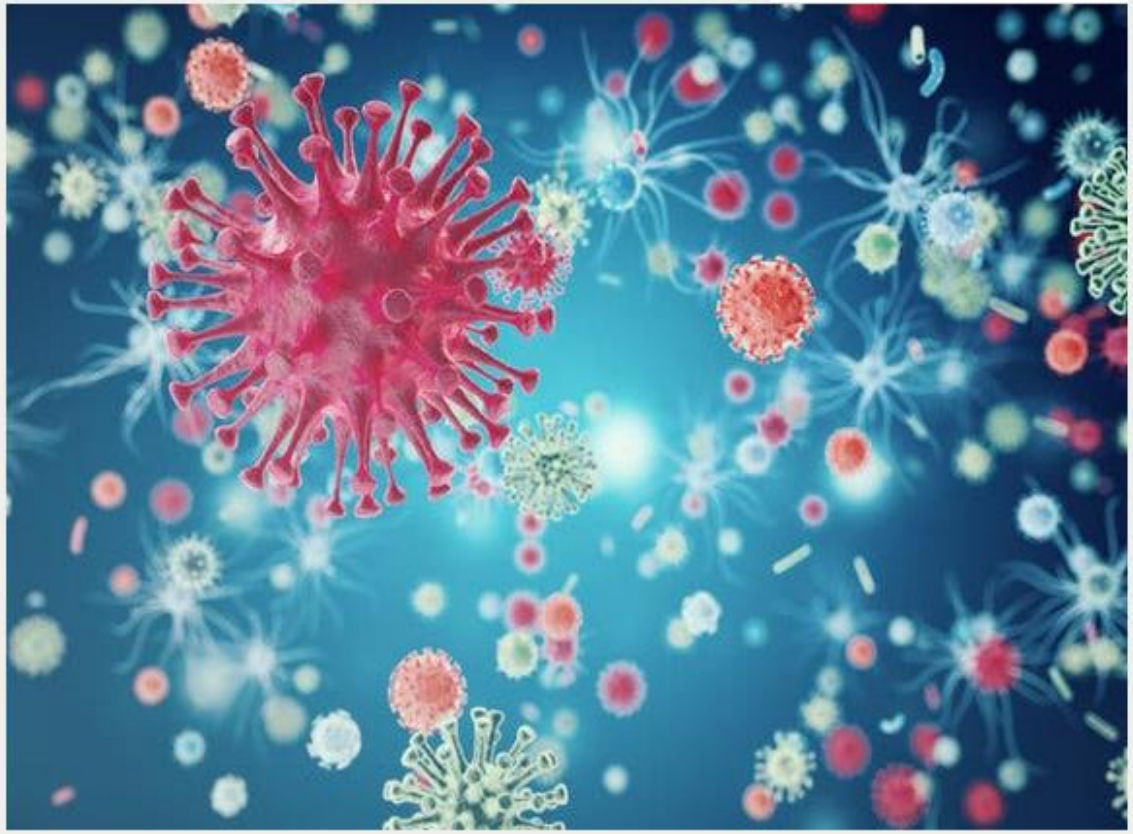
NUEVOS VIRUS RESPIRATORIOS EN PEDIATRIA

Walter Alfredo Goycochea Valdivia

Servicio de Infectología, Reumatología e Inmunología Pediátrica

Hospital Universitario Virgen del Rocío, Sevilla



Google

new respiratory virus in children

KidsHealth
https://kidshealth.org › parents › rsv · Traducir esta página

Respiratory Syncytial Virus (RSV) (for Parents)

Respiratory syncytial (sin-SISH-ul) **virus** (**RSV**) is a major cause of **respiratory illness in children**. The **virus** usually causes a common cold. But sometimes it ...

Cedars-Sinai
https://www.cedars-sinai.org › re... · Traducir esta página

Respiratory Syncytial Virus (RSV) in Children

RSV is a viral illness that causes symptoms such as trouble breathing. It's the most common cause of inflammation of the small airways in the lungs ...

World Health Organization (WHO)
https://www.who.int › News › item · Traducir esta página

WHO statement on reported clusters of respiratory illness in ...

22 nov 2023 — On 21 November, media and ProMED reported clusters of **undiagnosed pneumonia** in children in northern China. It is unclear if these are associated ...

Centers for Disease Control and Prevention (.gov)
https://www.cdc.gov › rsv › about · Traducir esta página

Symptoms and Care of RSV (Respiratory Syncytial Virus)

6 sept 2023 — In very young infants with RSV, the only symptoms may be **irritability, decreased activity, and breathing difficulties**. Almost all children will ...

Mayo Clinic
https://www.mayoclinic.org › syc-20353098

Respiratory syncytial virus (RSV) - Symptoms & causes

Respiratory syncytial virus (RSV) causes infections of the lungs and respiratory tract. It's so common that most children have been infected with the virus ...

PubMed®

new respiratory virus children

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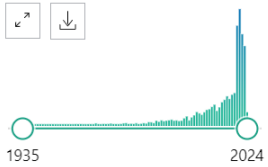
RESULTS BY YEAR



TEXT AVAILABILITY

- Abstract
- Free full text
- Full text

ARTICLE ATTRIBUTE

- Associated data

ARTICLE TYPE

- Books and Documents
- Clinical Trial

1 Cite Share

Respiratory Virus Surveillance Among **Children** with Acute **Respiratory** Illnesses - **New** Vaccine Surveillance Network, United States, 2016-2021.

Perez A, Lively JY, Curns A, Weinberg GA, Halasa NB, Staat MA, Szilagyi PG, Stewart LS, McNeal MM, Clopper B, Zhou Y, Whitaker BL, LeMasters E, Harker E, Englund JA, Klein EJ, Selvarangan R, Harrison CJ, Boom JA, Sahni LC, Michaels MG, Williams JV, Langley GE, Gerber SI, Campbell A, Hall AJ, Rha B, McMorrow M; New Vaccine Surveillance Network Collaborators.

MMWR Morb Mortal Wkly Rep. 2022 Oct 7;71(40):1253-1259. doi: 10.15585/mmwr.mm7140a1.

PMID: 36201373 Free PMC article.

The **New** Vaccine Surveillance Network (NVSN) is a prospective, active, population-based surveillance platform that enrolls **children** with acute **respiratory** illnesses (ARIs) at seven pediatric medical centers. ARIs are caused by **respiratory viruses** ...

2 Cite Share

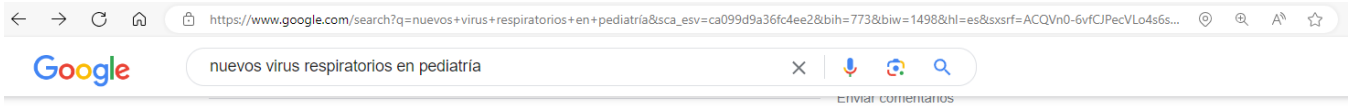
Influenza and **respiratory** syncytial **virus** during the COVID-19 pandemic: Time for a **new** paradigm?

Binns E, Koenraads M, Hristeva L, Flamant A, Baier-Grabner S, Loi M, Lempainen J, Osterheld E, Ramly B, Chakakala-Chaziya J, Enaganthi N, Simó Nebot S, Buonsenso D.

Pediatr Pulmonol. 2022 Jan;57(1):38-42. doi: 10.1002/ppul.25719. Epub 2021 Oct 13.

PMID: 34644459 Free PMC article.

Seasonal epidemics of influenza and the **respiratory** syncytial **virus** (RSV) are the cause of substantial morbidity and mortality among **children**. During the global coronavirus disease 2019 (COVID-19) pandemic, the epidemiology of these **viruses** seems to ha ...



Elsevier
https://www.elsevier.es › es-revista-revista-medica-clinic...

