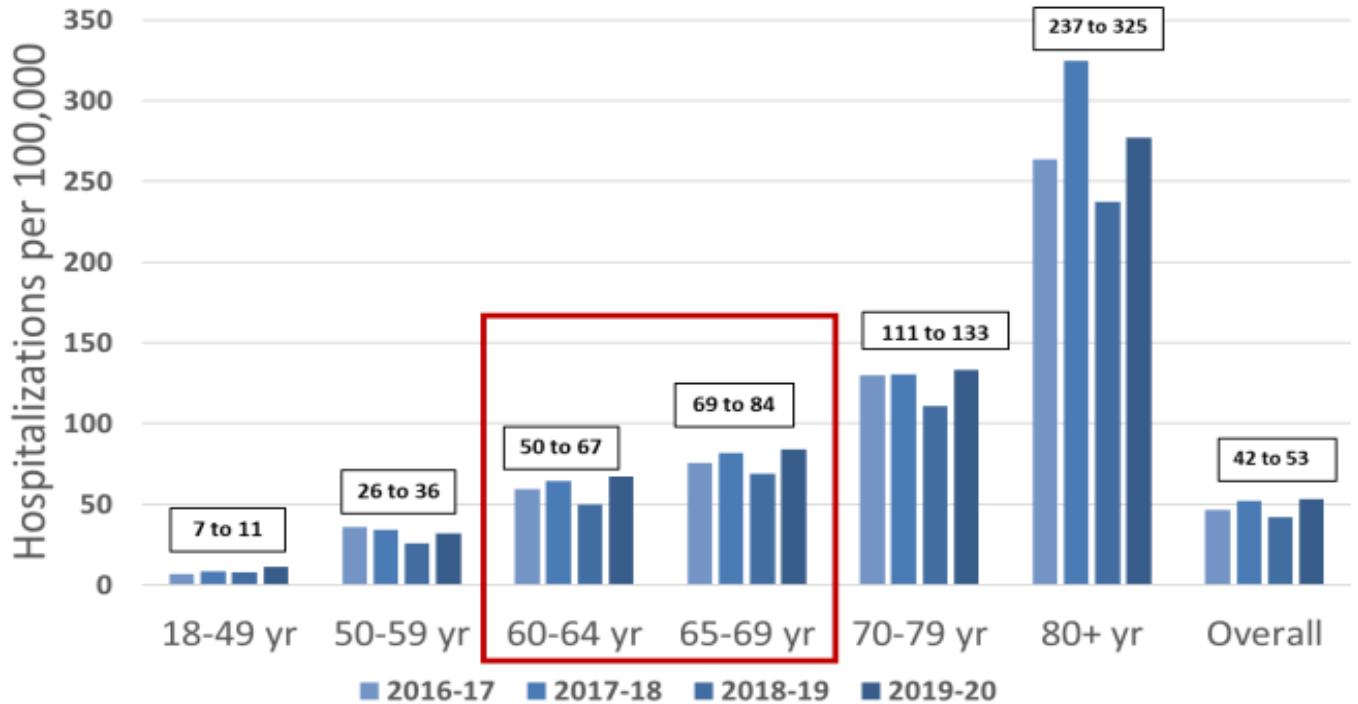
[1]Falsey et al, NEJM (2005); [2]Adapted from Falsey et al, NEJM (2005); [3]Estimated Influenza Disease Burden 2015-2016 through 2019-2020, CDC (2022): https://www.cdc.gov/flu/about/burden/past-seasons.html

www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-06-22-23/04-RSV-Havers-508.pdf

RSV-associated hospitalization rates by adult age group, RSV-NET 2016–2020



RSV-NET: unpublished data. Rates are adjusted for the frequency of RSV testing during recent prior seasons and the sensitivity of RSV diagnostic tests

www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-10-19-20/04-RSV-Adults-Melgar-508.pdf

Underlying medical conditions among adults ≥18 years hospitalized for RSV: RSV-NET 2014-2018

Major underlying condition categories (n=4,970)	N=4,970	%
Cardiovascular disease	2833	57.0
Chronic lung disease	2486	50.0
Diabetes mellitus	1692	34.0
Renal disease	1378	27.7
Immunocompromised condition	1126	22.7
Neurologic disorder	1041	21.0
Chronic metabolic disease (except diabetes)	934	18.8
Liver disease	332	6.7
Blood disorders/ hemoglobinopathy	132	2.7
Other disease or condition	429	8.7

Source: CDC unpublished data.

94% of hospitalized adults have underlying medical conditions:

- **46%: 1-2 conditions**
- **48%: ≥3 conditions**

14

Ins. cardiaca congestiva 50-64 años x 14 riesgo ingreso
Inmunodeficiencias aumentan riesgo
Brotes en centros residenciales

www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-06-22-23/04-RSV-Havers-508.pdf

Los adultos mayores

tienen alto riesgo de contraer una infección grave por el VRS

El virus respiratorio sincitial, o VRS, es un virus común que afecta los pulmones y las vías respiratorias

Las infecciones por el VRS pueden ser peligrosas para ciertos adultos. Los adultos que tienen el más alto riesgo de contraer una infección grave por el VRS incluyen:

- Adultos mayores, especialmente los de 65 años de edad o más.
- Adultos con enfermedad cardiaca o pulmonar crónicas.
- Adultos con el sistema inmunitario debilitado

Cada año, en los Estados Unidos una cifra estimada de 60 000 a 120 000 adultos mayores son hospitalizados y de 6000 a 10 000 de ellos mueren debido a una infección por el VRS.

Infección grave por el VRS

Cuando los adultos mayores contraen una infección por el VRS, generalmente tienen síntomas leves similares a los de un resfriado, como moqueo, dolor de garganta, tos y dolor de cabeza. Pero el VRS a veces puede causar afecciones graves como las siguientes:

- Neumonía (infección de los pulmones).
- Síntomas más graves en las personas con asma.
- Síntomas más graves en las personas con enfermedad pulmonar obstructiva crónica (epoc), una afección crónica de los pulmones que hace que sea difícil respirar.
- Insuficiencia cardiaca congestiva (cuando el corazón no puede bombear sangre y oxígeno a los tejidos del cuerpo).

Los adultos mayores que se enfermen gravemente por el VRS puede que necesiten ser hospitalizados. Algunos pueden incluso morir. Los adultos mayores están en mayor riesgo que los adultos jóvenes de presentar complicaciones graves por el VRS porque el sistema inmunitario se debilita cuando envejecemos.

Los científicos están trabajando para elaborar vacunas

Todavía no hay ninguna vacuna que prevenga la infección por el VRS, pero los científicos están trabajando arduamente para crear una. Si le preocupa el riesgo que tiene de contraer el VRS, hable con su médico.

Cómo protegerse y proteger a sus seres queridos

El VRS comienza a circular en el otoño y alcanza su punto máximo en el invierno. Si usted tiene un alto riesgo de contraer una infección grave por el VRS o si interactúa con un adulto mayor, debe tomar medidas adicionales para mantenerse sano:

- **Lávese las manos con frecuencia**
  Lávese las manos frecuentemente con agua y jabón durante 20 segundos. Si no hay agua y jabón disponibles, use un desinfectante de manos a base de alcohol. Lavarse las manos lo ayudará a protegerse de los microbios.
- **No se lleve las manos a la cara**
  Evite tocarse los ojos, la nariz y la boca si no se ha lavado las manos. Los microbios se transmiten de este modo.
- **Evite el contacto cercano con las personas enfermas**
  Evite el contacto cercano, como dar besos y compartir vasos o cubiertos con las personas que tengan síntomas similares a los de un resfriado.
- **Cúbrase la nariz y la boca cuando tosa o estornude**
  Cúbrase con un pañuelo desechable la nariz y la boca cuando tosa o estornude. Luego bote el pañuelo a la basura.
- **Limpie y desinfecte las superficies**
  Limpie y desinfecte las superficies que las personas toquen frecuentemente, como las manijas de las puertas. Cuando las personas infectadas con el VRS tocan superficies y objetos, pueden dejar allí los microbios. Además, cuando tosen o estornudan, las gotitas que expulsan y que contienen microbios pueden caer en las superficies y objetos.

- **Quédese en la casa si está enfermo**
  Si es posible, quédese en la casa y no vaya al trabajo, la escuela ni a lugares públicos cuando esté enfermo. Esto ayudará a proteger a los demás para que no contraigan su enfermedad.