NUEVOS VIRUS RESPIRATORIOS EN PEDIATRÍA

con los avances en las técnicas diagnósticas se han sumado. "**nuevos virus**" entre los que destacan Metapneumovirus. (MPVh), Bocavirus (BoVh) y Coronavirus ...

Centers for Disease Control and Prevention (.gov)
https://espanol.cdc.gov › rsv › infants-young-children

El VRS en los bebés y los niños pequeños

18 ene 2024 — La mayor parte de las veces el VRS causará síntomas leves similares a los del resfriado, pero también puede causar enfermedades graves, tales ...

MedlinePlus (.gov)
https://medlineplus.gov › ... › Enciclopedia médica

Virus sincicial respiratorio (VSR)

El **virus** sincicial **respiratorio** (VSR) es el microbio más común que causa infecciones en los pulmones y en las vías **respiratorias** en los bebés y en los niños ...

World Health Organization (WHO)
https://www.who.int › ... › Comunicados de prensa › item

Declaración de la OMS sobre los brotes de enfermedades ...

22 nov 2023 — Declaración de la OMS sobre los brotes de enfermedades **respiratorias** en niños en el norte de China ... **virus** gripales, Mycoplasma pneumoniae (una ...

NUEVOS VIRUS RESPIRATORIOS EN PEDIATRÍA

NEW RESPIRATORY VIRUS IN PEDIATRICS

DRA. ERIKA INOSTROZA (1), DR. RICARDO PINTO (2)

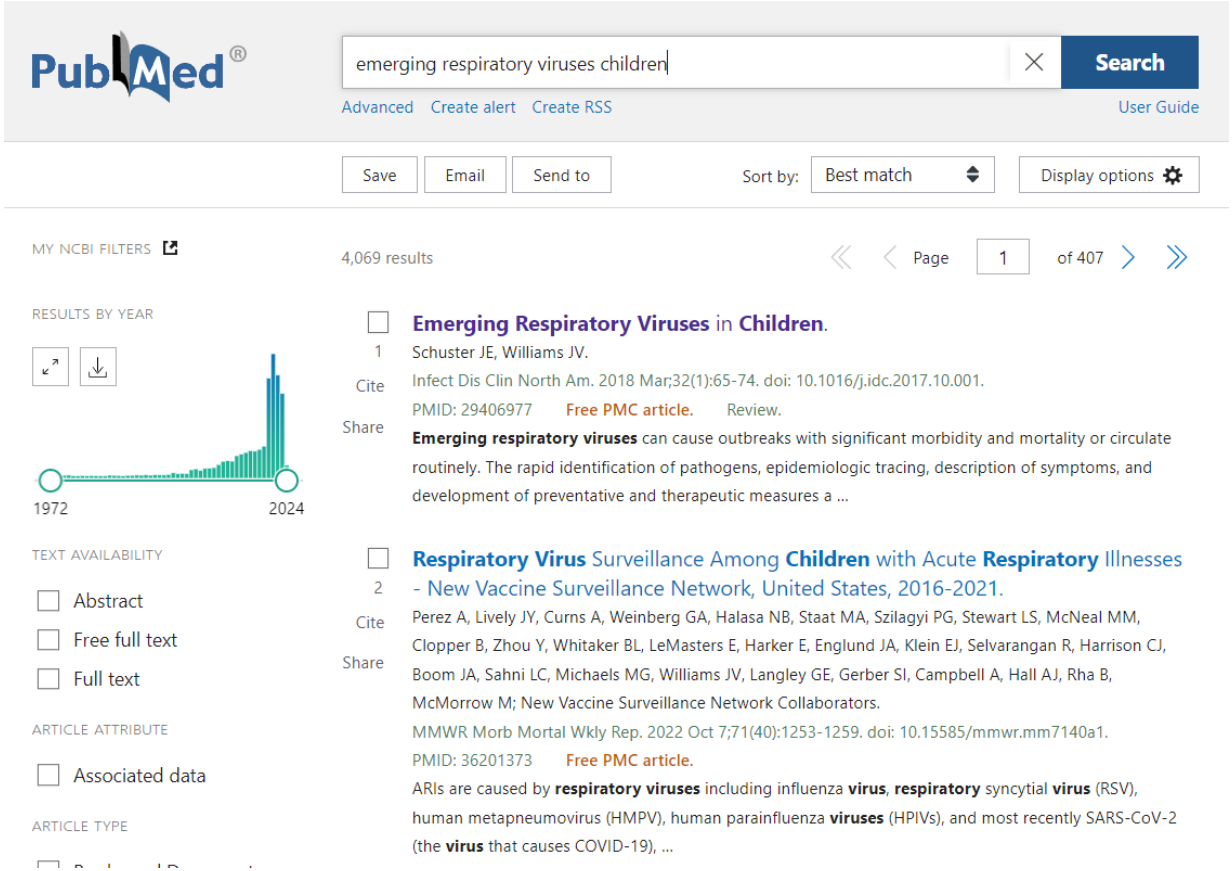
(1) Pediatra Broncopulmonar, Hospital de Niños Roberto del Río. Santiago, Chile.
(2) Profesor Asociado de Pediatría y Enfermedades Respiratorias en Niños. Clínica Las Condes. Facultad de Medicina, Universidad de Chile. Hospital de Niños Roberto del Río. Santiago, Chile.

Email: erikainostrozavega@gmail.com, rpinto@clinicalascondes.cl

RESUMEN

Las infecciones respiratorias continúan siendo la mayor causa de morbimortalidad en pediatría. Los virus constituyen los agentes infecciosos más frecuentes, actualmente con los avances en las técnicas diagnósticas se han sumado "nuevos virus" entre los que destacan Metapneumovirus (MPVh), Bocavirus (BoVh) y Coronavirus (CoVh), que son el objetivo de este artículo.

Palabras clave: Metapneumovirus humano, Bocavirus, Coronavirus.



Emerging Respiratory Viruses in Children

Jennifer E. Schuster, MD, MSCI[a,*], John V. Williams, MD[b]

KEYWORDS

- Novel influenza A • Influenza C • Middle East respiratory syndrome virus
- Rhinovirus C

KEY POINTS

- Molecular diagnostics have led to the increased identification and recognition of existing and new viruses.
- Mutations and gene reassortment have caused transmission of animal viruses to humans.
- Emerging respiratory viruses can circulate seasonally or year-round as intermittent epidemics, or as outbreaks with subsequent resolution.

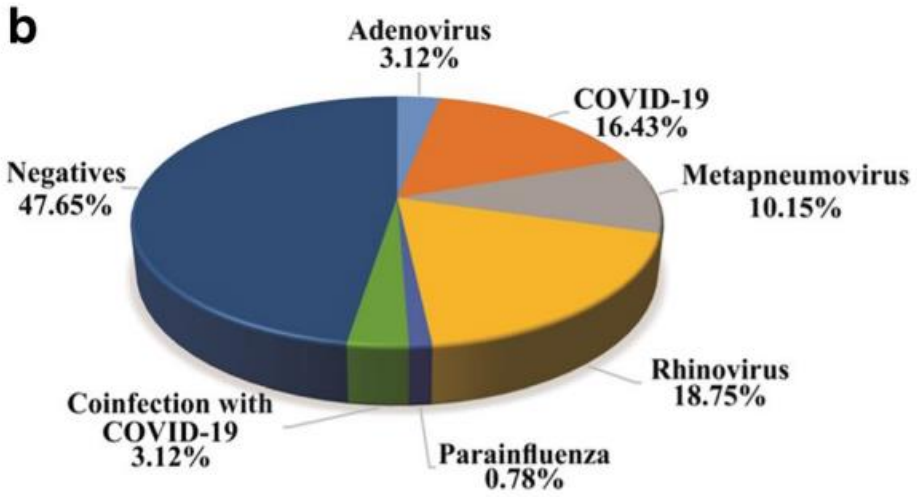
European Journal of Clinical Microbiology & Infectious Diseases (2023) 42:873–882
https://doi.org/10.1007/s10096-023-04615-8

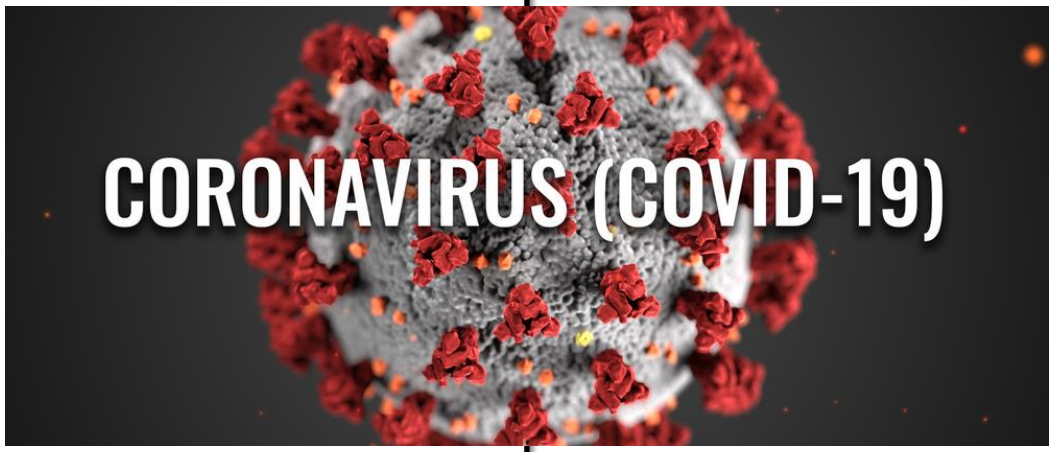
ORIGINAL ARTICLE

Profile analysis of emerging respiratory virus in children

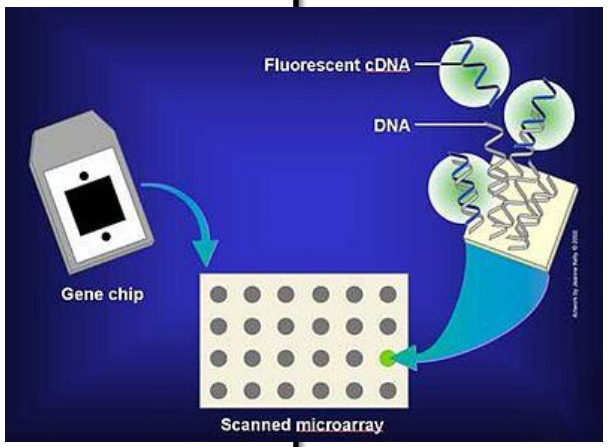
André Luís Elias Moreira[1] · Paulo Alex Neves da Silva[1] · Leandro do Prado Assunção[2] · Mônica de Oliveira Santos[1] · Célia Regina Malveste Ito[1] · Kelliane Martins de Araújo[1] · Marcos de Oliveira Cunha[1] · Vívian da Cunha Rabelo[3] · Paula Pires de Souza[4] · Sibely Braga Santos Maia[5] · Fernanda Aparecida de Oliveira Peixoto[6] · Isabela Jubé Wastowski[7] · Lilian Carla Carneiro[1] · Melissa Ameloti Gomes Avelino[1,8]

Received: 14 October 2022 / Accepted: 26 April 2023 / Published online: 9 May 2023




CORONAVIRUS (COVID-19)


No se preocupe, su hijo tiene un virus.
Ufff menos mal gracias doctor.


Fluorescent cDNA
DNA
Gene chip
Scanned microarray


No se preocupe, su hijo tiene un virus.
Pero ¿Qué virus?, ¿El Covid?, ¿la gripe?, ¿el de la bronquiolitis ese?, ¿la tos ferina?, ¿el *Mycoplasma* chino de las noticias?… DIGAME CUAL!!!

1 Test. 21 Pathogens. 45 minutes.

The FilmArray® Respiratory Panel 2 (RP2)

Sample type: Nasopharyngeal Swab

Viruses

Adenovirus
Coronavirus HKU1
Coronavirus NL63
Coronavirus 229E
Coronavirus OC43
Human Metapneumovirus
Human Rhinovirus/Enterovirus
Influenza A
Influenza A/H1
Influenza A/H1-2009
Influenza A/H3
Influenza B
Parainfluenza Virus 1
Parainfluenza Virus 2
Parainfluenza Virus 3
Parainfluenza Virus 4
Respiratory Syncytial Virus

Bacteria

Bordetella parapertussis
Bordetella pertussis
Chlamydia pneumoniae
Mycoplasma pneumoniae

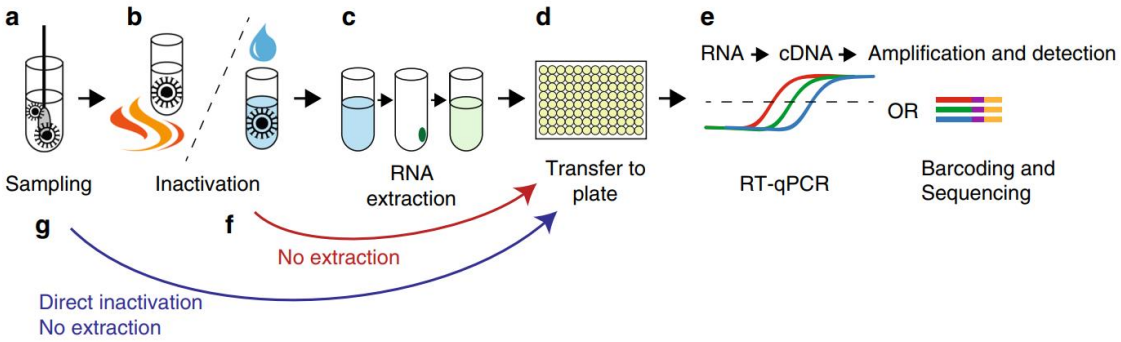
An unprecedented run time of about 45 minutes enables **higher efficiency and throughput** on the FilmArray® 2.0 and the FilmArray® Torch Systems with only 2 minutes of hands-on time.

With 21 pathogen targets in one test, including *Bordetella parapertussis*, the FilmArray RP2 is **more comprehensive** than ever.

97.1%
Sensitivity*
99.3%
Specificity*

*Data on file.

Higher overall sensitivity across a broader spectrum of pathogens means that the FilmArray RP2 offers the world the fastest way to better results in the detection of respiratory pathogens.



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EPIDEMIOLOGY

Check for updates

PCR Detection of Respiratory Pathogens in Asymptomatic and Symptomatic Adults

Nicklas Sundell,[a] Lars-Magnus Andersson,[a] Robin Brittain-Long,[b] Pär-Daniel Sundvall,[c,d] Åsa Alsiö,[a,e] Magnus Lindh,[a] Lars Gustavsson,[a] Johan Westin[a]

[a]Department of Infectious Diseases, Institute of Biomedicine, University of Gothenburg, Gothenburg, Sweden
[b]Department of Infectious Diseases, Aberdeen Royal Infirmary, Aberdeen, Scotland
[c]Närhälsan, Research and Development Primary Health Care, Research and Development Centre Södra Älvsborg, Region Västra Götaland, Sweden
[d]Department of Public Health and Community Medicine/Primary Health Care, Institute of Medicine, Sahlgrenska Academy at the University of Gothenburg, Gothenburg, Sweden
[e]Department of Infectious Diseases, Skaraborg Hospital, Skövde, Sweden

Published in final edited form as:
Pediatr Infect Dis J. 2012 December ; 31(12): 1221–1226. doi:10.1097/INF.0b013e318265a804.