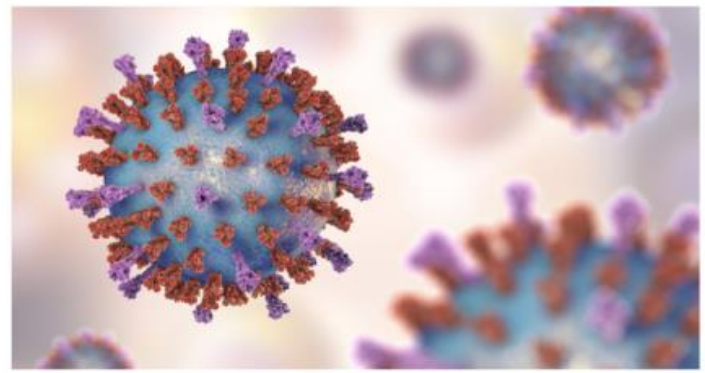
Centers for Disease Control and Prevention
National Center for Immunization and Respiratory Diseases

CS280240
Octubre de 2022

www.cdc.gov/rsv

Novavax RSV Vaccine Fails to Hit Primary Endpoint in Phase III Trial

Published: Feb 28, 2019 | By Alex Keown



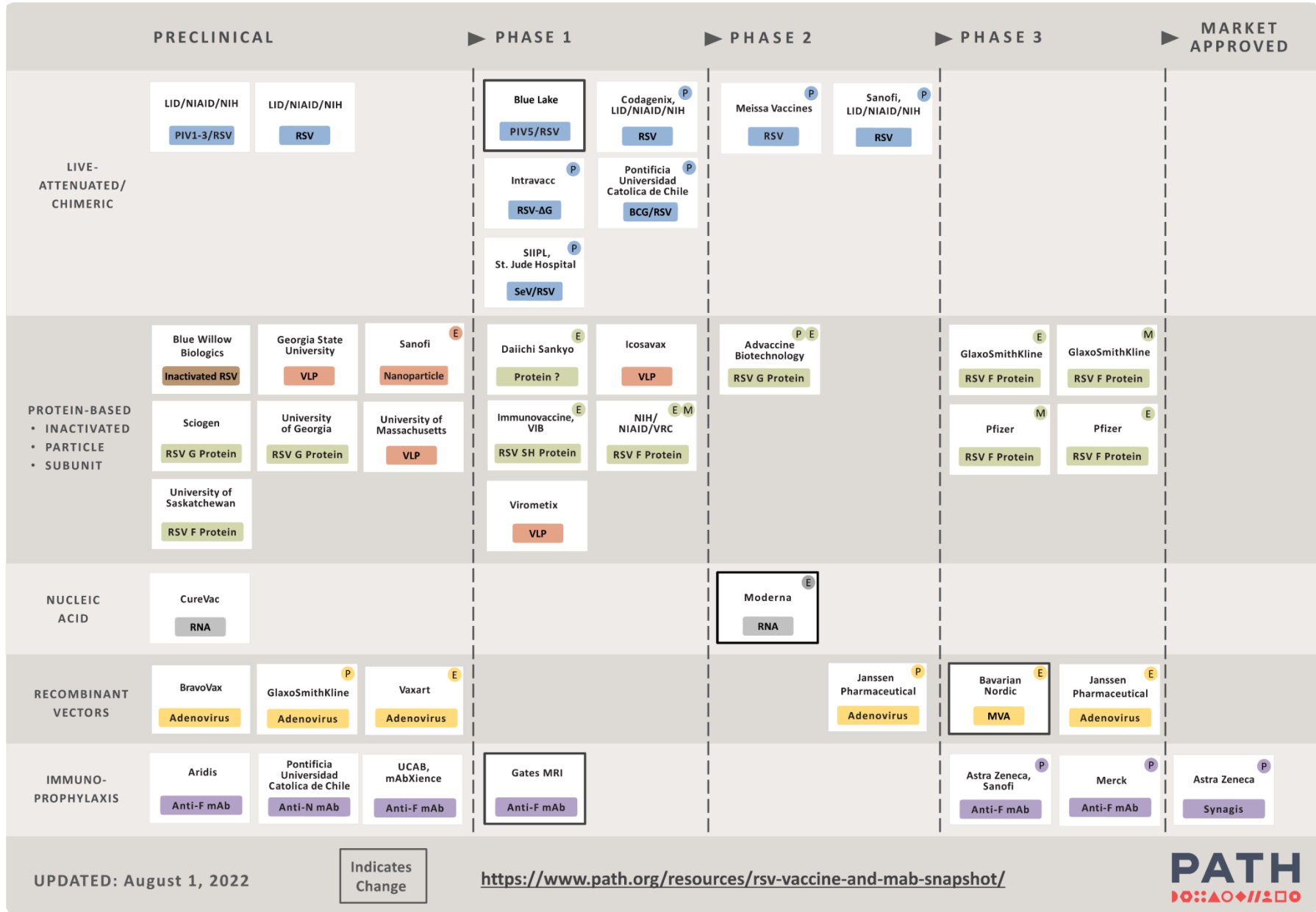
Shares of Maryland-based **Novavax** are down 66 percent in morning trading after the company announced its respiratory syncytial virus (RSV) vaccine called ResVax **failed to hit its primary endpoint** in a Phase III trial.

In the late-stage PREPARE trial, ResVax, an aluminum adjuvanted RSV fusion (F) protein recombinant nanoparticle vaccine, was being tested in infants with RSV lower respiratory tract infection (LRTI). Data from the Phase III trial showed that ResVax failed to meet the primary objective of prevention of medically significant RSV LRTI through 90 days of life. However, the company said the trial did show efficacy against a secondary objective of RSV LRTI hospitalization. That makes ResVax the first RSV vaccine to show Phase III efficacy, the company said. Data also showed that the drug

https://www.biospace.com/article/novavax-rsv-vaccine-fails-to-hit-primary-endpoint-in-phase-iii-trial/

RSV Vaccine and mAb Snapshot

TARGET INDICATION: (P)=PEDIATRIC (M)=MATERNAL (E)=ELDERLY



UPDATED: August 1, 2022

Indicates Change

https://www.path.org/resources/rsv-vaccine-and-mab-snapshot/

PATH

Adult RSV Vaccine Products Expected be Reviewed by the WG

- *GSK*
  - Protein-based + adjuvant
- *Pfizer*
  - Protein-based
- *Janssen Pharmaceutical*
  - Adenovirus vector + soluble protein
- *Moderna*
  - mRNA
- *Bavarian Nordic*
  - Vaccinia vector

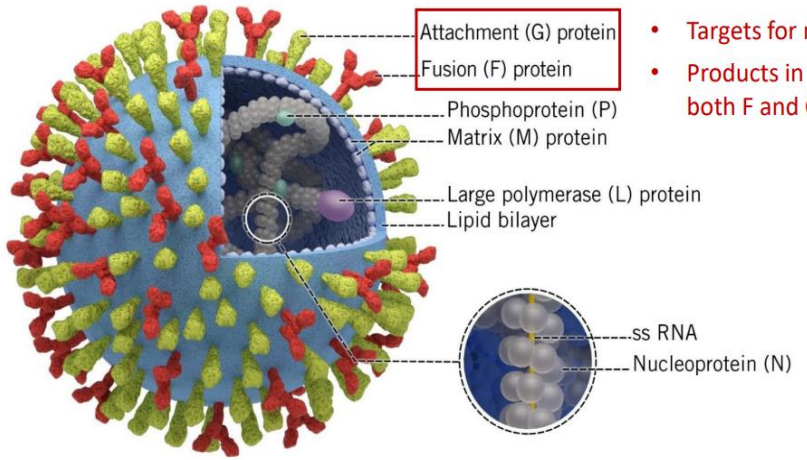
Tentative ACIP timeline*

2022		2023		
June	**October**	**February**	**June**	**October**
Epidemiology and burden of RSV disease	1–2 manufacturer presentations GRADE for 1–2 vaccine products	1–2 manufacturer presentations GRADE for 1–2 vaccine products Cost effectiveness EtR for 1–2 vaccine products Policy options for 1–2 products	ACIP votes on 1–2 vaccine products GRADE & EtR for 1–2 vaccine products Policy options for 1–2 products	ACIP votes on 1–2 vaccine products

*Subject to change

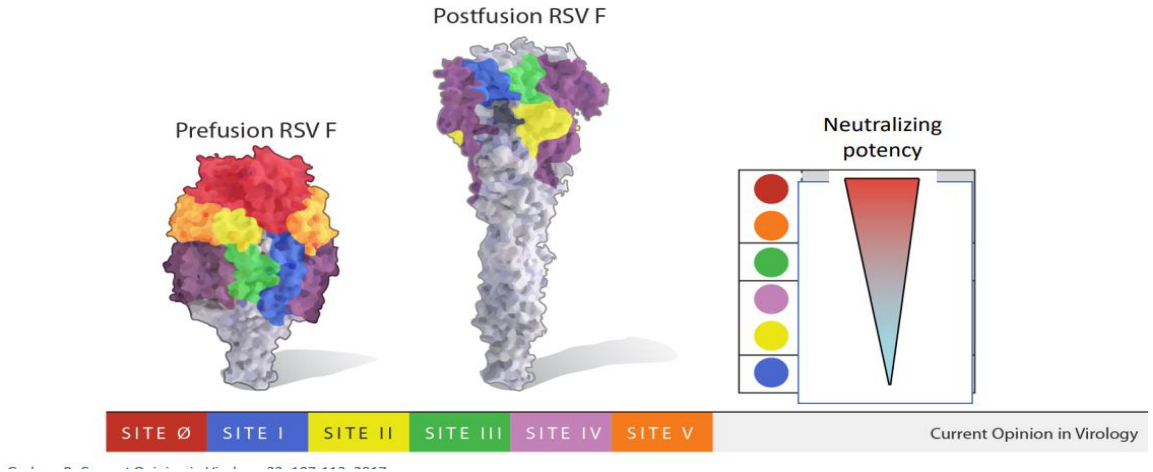
[Introduction to ACIP's Adult Respiratory Syncytial Virus Work Group (cdc.gov)]
www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-06-22-23/01-RSV-Kotton-508.pdf

RSV – virion structure



- Targets for neutralizing antibodies
- Products in target F alone or have both F and G

The fusion (F) protein exists in two or more structural forms, which bind different antibodies



www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-06-22-23/04-RSV-Havers-508.pdf

Key Phase 3 trials

AReSVi-004 study[1]
Older adults ≥60 YOA
Safety, reactogenicity, immunogenicity, persistence & revaccination

AReSVi-006 study[2]
Older adults ≥60 YOA
Pivotal efficacy study

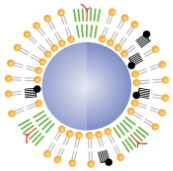
RSV-007 study[3]
Older adults ≥60 YOA
Safety, reactogenicity, immunogenicity when co-administered with FLU-QIV

QIV, Inactivated quadrivalent influenza vaccine; YOA, years of age.
1. ClinicalTrials.gov, 2022 NCT04732871. https://clinicaltrials.gov/ct2/show/NCT04732871; 2. ClinicalTrials.gov, 2022. NCT04886596. https://clinicaltrials.gov/ct2/show/NCT04886596;
3. ClinicalTrials.gov, 2022. NCT04841577. https://clinicaltrials.gov/ct2/show/NCT04841577. URLs accessed Oct 2022.