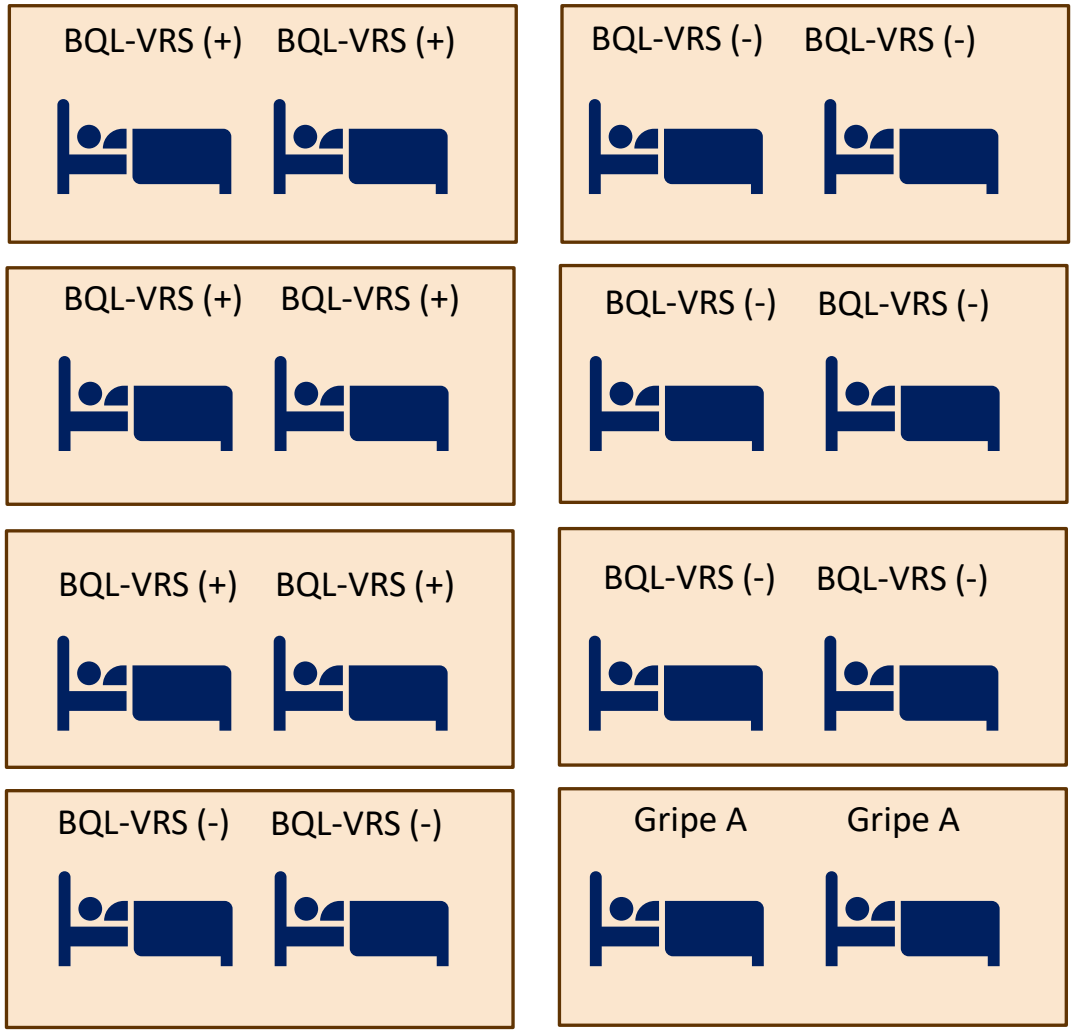
Detecting Respiratory Viruses in Asymptomatic Children

Sonali Advani, MBBS, MPH[1], Arnab Sengupta, MBBS, MPH[1], Michael Forman[2], Alexandra Valsamakis, MD, PhD[2], and **Aaron Milstone, MD, MHS[1]**

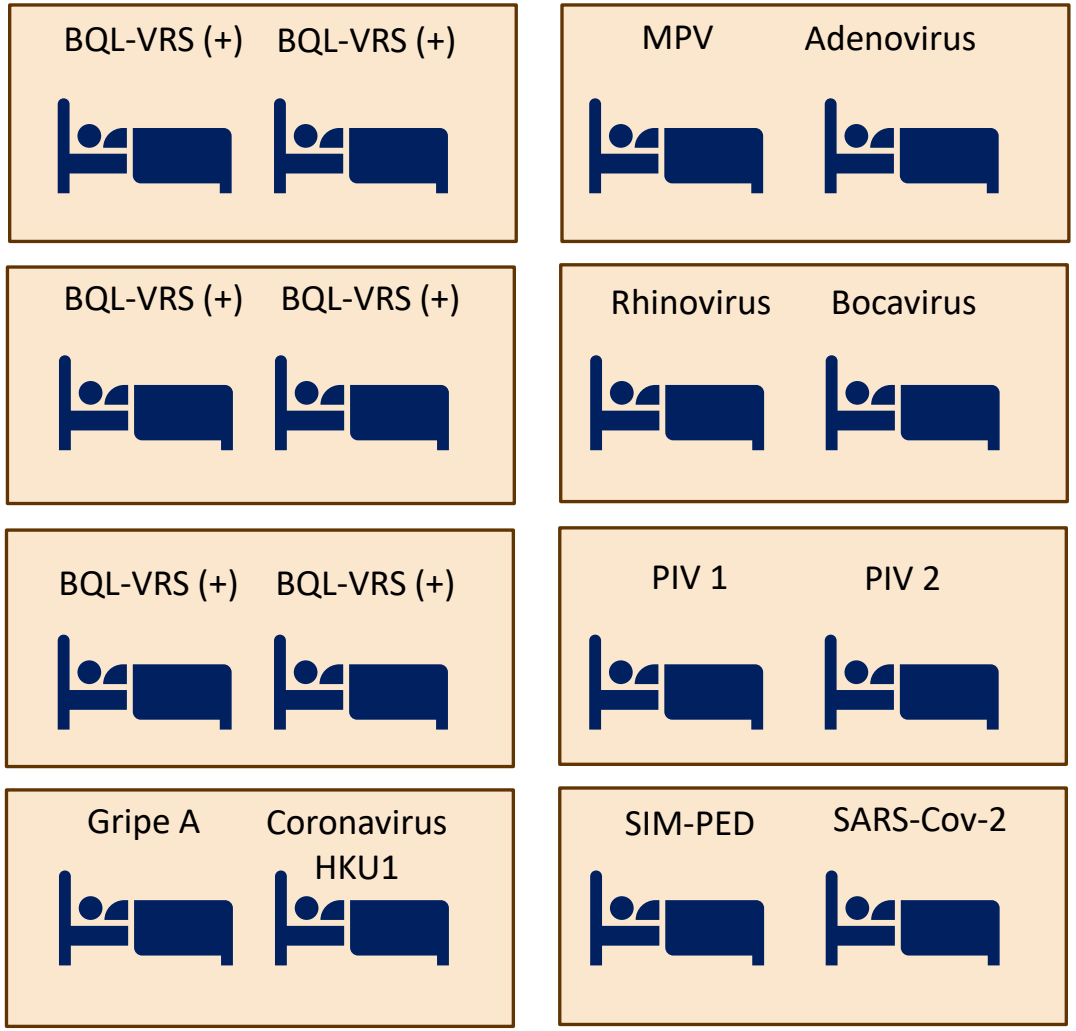
[1]Division of Pediatric Infectious Diseases, The Johns Hopkins Medical Institutions, Baltimore, Maryland [2]Division of Microbiology, The Johns Hopkins Medical Institutions, Baltimore, Maryland

Smyrlaki, I., Ekman, M., Lentini, A. et al. Massive and rapid COVID-19 testing is feasible by extraction-free SARS-CoV-2 RT-PCR. Nat Commun 11, 4812 (2020).