F3 Antigen (120 µg)

tigen engineered to preferentially maintain the pre-fusion conformation and display potent neutralizing epitopes to boost humoral immune response in older adults[1,2]

AS01$_E$ Adjuvant System



Boosts cellular immune response and restores the RSVPreF3 CD4+ T-cell level in older adults[2]

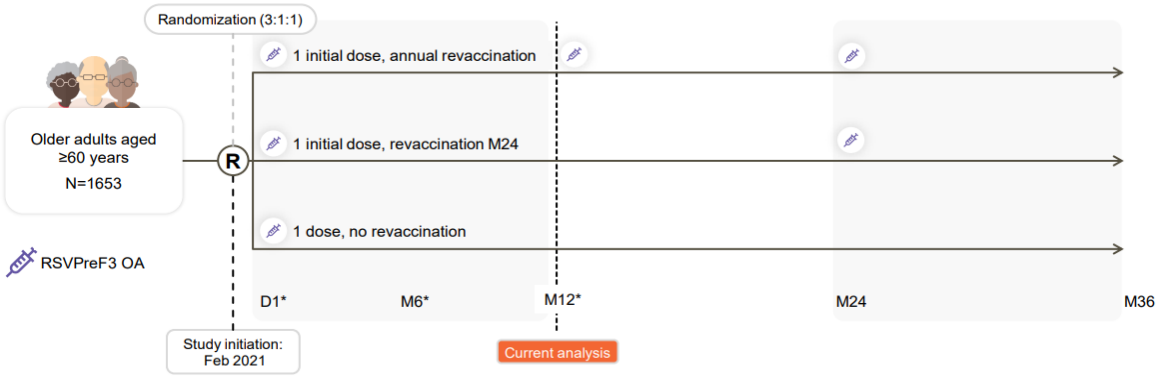
AS01$_E$, Adjuvant System 01$_E$ (25 µg *Quillaja saponaria* Molina, fraction 21, 25 µg 3-Odesacyl-4'- monophosphoryl lipid A); OA, older adults.
Image of F protein reproduced from Graham BS, et al. *Curr Opin Immunol* 2015;35:30–38. Copyright 2015, with permission from Elsevier.
1. Graham BS, et al. *Curr Opin Immunol*. 2015;35:30–38; 2. Leroux-Roels I, et al. *J Infect Dis*. 2022:jiac327.

www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-10-19-20/02-RSV-Adults-Rizkalla-508.pdf

AReSVi-004

AReSVi-004 Phase 3 trial design[1]

Open-label study evaluating immunogenicity, safety, reactogenicity, and persistence of single-dose and different vaccination schedules



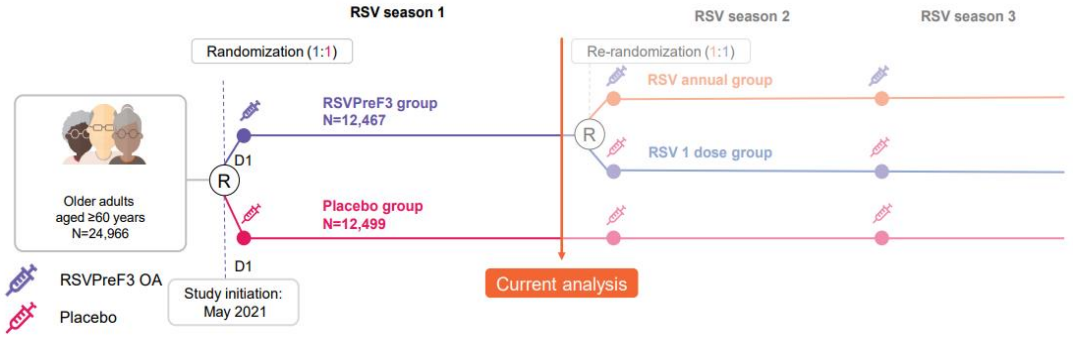
Primary objective: To evaluate humoral immune response following a 1-dose primary schedule up to 12 months post-dose 1*.
Key secondary objectives: To evaluate humoral and CMI† responses following 1-dose primary schedule and revaccination doses, up to study end (M36).

*Primary endpoints are NAb geometric mean titers (RSV-A and RSV-B) at Day 1 (pre-vaccination), D31, M6, and M12 post-dose 1; †CMI response in terms of frequency of RSVPreF3-specific CD4+ and/or CD8+ T-cells expressing at least 2 activation markers. AE, adverse event; CD, cluster of differentiation; CMI, cell-mediated immune; D, day; M, month; NAb, neutralizing antibody. 1. ClinicalTrials.gov. 2021. NCT04732871. https://clinicaltrials.gov/ct2/show/NCT04732871 (accessed October 2022).

AReSVi-006

Ongoing AReSVi-006 Phase 3 trial design

A randomized, placebo-controlled, observer-blind, multi-country efficacy study



Primary endpoint: To demonstrate the efficacy of RSVPreF3 OA vaccine in the prevention of RSV*-LRTD† in adults ≥60 years of age during the first season.

All RSV-LRTD cases were adjudicated by an independent external adjudication committee

*RT-PCR confirmed; †LRTD defined as ≥2 lower respiratory symptoms/signs for ≥24 hours including ≥1 lower respiratory sign OR ≥3 lower respiratory symptoms for ≥24 hours. D, day; LRTD, lower respiratory tract disease; RT-PCR, reverse transcriptase polymerase chain reaction. ClinicalTrials.gov, 2022. NCT04886596. https://clinicaltrials.gov/ct2/show/NCT04886596 (accessed October 2022).

RSVpreF Older Adult Clinical Development Program

Study	Status	Brief Description	Age Group
C3671001[1] Phase 1/2	Completed	First-in-Human Dose Ranging +/- $Al(OH)_3$, +/- Influenza Vaccine Revaccination	18–85 years
C3671002[2] Phase 1/2	Completed	CpG/$Al(OH)_3$ Adjuvant Safety and Immunogenicity	65–85 years
WI257521[3] Phase 2a	Completed	Human Challenge Study	18–50 years
C3671014[4] Phase 3	Completed	Lot Consistency Study	18–49 years
C3671006[5] Phase 3	Ongoing	Concomitant Influenza Vaccine Study	≥ 65 years
C3671013[6] Phase 3	Ongoing	Pivotal Efficacy	≥ 60 years

1. A Study to Describe the Safety and Immunogenicity of a RSV Vaccine in Healthy Adults. NCT03529773; 2. A Study to Evaluatethe Safety and Immunogenicity of an Adjuvanted RSV Vaccine in Healthy Older Adults. NCT03572062; 3. Schmoele-Thoma B et al. Vaccine Efficacy in Adults in a Respiratory Syncytial Virus Challenge Study. N Engl J Med 2022; 386:2377-89. 4. Clinical Lot Consistency for RSVpreF in a Population of Healthy Adults 18 to ≤ 49 Years of Age. NCT05096208; 5. Safety and Immunogenicity of RSVpreF Coadministered with SIIV in Adults ≥ 65 Years of Age. NCT05301322; 6. Study to Evaluate the Efficacy, Immunogenicity, and Safety of RSVpreF in Adults (RENOIR). NCT05035212

Pfizer Worldwide Research, Development and Medical Vaccine Research and Development

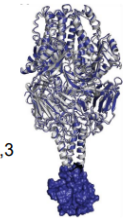
Breakthroughs that change patients' lives®

Pfizer's RSVpreF Vaccine Candidate Program

Vaccine

Bivalent stabilized prefusion F

- Sequence based on contemporary RSV A and RSV B strains
- Elicited high neutralizing titers for both RSV A and RSV B in Phase 1/2 studies[1,2,3]



Targeted Indications

Maternal

Immunize pregnant women to prevent RSV-associated lower respiratory tract illness (LRTI) in infants from birth through 6 months of age

Older adult

Active immunization to prevent RSV-associated LRTI in adults ≥ 60 years of age

[1]Falsey A., et al. J. Infect Dis 2022;225(12):2056-2066. [2]Walsh E., et al. J. Infect Dis 2022;225(8):1357-1366. [3]Baber J., et al. J. Infect Dis 2022 May 11;jiac189.

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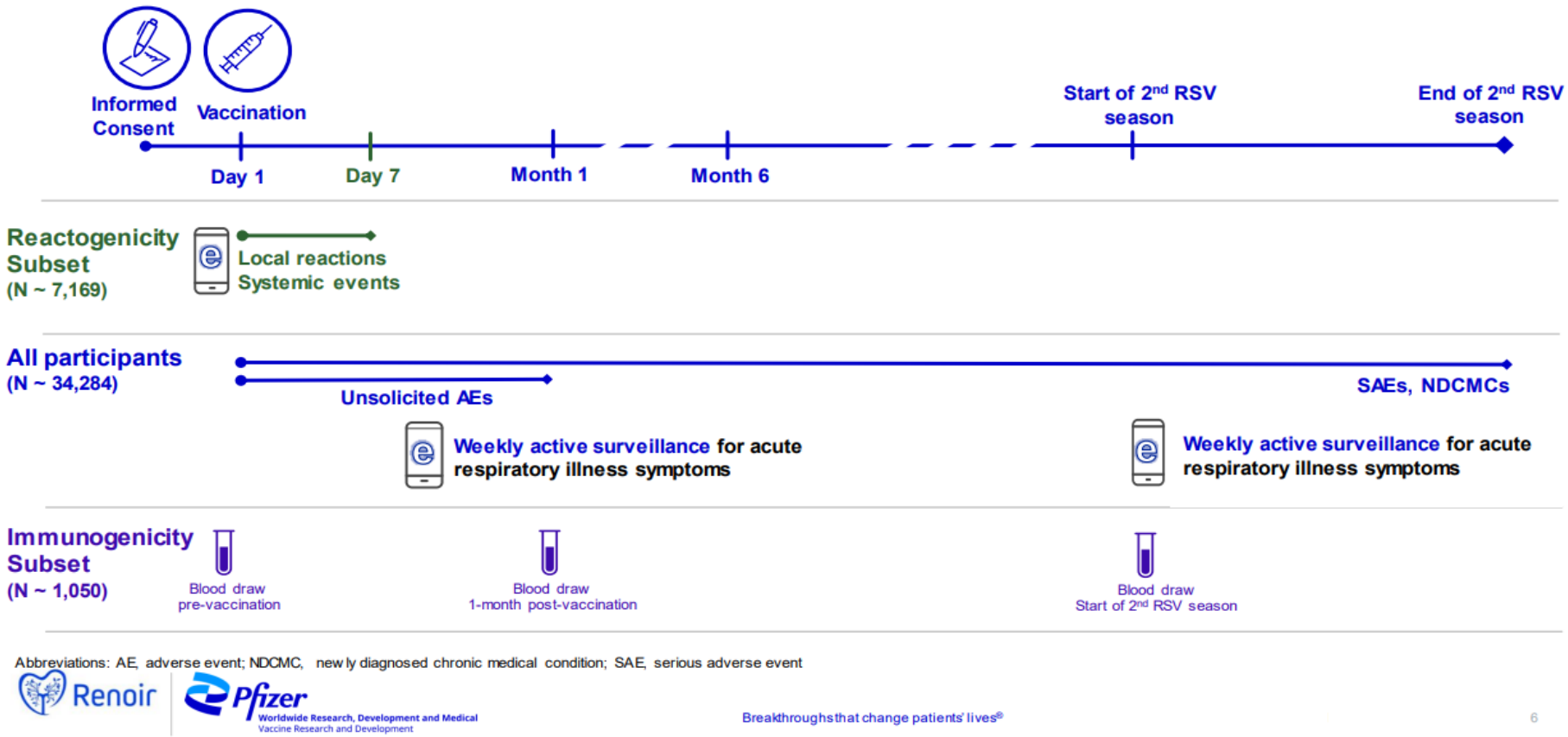
www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-10-19-20/03-RSV-Adults-Gurtma-508.pdf

RENOIR Study Design II



Abbreviations: AE, adverse event; NDCMC, newly diagnosed chronic medical condition; SAE, serious adverse event

Renoir | Pfizer Worldwide Research, Development and Medical Vaccine Research and Development

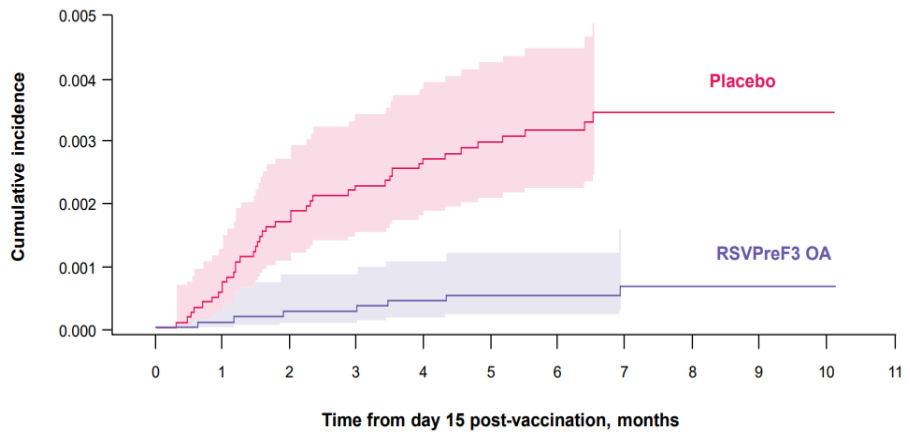
Breakthroughs that change patients' lives®

www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-10-19-20/03-RSV-Adults-Gurtma-508.pdf

AReSVi-006

High vaccine efficacy against RSV-LRTD observed over 6.7-month follow-up, supporting efficacy over the course of an RSV season

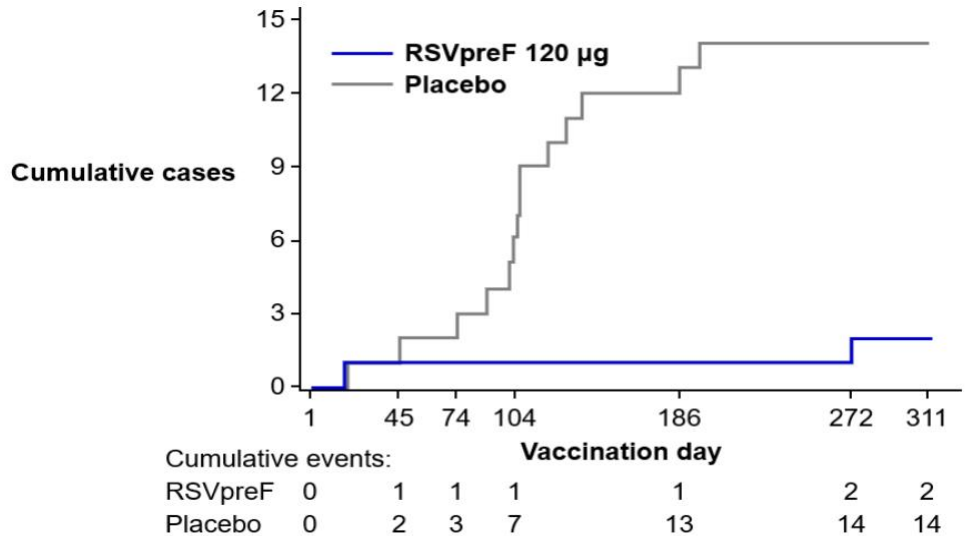
Cumulative incidence curve for RSV-LRTD



The shaded areas represent 96.95% CI.
LRTD, lower respiratory tract disease; VE, vaccine efficacy. ClinicalTrials.gov, 2022. NCT04886596. https://clinicaltrials.gov/ct2/show/NCT04886596 (accessed October 2022).