Pre-Pandemia COVID19



Post-Pandemia COVID19



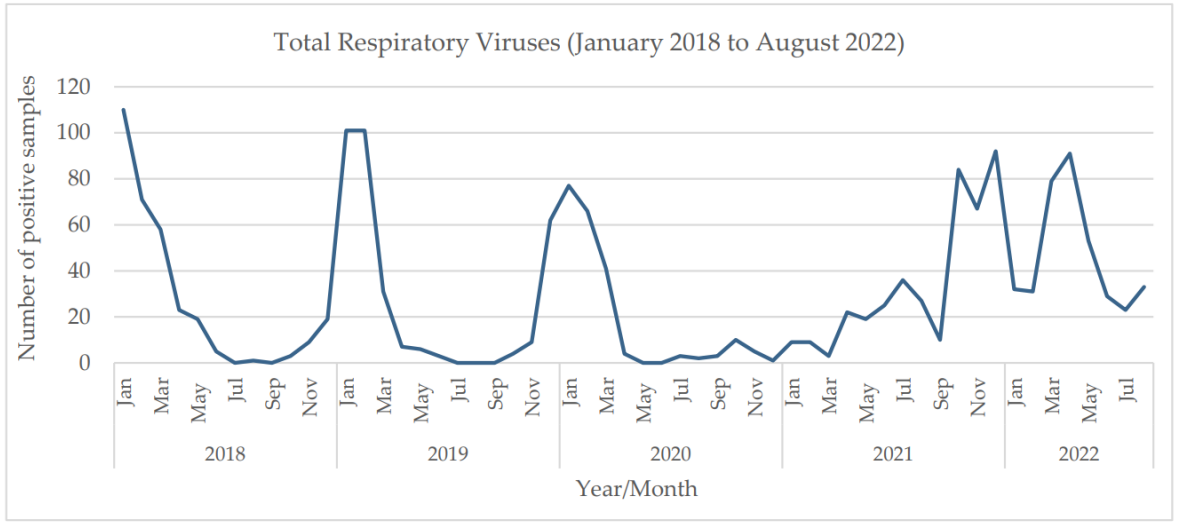
viruses

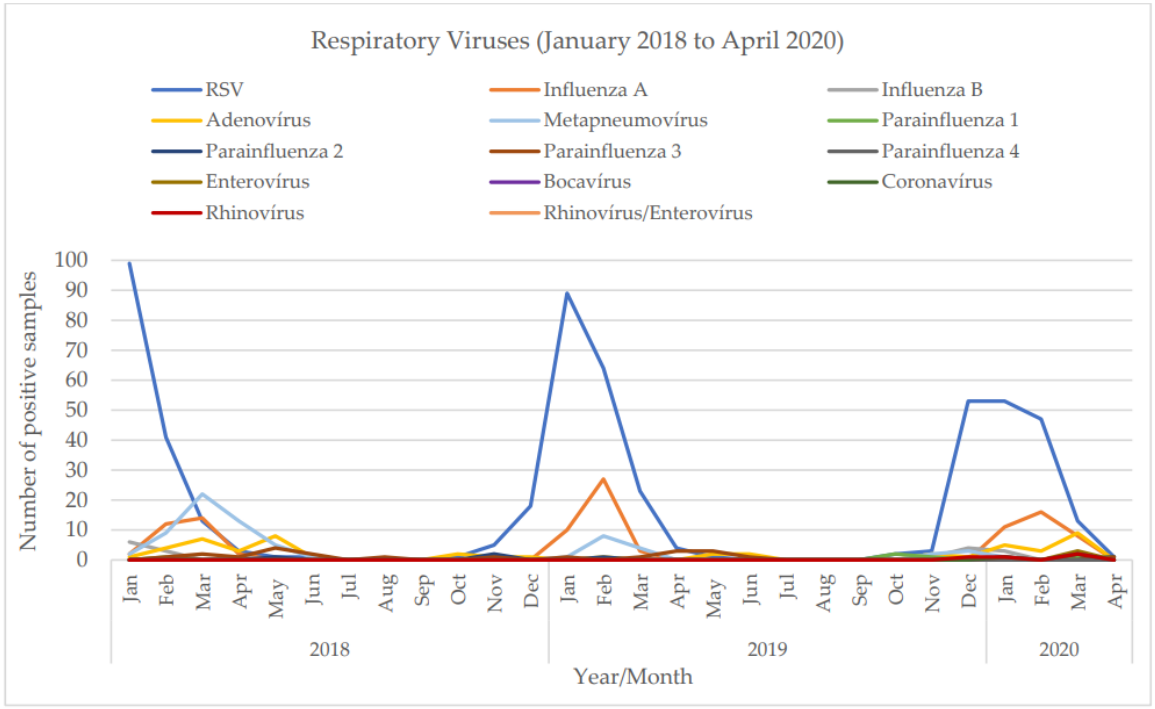
MDPI

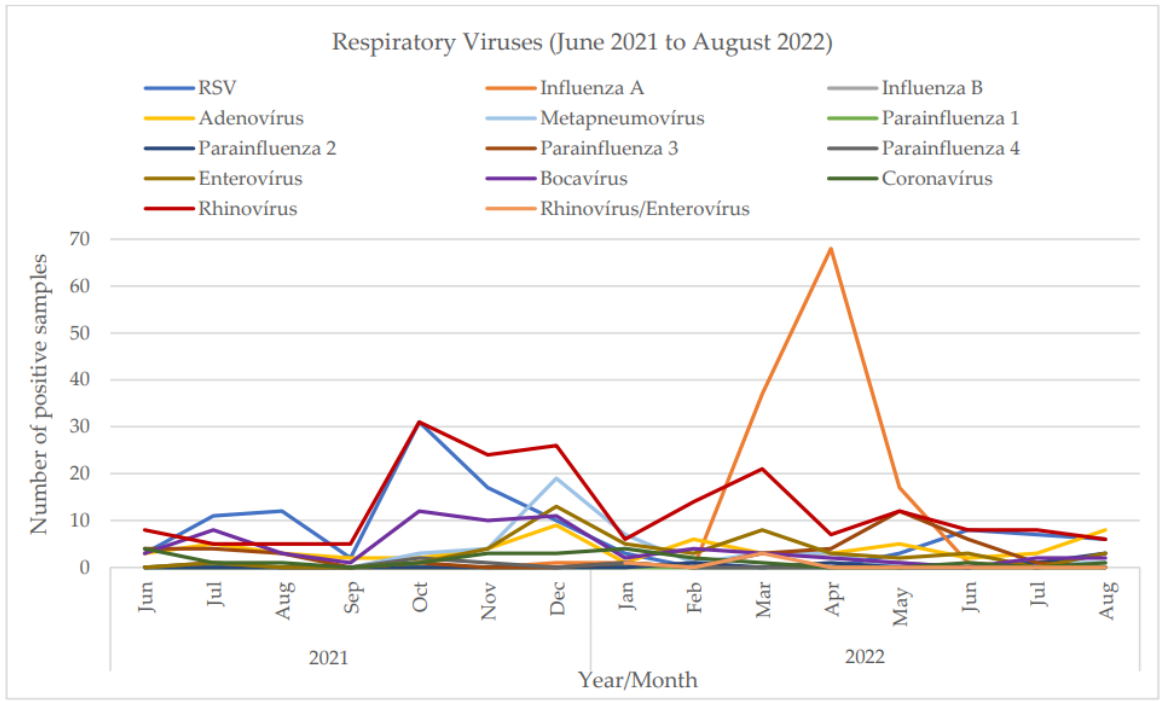
Communication

Epidemiological Changes in Respiratory Viral Infections in Children: The Influence of the COVID-19 Pandemic

Teresa Almeida [1,*], João Tiago Guimarães [1,2,3,4] and Sandra Rebelo [1,2,5]







Almeida T, Guimarães JT, Rebelo S. Epidemiological Changes in Respiratory Viral Infections in Children: The Influence of the COVID-19 Pandemic. Viruses. 2023 Sep 5;15(9):1880.