Presentation by GSK to

RSVpreF efficacy against RSV-LRTI with ≥ 3 symptoms



Mean active surveillance: 7 months

Cumulative events:							
RSVpreF	0	1	1	1	1	2	2
Placebo	0	2	3	7	13	14	14

Abbreviations: RSV-LRTI, lower respiratory tract illness due to respiratory syncytial virus

Renoir

Pfizer Worldwide Research, Development and Medical Vaccine Research and Development

Breakthroughs that change patients' lives®

Expect efficacy against more severe outcomes to be at least as high as efficacy against lower respiratory tract disease/illness

Increasing severity ↓

GSK		Pfizer	
Outcome	**Efficacy**	**Outcome**	**Efficacy**
RSV acute respiratory illness[a]	71.7%	RSV acute respiratory illness[b]	62.1%
RSV lower respiratory tract disease[c]	82.6%	RSV lower respiratory tract illness ≥2 symptoms[d]	66.7%
		RSV lower respiratory tract illness ≥3 symptoms[d]	85.7%
RSV lower respiratory tract disease with ≥2 lower respiratory **signs** or assessed as '**severe**' by investigator	94.1%		

[a] Acute respiratory illness: ≥2 respiratory symptoms/signs for ≥24 hours OR ≥1 respiratory symptom/sign +1 systemic sign for ≥24 hours
[b] Acute respiratory illness: ≥1 respiratory symptom lasting more than 1 day
[c] Lower respiratory tract disease: ≥2 lower respiratory symptoms/signs for ≥24 hours including ≥1 lower respiratory sign OR ≥3 lower respiratory symptoms for ≥24 hours
[d] Lower respiratory tract illness: ARI with ≥2 or ≥3 lower respiratory signs/symptoms

14

- Ensayos con muy pocos casos (falta de potencia)
- ¿Duración de la protección? "Datos suficientes para primera decisión"
- No hay correlato de protección

www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-10-19-20/04-RSV-Adults-Melgar-508.pdf

Figure 1: Schematic Representation of the Structure of the Ad26 Virion

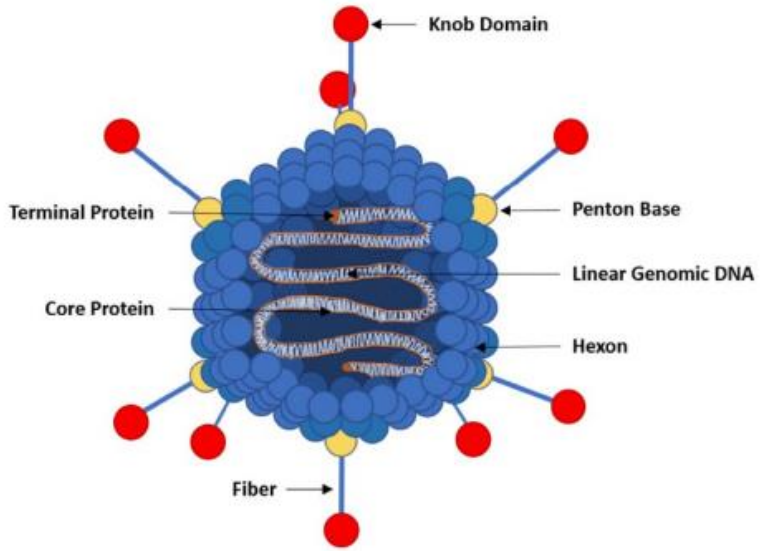
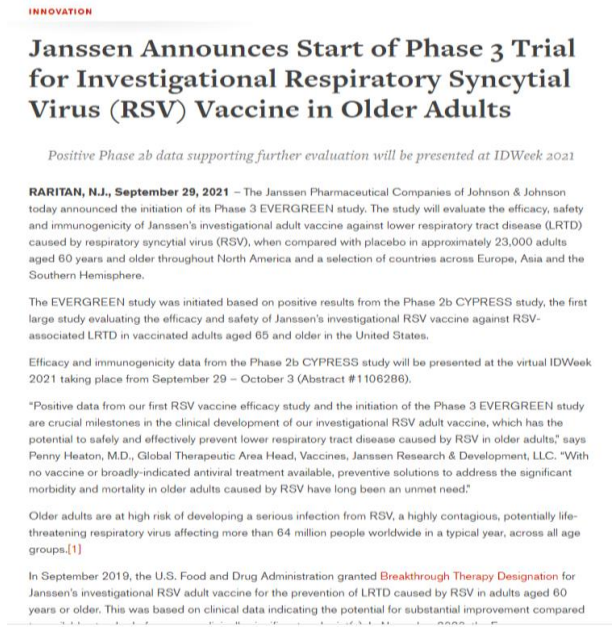


Figure 2: Schematic Representation of the Ad26.COV2.S Vector Genome

Vectores NO replicativos

https://www.ema.europa.eu/en/documents/assessment-report/covid-19-vaccine-janssen-epar-public-assessment-report_en.pdf



INNOVATION

Janssen Announces Start of Phase 3 Trial for Investigational Respiratory Syncytial Virus (RSV) Vaccine in Older Adults

Positive Phase 2b data supporting further evaluation will be presented at IDWeek 2021

RARITAN, N.J., September 29, 2021 – The Janssen Pharmaceutical Companies of Johnson & Johnson today announced the initiation of its Phase 3 EVERGREEN study. The study will evaluate the efficacy, safety and immunogenicity of Janssen's investigational adult vaccine against lower respiratory tract disease (LRTD) caused by respiratory syncytial virus (RSV), when compared with placebo in approximately 23,000 adults aged 60 years and older throughout North America and a selection of countries across Europe, Asia and the Southern Hemisphere.

The EVERGREEN study was initiated based on positive results from the Phase 2b CYPRESS study, the first large study evaluating the efficacy and safety of Janssen's investigational RSV vaccine against RSV-associated LRTD in vaccinated adults aged 65 and older in the United States.

Efficacy and immunogenicity data from the Phase 2b CYPRESS study will be presented at the virtual IDWeek 2021 taking place from September 29 – October 3 (Abstract #1106286).

"Positive data from our first RSV vaccine efficacy study and the initiation of the Phase 3 EVERGREEN study are crucial milestones in the clinical development of our investigational RSV adult vaccine, which has the potential to safely and effectively prevent lower respiratory tract disease caused by RSV in older adults," says Penny Heaton, M.D., Global Therapeutic Area Head, Vaccines, Janssen Research & Development, LLC. "With no vaccine or broadly-indicated antiviral treatment available, preventive solutions to address the significant morbidity and mortality in older adults caused by RSV have long been an unmet need."

Older adults are at high risk of developing a serious infection from RSV, a highly contagious, potentially life-threatening respiratory virus affecting more than 64 million people worldwide in a typical year, across all age groups.[1]

In September 2019, the U.S. Food and Drug Administration granted Breakthrough Therapy Designation for Janssen's investigational RSV adult vaccine for the prevention of LRTD caused by RSV in adults aged 60 years or older. This was based on clinical data indicating the potential for substantial improvement compared

https://www.jnj.com/janssen-announces-start-of-phase-3-trial-for-investigational-respiratory-syncytial-virus-rsv-vaccine-in-older-adults

A Study of an Adenovirus Serotype 26 Pre-fusion Conformation-stabilized F Protein (Ad26. RSV. preF) Based Respiratory Syncytial Virus (RSV) Vaccine in the Prevention of Lower Respiratory Tract Disease in Adults Aged 60 Years and Older **(EVERGREEN)**

27.500 sujetos
Cierre primario Junio 2023

https://clinicaltrials.gov/ct2/show/NCT04908683

Sadoff J et al. Safety and Immunogenicity of the Ad26.RSV.preF Investigational Vaccine Coadministered With an Influenza Vaccine in Older Adults.
J Infect Dis. 2021 Feb 24;223(4):699-708. doi: 10.1093/infdis/jiaa409.

RSV

MVA-BN® RSV

PHASE 3 ONGOING

MVA-BN RSV is our product candidate for the prevention of RSV (Respiratory Syncytial Virus). The vaccine incorporates five different RSV antigens to stimulate a broad immune response against both RSV subtypes (A and B), thus mimicking the immune response observed following a natural response to an RSV infection.

We have advanced the clinical development of the vaccine and have generated highly promising Phase 2 results, confirming both broad and durable antibody and T cell responses against RSV, as well as mucosal immune responses that may be important for protection against RSV. The Phase 2 program in elderly included a revaccination of subjects after one year, following which the immune responses were rapidly and significantly increased, notably in subjects with the weakest immunity prior to the booster vaccination.

BAVARIAN NORDIC

https://www.bavarian-nordic.com/what-we-do/pipeline/rsv.aspx

MVA-BN-RSV Vaccine Trial VANIR
2 dosis
5 antígenos F, G (2 subtipos), N, M2

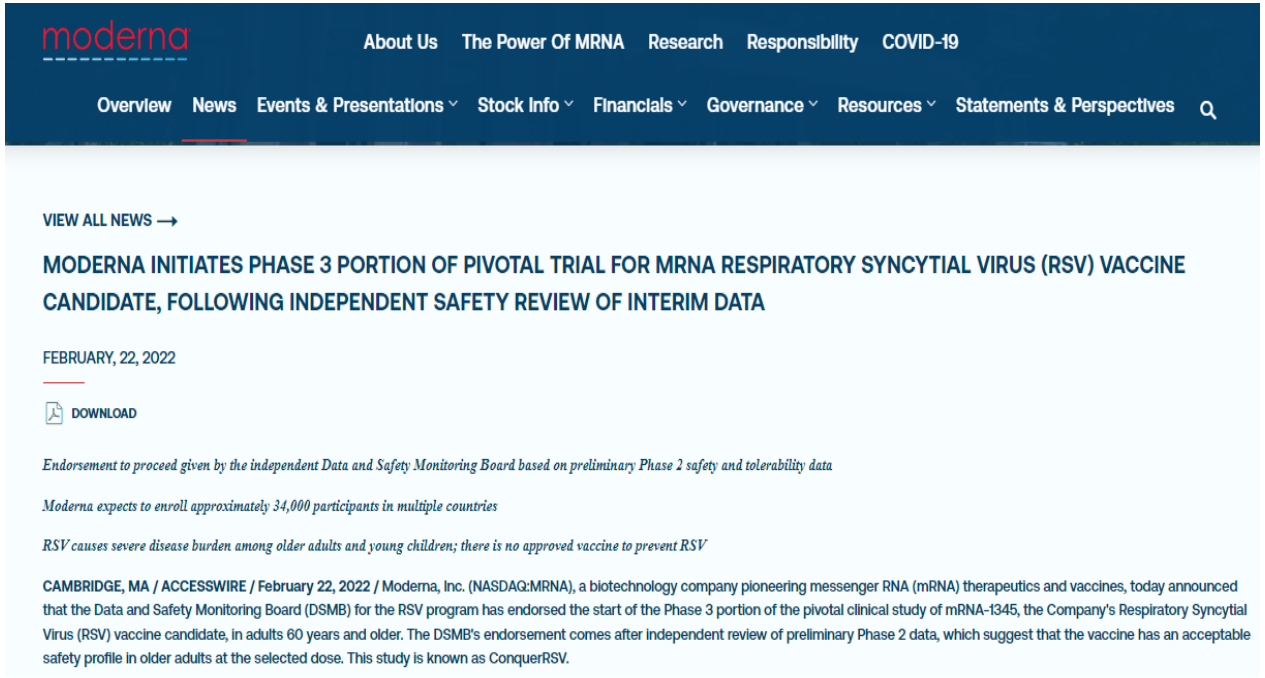
20.000 sujetos mayores 60 años
Cierre primario noviembre 2023

https://clinicaltrials.gov/ct2/show/NCT05238025

moderna

Program Indication	ID #	Preclinical Development	Phase 1	Phase 2	Phase 3	Commercial
COVID-19 vaccine *Next generation (2-5 ºC)*	*mRNA-1283*					
Flu vaccine	*mRNA-1010*					
Flu vaccine	*mRNA-1020*					
Flu vaccine	*mRNA-1030*					
Flu vaccine	*mRNA-1011*					
Flu vaccine	*mRNA-1012*					
Older adults respiratory syncytial virus (RSV) vaccine	*mRNA-1345*					
COVID + Flu vaccine *mRNA-1273 mRNA-1010*	*mRNA-1073*					
COVID + Flu + RSV vaccine	*mRNA-1230*					

https://www.modernatx.com/research/product-pipeline



mRNA-1345
ARNm codifica glicoproteína F prefusión
mismas lipid nanoparticle (LNP) que
Spikevax

Estudio ConquerRSV
34.000 sujetos mayores 60 años
2 años de seguimiento

https://investors.modernatx.com/news/news-details/2022/Moderna-Initiates-Phase-3-Portion-of-Pivotal-Trial-for-mRNA-Respiratory-Syncytial-Virus-RSV-Vaccine-Candidate-Following-Independent-Safety-Review-of-Interim-Data/default.aspx
https://conquerrsv.com/

Retos para implementar vacuna VRS adultos

- Enfermedad infradiagnosticada
- Falta de percepción del VRS como problema de salud en los mayores (profesionales, decisores y la propia población)
- Vacunas aún no autorizadas / diferentes tecnologías
- Incertidumbre sobre la pauta / necesidad revacunación
- Cansancio / agotamiento vacunal
- Aumento calendario: Gripe / Neumo / Covid / HZ / Td-Tpda

La impredecible gripe

INFLUENZA LABORATORY SURVEILLANCE INFORMATION
Virus detections by subtype reported to FluNet

World Health Organization

GISRS GLOBAL INFLUENZA SURVEILLANCE & RESPONSE SYSTEM

Date last refreshed (UTC)
11/15/2022 7:01:30 PM

Country, area or territory: Todas

WHO region: Todas

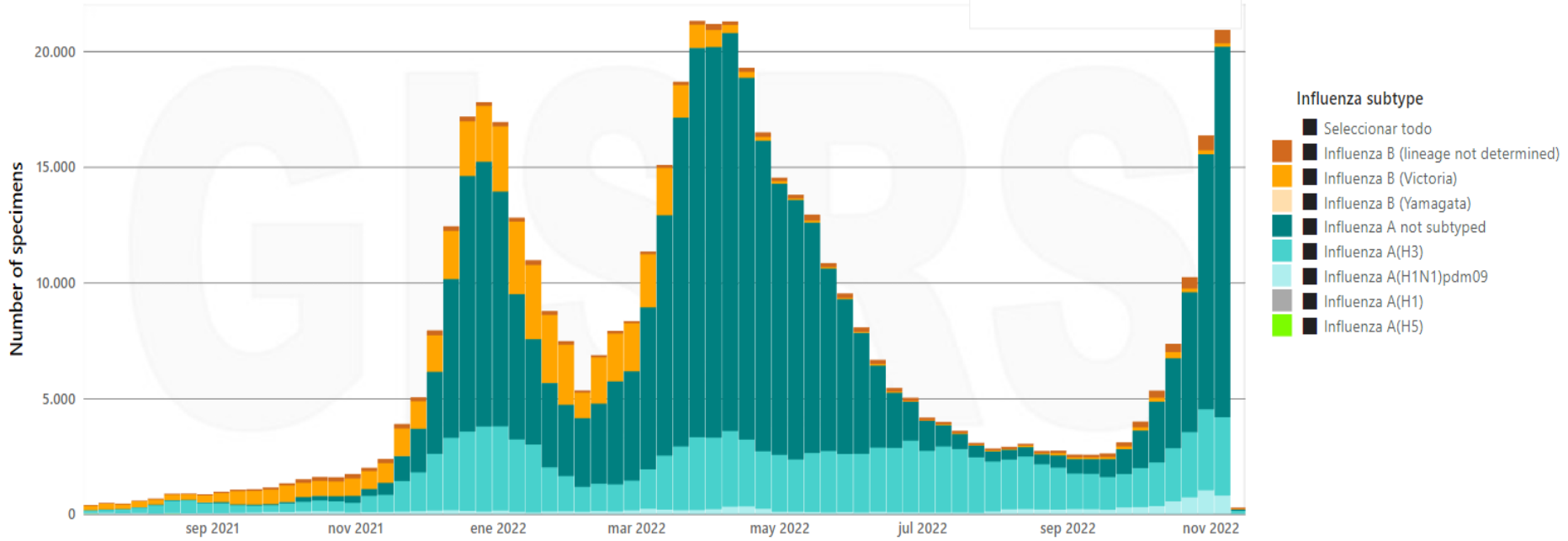
Influenza transmission zone: Todas

Hemisphere: Northern hemisphere
Buscar
Seleccionar todo
Northern hemisphere
Southern hemisphere

*Surveillance site type: Todas

Week end date: 10/07/2021 13/11/2022

Show week numbers



*Surveillance site type:
- **Non-sentinel:** Data obtained from non-sentinel systems as indicated by the reporting country. Data reported in this category may include outbreak investigation, universal testing, testing at point of care or other systems apart from sentinel surveillance.
- **Sentinel:** Data obtained from sentinel surveillance as indicated by the reporting country. Sentinel surveillance systems collect high-quality data in a timely manner systematically and routinely from sentinel surveillance sites representatives of the population under surveillance.
- **Type not defined:** Source of data not indicated by the reporting country neither as sentinel nor as non-sentinel surveillance. These data may include sentinel or non-sentinel surveillance sources or both.

Calendar type: ISO 8601

Data source: FluNet (https://www.who.int/tools/flunet)

INFLUENZA LABORATORY SURVEILLANCE INFORMATION
Virus detections by subtype reported to FluNet

World Health Organization

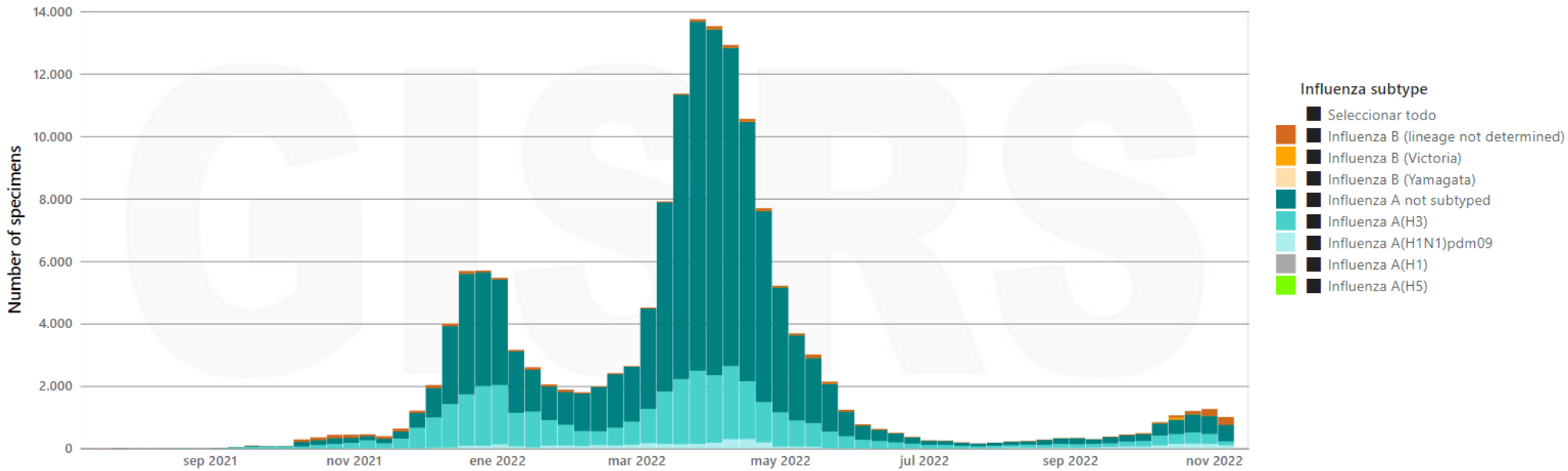
GISRS GLOBAL INFLUENZA SURVEILLANCE & RESPONSE SYSTEM