XI CONGRESO de la SEIP
y XIII Reunión Hispano-Mexicana de Infectología
SOCIEDAD ESPAÑOLA de INFECTOLOGÍA PEDIÁTRICA
del 9 al 11 de Marzo • MURCIA 2023

Variación temporal de detección de virus respiratorios en pacientes pediátricos tras reducción de medidas preventivas instauradas durante la pandemia COVID-19

Walter Alfredo Goycochea-Valdivia[1], Pedro Camacho Martinez[2], Laura Merino Díaz[2], Inmaculada Pupo[2], Carmen Malagon[1], Álvaro Villarejo[1], José Gil[1], Marisol Camacho[1], Lola Falcon[1], María José Vilchez[1], Laura Fernández[1], Peter Olbrich[1], José Antonio Lepe[2], Olaf Neth[1]

1. Servicio de Infectología, Reumatología e Inmunología Pediátrica, Hospital Universitario Virgen del Rocío, Sevilla.
2. Servicio de Microbiología Clínica. Unidad de gestión clínica de Enfermedades Infecciosas y Microbiología Clínica.

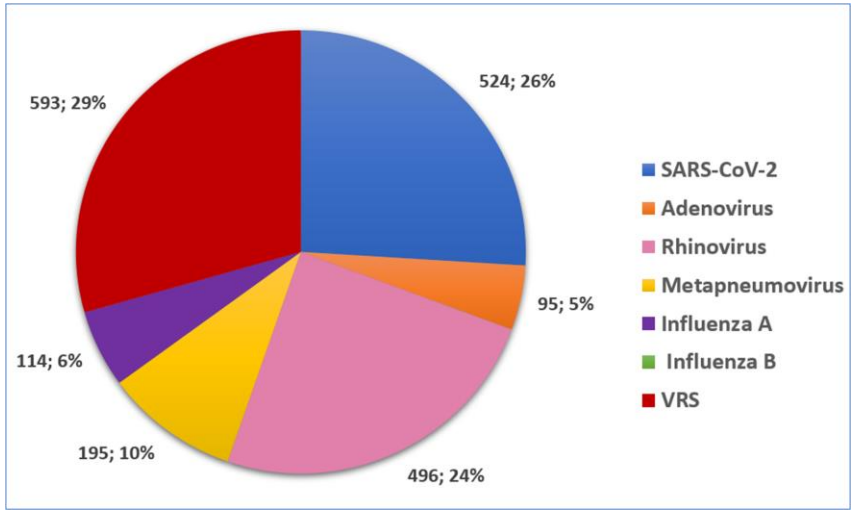
MÉTODOS

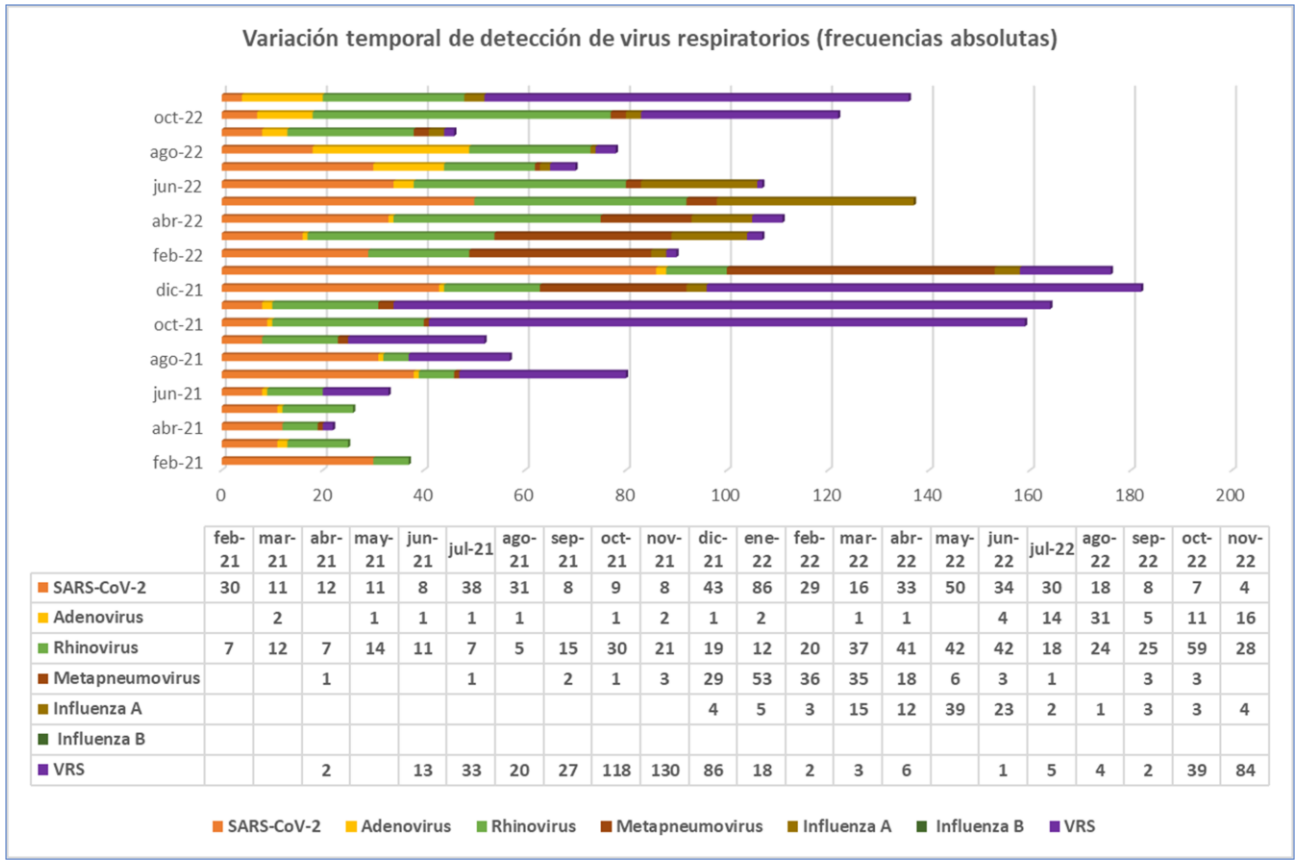
Tipo de estudio: Observacional retrospectivo

Virus evaluados: SARS-CoV-2, Rhinovirus, Adenovirus, Metapneumovirus, Virus sincitial respiratorio [VRS], Influenza A y B

Técnica: One-step RT-PCR multiplex en tiempo real en aspirados nasofaríngeos de pacientes pediátricos con sintomatología respiratoria

Periodo y lugar de estudio: Entre febrero/2021 a noviembre/2022 – Hospital Universitario Virgen del Rocío, Sevilla