Date last refreshed (UTC)
11/15/2022 7:01:30 PM

Country, area or territory	WHO region	Influenza transmission zone	Hemisphere	*Surveillance site type
Todas	EUR	Todas	Northern hemisphere	Todas

Week end date: 10/07/2021 – 13/11/2022

Show week numbers



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Calendar type: ISO 8601

Data source: FluNet (https://www.who.int/tools/flunet)

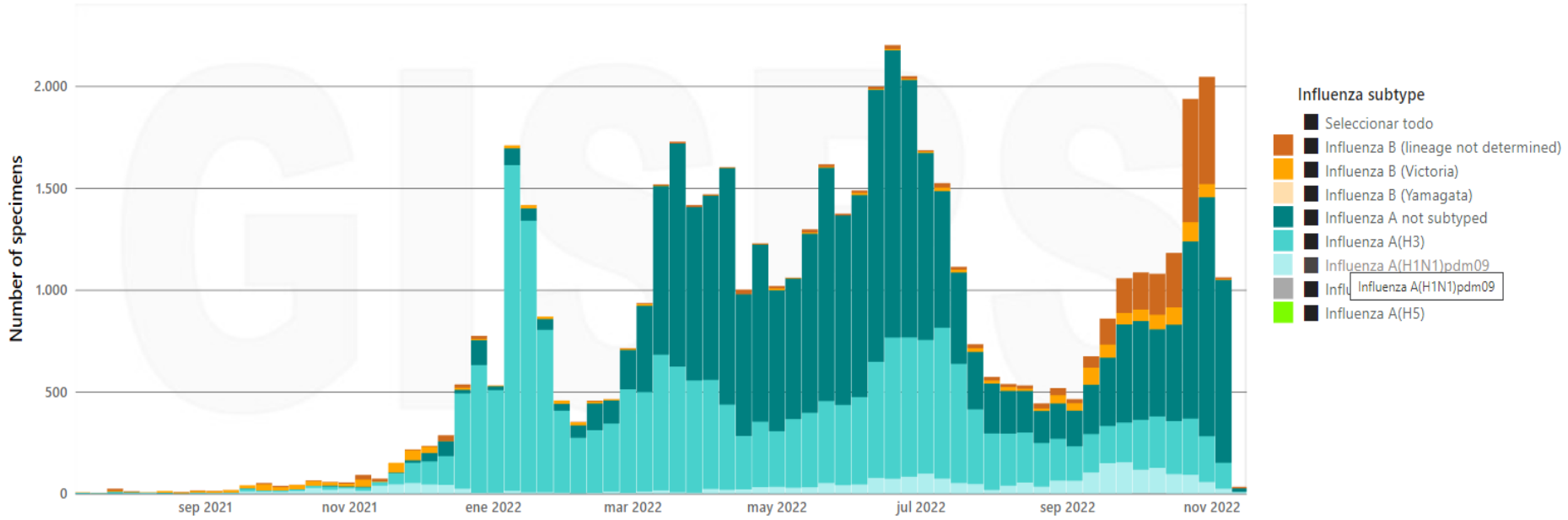
INFLUENZA LABORATORY SURVEILLANCE INFORMATION
Virus detections by subtype reported to FluNet

Date last refreshed (UTC)
11/15/2022 7:01:30 PM

Country, area or territory	WHO region	Influenza transmission zone	Hemisphere	*Surveillance site type
Todas	Todas	Todas	Southern hemisphere	Todas

Week end date: 10/07/2021 – 13/11/2022

Show week numbers



*Surveillance site type:
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Calendar type: ISO 8601

Data source: FluNet (https://www.who.int/tools/flunet)

Nadie (con sentido) duda de la vacunación
¿pero con qué vacuna?

¿Usar vacunas mejoradas?

Cultivo celular
Adyuvadas
Alta carga
Recombinantes
¿Atenuadas?

Evidence Summary: EIVs vs SD-IIVs

Outcome	Importance	HD-IIV3 vs SD-IIV	aIIV3 vs SD-IIV	RIV vs SD-IIV
Benefits				
Influenza illnesses	Critical	Level 1 (High) Favors HD-IIV3	Level 2 (Moderate)	Level 2 (Moderate)
Influenza outpatient/ER visits	Critical	Level 2 (Moderate) Favors HD-IIV3	Level 2 (Moderate)	
Influenza hospitalizations	Critical	Level 2 (Moderate) Favors HD-IIV3	Level 2 (Moderate) Favors aIIV3	Level 2 (Moderate) Favors RIV4
Influenza deaths	Critical	Level 2 (Moderate) Favors HD-IIV3		
Harms				
Any Serious Adverse Event (SAE)	Important	Level 1 (High) Favors HD-IIV3	Level 2 (Moderate)	Level 3 (Low)
Solicited injection site adverse events Grade ≥3	Important	Level 3 (Low)	Level 3 (Low) Favors SD-IIV	Level 3 (Low)
Solicited systemic adverse events Grade ≥3	Critical	Level 3 (Low)	Level 3 (Low)	Level 3 (Low)
Guillain-Barré syndrome	Critical	Level 3 (Low)	Level 3 (Low)	Level 4 (Very lo
OVERALL CERTAINTY		**Level 3 (Low)**	**Level 3 (Low)**	**Level 4 (Very lo**

Evidence Summary: EIVs vs One Another

Outcome	Importance	HD-IIV3 vs aIIV3	HD-IIV3 vs RIV	aIIV3 vs RIV
Benefits				
Influenza illnesses	Critical	Level 4 (Very low)	Level 4 (Very low)	Level 4 (Very low)
Influenza outpatient/ER visits	Critical	Level 2 (Low)		
Influenza hospitalizations	Critical	Level 3 (Low)	Level 2 (Moderate) Favors RIV4 (1 retro cohort study)	Level 2 (Moderate) Favors RIV4 (1 retro cohort study)
Influenza deaths	Critical			
Harms				
Any Serious Adverse Event (SAE)	Important	Level 3 (Low)	Level 3 (Low)	Level 3 (Low)
Solicited injection site adverse events Grade ≥3	Important	Level 4 (Low)	Level 3 (Low)	Level 3 (Low)
Solicited systemic adverse events Grade ≥3	Critical	Level 3 (Low)	Level 3 (Low)	Level 3 (Low)
Guillain-Barré syndrome	Critical	Level 3 (Low)		
OVERALL CERTAINTY		**Level 4 (Very low)**	**Level 4 (Very low)**	**Level 4 (Very low)**

https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-02-23-24/04-influenza-grohskopf-508.pdf

Jordan K, et al. Systematic review of the efficacy, effectiveness and safety of cell-based seasonal influenza vaccines for the prevention of laboratory-confirmed influenza in individuals ≥18 years of age. Rev Med Virol. 2022 Feb 8:e2332.

Comber L, et al. Systematic review of the efficacy, effectiveness and safety of high-dose seasonal influenza vaccines for the prevention of laboratory-confirmed influenza in individuals ≥18 years of age. Rev Med Virol. 2022 Feb 4:e2330.

O Murchu E, el al. Systematic review of the efficacy, effectiveness and safety of MF59® adjuvanted seasonal influenza vaccines for the prevention of laboratory-confirmed influenza in individuals ≥18 years of age. Rev Med Virol. 2022 Feb 10:e2329.

O Murchu E, et al. Systematic review of the efficacy, effectiveness and safety of recombinant haemagglutinin seasonal influenza vaccines for the prevention of laboratory-confirmed influenza in individuals ≥18 years of age. Rev Med Virol. 2022 Feb 2:e2331.

			EV frente a vacuna estándar huevo	
	Artículos revisados	Estudios incluidos	Gripe	hospitaliz.
Alta carga	28.846	36	24%	12%
Adyuvada		48	-	-
C. celular		19	Diferencia pequeña y significativa en hospitalización	
Recombinante		10	30%	

La batalla de las vacunas ARNm

VIEW ALL NEWS →

MODERNA ANNOUNCES FIRST PARTICIPANTS DOSED IN PHASE 3 STUDY OF SEASONAL INFLUENZA VACCINE CANDIDATE (MRNA-1010)

JUNE, 07, 2022

DOWNLOAD

mRNA-1010 is Moderna's first seasonal influenza vaccine candidate to enter a Phase 3 trial
mRNA-1010 is one of several influenza vaccine candidates being developed in Moderna's respiratory portfolio
Moderna now has four programs in Phase 3 studies: Omicron-containing bivalent COVID booster, influenza, RSV, CMV

CAMBRIDGE, MA / ACCESSWIRE / June 7, 2022 / Moderna, Inc. (NASDAQ:MRNA), a biotechnology company pioneering messenger RNA (mRNA) therapeutics and vaccines, today announced the first participants have been dosed in a Phase 3 study of the Company's seasonal influenza vaccine candidate (mRNA-1010). The trial is expected to enroll approximately 6,000 adults in Southern

In addition to mRNA-1010, Moderna is developing influenza vaccine candidates that include additional HA antigens for broader coverage of circulating influenza A strains (mRNA-1011 and mRNA-1012), and vaccine candidates that incorporate both HA and neuraminidase (NA) antigens to target multiple proteins involved in the influenza virus lifecycle to reduce the potential of viral antigenic escape (mRNA-1020 and mRNA-1030)

REUTERS World Business Legal Markets Breakingviews Technology Investigations

Future of Health

2 minute read · September 14, 2022 12:47 PM GMT+2 · Last Updated 2 months ago

Pfizer starts late-stage trial of mRNA-based flu vaccine

Reuters

Parece que la **gripe estacional**, volverá con más fuerza este invierno a la vista de lo sucedido en el hemisferio sur. Tras unos años algo desplazada por la COVID-19, sigue siendo un importante problema de salud mundial. Ante este, los expertos coinciden en que la **mejor forma de prevenirla continúa siendo la vacunación** ya que se traduce en una menor transmisión del virus y una reducción de la mortalidad.

Seqirus (de CSL Limited) es una de las compañías biotecnológicas concienciada con este virus de la gripe, siendo la **única empresa mundial especializada únicamente en gripe** y el segundo mayor productor de vacunas antigripales en el mundo.

ABC Sociedad

→ ABC → Sociedad

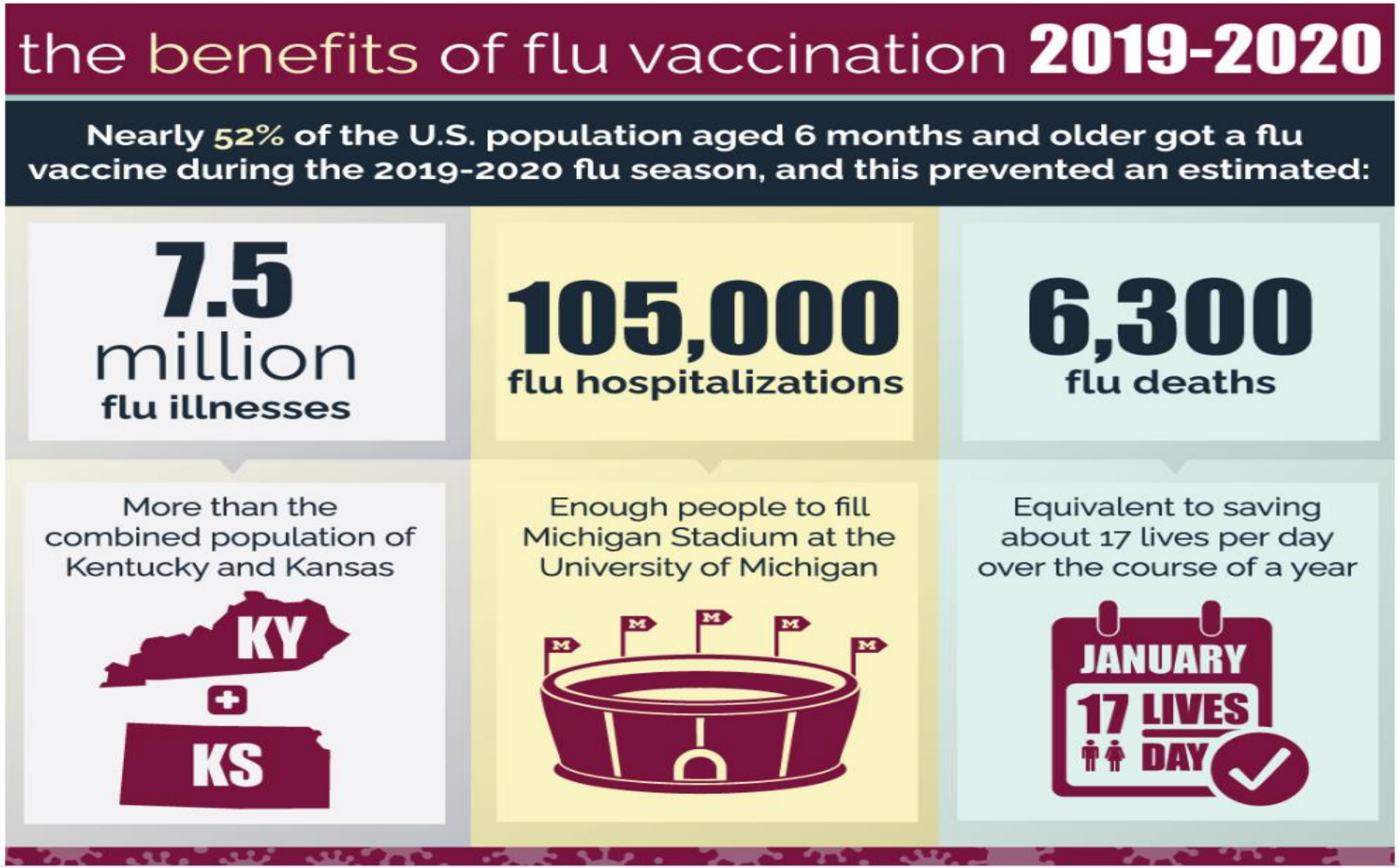
Pfizer-BioNTech comienza a probar la vacuna combinada para gripe y Covid-19

Esta será la cuarta colaboración entre los dos gigantes farmacéuticos en el campo de las enfermedades infecciosas

https://investors.modernatx.com/news/news-details/2022/Moderna-Announces-First-Participants-Dosed-in-Phase-3-Study-of-Seasonal-Influenza-Vaccine-Candidate-mRNA-1010/default.aspx

A pesar de la incertidumbre sobre la efectividad, hay que vacunar

The Benefits of Flu Vaccination 2019-2020 Infographic



https://www.cdc.gov/flu/about/burden-averted/2019-2020.htm

La gripe reaparece en la Región de Murcia tras dos años desaparecida por la pandemia

Salud detecta un «incremento significativo» de casos desde finales de marzo, pero las cifras se mantienen muy alejadas de inviernos pasados

Dos sanitarias administran simultáneamente las vacunas de la gripe y la Covid a una paciente, el pasado otoño en Murcia. / VICENTE VICÉNS / AGM

Las farmacias de la Región de Murcia comienzan a recibir los test combinados de Covid y gripe

Estas pruebas se adquieren sin receta y con un precio máximo de venta al público de 2,94 euros

Un farmacéutico muestra las pruebas para covid y gripe que ya se pueden comprar en farmacias de la Región de Murcia. / LV

LA VERDAD

Viernes, 23 septiembre 2022, 13:27

Salud se prepara para afrontar la Covid y la gripe este otoño

La incidencia de coronavirus aumenta un 10% en la última semana en la Región, y suben también las infecciones gripales en España

Una enfermera administra una vacuna en l

Salud abrirá la vacunación frente a la gripe a toda la población a partir del día 21

La Consejería señala que hay dosis suficientes para que todo aquel que quiera protegerse pueda hacerlo

Una paciente recibe la vacuna de la gripe en Murcia. / G. CARRIÓN / AGM

Onda Regional

ÚLTIMAS NOTICIAS REGIÓN NACIONAL DEPORTES PROGRAMAS Y PODCASTS PROGRAMACIÓN

VACUNA

Murcia, primera comunidad en administrar la vacuna intranasal pediátrica contra la gripe

Se administrará de forma gratuita a los niños de entre 2 y 4 años en centros sanitarios públicos y privados

ONDA REGIONAL
04 NOV 2022 - 13:10

Una gripe centenaria

Establecimiento comercial de Cartagena, en 1918, donde un cartel anuncia la 'Guerra a la gripe'.

LUIS MIGUEL PÉREZ ADÁN

Sábado, 17 noviembre 2018, 01:46

En este 2018 se cumplen cien años del comienzo de la mayor pandemia de gripe de la historia, la mal llamada 'gripe española'. Fue un suceso con un gran impacto en la humanidad, dejando importantes secuelas y de la que se pueden extraer aún hoy enseñanzas valiosas para el futuro.

Salud

Bruselas firma un contrato con GSK para adquirir 85 millones de vacunas contra la gripe pandémica

* *En la operación participarán doce Estados miembros, además de otros países, que se repartirán los sueros en función de sus necesidades*
* *A España llegarán la próxima semana 7.000 nuevas vacunas contra la viruela del mono*

Ana Sánchez

28/07/2022 - 18:21

Adjupanrix

Idea fundamental

- Vacúnate y recomienda la vacunación frente a la gripe
  - No lo demores
    - Con la vacuna que haya disponible
      - ¡¡Aunque ya hayas pasado la gripe!!

‘Quien salva una vida, salva al universo entero‘

Inscripción de la "Medalla de los Justos“ frase del Talmud

01/12/2020 -30/09/2021 en EEUU se evitaron 235.000 muertes asociadas al COVID-19

Steele MH et al. Estimated Number of COVID-19 Infections, Hospitalizations, and Deaths Prevented Among Vaccinated Persons in the US, December 2020 to September 2021. *JAMA Network Open.* 2022;5(7):e2220385. doi:10.1001/jamanetworkopen.2022.20385 7/07/2022

Gracias por la atención y vuestro compromiso