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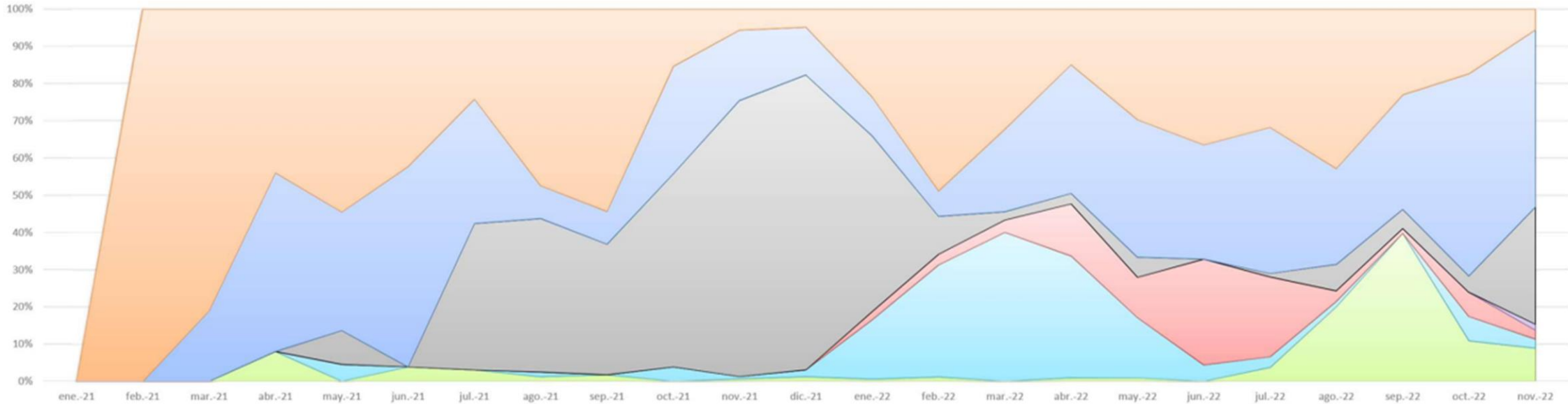
SARS-CoV-2	30	11	12	11	8	38	31	8	9	8	43	86	29	16	33	50	34	30	18	8	7	4
Adenovirus		2		1	1	1	1		1	2	1	2		1	1		4	14	31	5	11	16
Rhinovirus	7	12	7	14	11	7	5	15	30	21	19	12	20	37	41	42	42	18	24	25	59	28
Metapneumovirus			1			1		2	1	3	29	53	36	35	18	6	3	1		3	3	
Influenza A											4	5	3	15	12	39	23	2	1	3	3	4
Influenza B																						
VRS			2		13	33	20	27	118	130	86	18	2	3	6		1	5	4	2	39	84

Variación temporal de detección de virus respiratorios (frecuencias relativas)



	ene.-21	feb.-21	mar.-21	abr.-21	may.-21	jun.-21	jul.-21	ago.-21	sep.-21	oct.-21	nov.-21	dic.-21	ene.-22	feb.-22	mar.-22	abr.-22	may.-22	jun.-22	jul.-22	ago.-22	sep.-22	oct.-22	nov.-22
POSITIVOS COVID	0	100,00%	81,08%	44,00%	54,55%	42,31%	24,24%	47,50%	54,39%	15,38%	5,66%	4,88%	23,63%	48,86%	32,22%	14,95%	29,73%	36,50%	31,78%	42,86%	23,08%	17,39%	5,65%
POSITIVOS RHINOVIRUS	0	0,00%	18,92%	48,00%	31,82%	53,85%	33,33%	8,75%	8,77%	28,85%	18,87%	12,80%	10,44%	6,82%	22,22%	34,58%	36,94%	30,66%	39,25%	25,71%	30,77%	54,35%	47,58%
POSITIVOS VRS	0	0,00%	0,00%	0,00%	9,09%	0,00%	39,39%	41,25%	35,09%	51,92%	74,21%	79,27%	47,25%	10,23%	2,22%	2,80%	5,41%	0,00%	0,93%	7,14%	5,13%	4,35%	31,45%
POSITIVOS INFLUENZA B	0	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,61%
POSITIVOS INFLUENZA A	0	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,20%	2,84%	3,33%	14,02%	10,81%	28,47%	21,50%	2,86%	1,28%	6,52%	2,42%
POSITIVOS METAPNEUMOVIRUS	0	0,00%	0,00%	0,00%	4,55%	0,00%	0,00%	1,25%	0,00%	3,85%	0,63%	1,83%	15,93%	30,11%	40,00%	32,71%	16,22%	4,38%	2,80%	1,43%	0,00%	6,52%	2,42%
POSITIVOS ADENOVIRUS	0	0,00%	0,00%	8,00%	0,00%	3,85%	3,03%	1,25%	1,75%	0,00%	0,63%	1,22%	0,55%	1,14%	0,00%	0,93%	0,90%	0,00%	3,74%	20,00%	39,74%	10,87%	8,87%

Archivos de Bronconeumología 59 (2023) 264–266

Sociedad Española de Neumología y Cirugía Torácica SEPAR

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www.archbronconeumol.org

Scientific Letter

Epidemiology of Acute Bronchiolitis in a Third-level Hospital During the COVID-19 Pandemic

José Márquez Caballero [a,*], Maria Elisa Cordero Matía [b]

[a] Instituto de Biomedicina de Sevilla (IBIS), Pediatrics Department, Hospital Universitario Virgen del Rocío, Seville, Spain
[b] Department of Medicine, Infectious Diseases, Clinical Microbiology, and Preventive Medicine, Infectious Diseases Research Group, Instituto de Biomedicina de Sevilla (IBiS), Universidad de Sevilla/CSIC/Hospital Universitario Virgen del Rocío, Seville, Spain

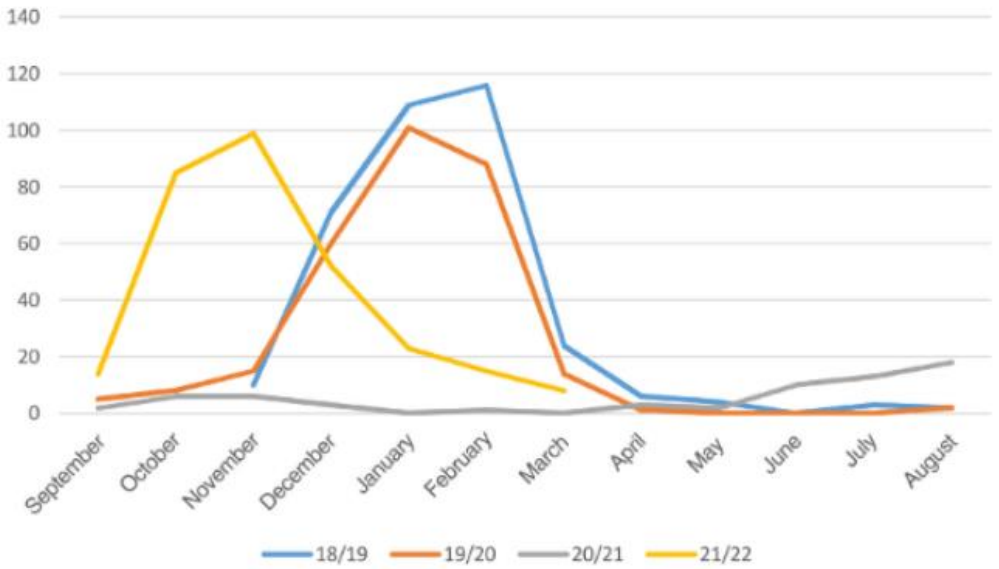


Fig. 1. Hospitalizations for acute bronchiolitis.

Variable	Total n = 916	Pre-pandemic n = 549	Pandemic n = 367	p Value OR (95% CI)
Age (months) – median (IQR)	2.3 (1–4.5)	2.3 (1–4.7)	2.3 (1–4.8)	p = 0.11
Female sex – n (%)	413 (45%)	285 (52%)	179 (42%)	p < 0.05 1.2 (1.1–1.3)
Prematurity – n (%)	215 (24%)	132 (24%)	83 (23%)	p = 0.68 1 (0.8–1.3)
Comorbidities – n (%)				
Heart disease with clinical repercussions	40 (4.36%)	23 (4.3%)	17 (4.6%)	p = 0.8 0.9 (0.5–1.7)
Bronchopulmonary dysplasia	46 (5%)	31 (5.7%)	15 (4%)	p = 0.26 1.4 (0.7–2.7)
Immunosuppression	8 (0.87%)	6 (1.1%)	2 (0.54%)	p = 0.2 3.6 (0.4–29.7)
Neurological involvement	12 (1.31%)	9 (1.7%)	3 (0.81%)	p = 0.18 2.6 (0.6–12.4)
Etiology – n (%)				
Not detected	169 (18.4%)	121 (22%)	48 (13%)	p < 0.001 1.6 (1.2–2.3)
RSV	662 (72.2%)	397 (72.3%)	265 (72.2%)	p = 0.9 1 (0.7–1.3)
Influenza A/B	14 (1.5%)	14 (2.73%)	0	p < 0.001
Metapneumovirus	36 (3.9%)	0	36 (9%)	
Rhinovirus	23 (2.5%)	1	22 (6%)	
SARS-CoV-2:	7 (0.7%)		6 (1.6%)	
Not performed	27 (2.9%)	25 (4.5%)	2 (0.55%)	p < 0.001 1.8 (1.3–2.4)
Coinfections				
Viral coinfection – n (%)	27 (2.9%)	12 (2%)	15 (4%)	p < 0.05 0.5 (0.2–0.9)
Bacterial infection – n (%)	182 (19.9%)	104 (19%)	78 (21.2%)	p = 0.58 0.9 (0.7–1.2)
UTI in absence of urinary catheter – n (%)	51 (28%)	31 (29.8%)	20 (25.6%)	p = 0.67 1.1 (0.7–1.8)
UTI in presence of urinary catheter – n (%)	37 (20.3%)	21 (20.2%)	16 (20.5%)	p = 0.79 0.9 (0.5–1.6)
Respiratory not confirmed – n (%)	85 (46.7%)	46 (44.2%)	39 (50%)	p = 0.34 0.8 (0.6–1.1)
Ward – n (%)	33 (18.1%)	20 (19.2%)	15 (19.2%)	p = 0.83 0.9 (0.5–1.7)
PICU – n (%)	52 (28.5%)	26 (25%)	24 (30.7%)	p = 0.23 0.7 (0.5–1.2)
Respiratory confirmed – n (%)	9 (4.9%)	6 (5.8%)	3 (3.8%)	p = 0.55 1.5 (0.4–5.8)
Severity– n (%)				
Mild (<6 points)	318 (34.7%)	247 (45%)	71 (19.3%)	p < 0.001 2.3 (1.8–2.5)
Moderate (6–10 points)	444 (48.4%)	198 (36%)	246 (67%)	p < 0.001 0.6 (0.5–0.7)
Severe (>10 points)	154 (16.8%)	104 (18.9%)	50 (13.6%)	p = 0.3 1.1 (0.8–1.5)
PICU admission – n (%)	249 (27.2%)	123 (22.4%)	126 (34.3%)	p < 0.001 0.6 (0.5–0.7)
PICU length of stay in days – median (IQR)	5 (3–8)	6 (4–10)	4 (3–7)	p = 0.36
Hospital length of stay in days – median (IQR)	4 (2–6)	4 (2–7)	4 (3–6)	p = 0.54
Deaths	0	0	0	

Pre-pandemia: Temporadas 18-19 y 19-20

Pandemia: Temporadas 20-21 y 21-22

Márquez Caballero J, Cordero Matía ME. Epidemiology of Acute Bronchiolitis in a Third-level Hospital During the COVID-19 Pandemic.
Arch Bronconeumol. 2023 Apr;59(4):264-266.

Enfermedades Infecciosas y Microbiología Clínica 41 (2023) 348–351

Enfermedades Infecciosas y Microbiología Clínica

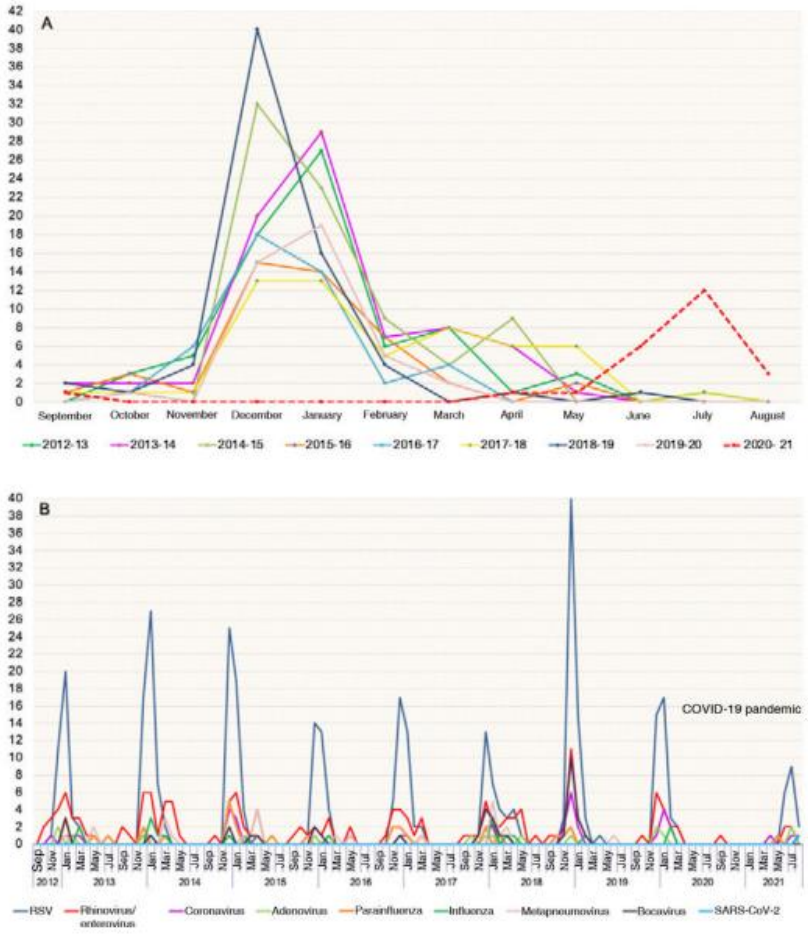
www.elsevier.es/eimc

Lorena Bermúdez Barrezueta[a,b,*], María Gutiérrez Zamorano[a], Pablo López-Casillas[a], Marta Brezmes-Raposo[a,b], Irene Sanz Fernández[a], María de la Asunción Pino Vázquez[a,b]

[a] Unidad de Cuidados Intensivos Pediátricos y Neonatales, Servicio de Pediatría, Hospital Clínico Universitario de Valladolid, Valladolid, Spain
[b] Departamento de Pediatría, Facultad de Medicina, Universidad de Valladolid, Valladolid, Spain

Original article

Influence of the COVID-19 pandemic on the epidemiology of acute bronchiolitis



	Total n = 509 (%)	Pre-pandemic n = 485 (%)	COVID-19 pandemic n = 24 (%)	*P-value*
Age (months)	2.6 [1.4–4.9]	2.6 [1.5–5]	1.6 [0.9–3.3]	.030
Weight at admission (kg)	5.2 [4.2–6.7]	5.3 [4.2–6.7]	4.3 [3.4–6]	.038
Male sex	300 (58.9)	286 (58.9)	14 (58.3)	.951
Birth weight (g)	3090 [2740–3440]	3100 [2745–3447]	2910 [2417–3351]	.139
Gestational age (weeks)	39 [37–40]	39 [37–40]	37.5 [36.3–39]	.016
Premature	77 (15.1)	71 (14.6)	6 (25)	.180
Comorbidity	42 (8.2)	40 (8.2)	2 (8.3)	.988
[0.1-5]*Viral aetiology*				
RSV	360 (70.7)	343 (70.7)	17 (70.8)	.778
Rhinovirus/enterovirus	158 (30.9)	153 (31.5)	5 (20.8)	.222
Coronavirus	42 (8.2)	39 (8)	3 (12.5)	.449
Parainfluenza	33 (6.5)	32 (6.6)	1 (4.2)	1
Adenovirus	21 (4.1)	19 (3.9)	2 (8.3)	.274
Influenza	19 (3.7)	19 (3.9)	0	.615
Bocavirus	37 (7.3)	37 (7.6)	0	.243
Metapneumovirus	25 (4.9)	25 (5.1)	0	.625
SARS-CoV-2	1 (0.2)	0	1 (4.2)	.049
Virus not detected	23 (4.5)	22 (4.5)	1 (4.2)	1
Test not performed	18 (3.5)	18 (3.7)	0	1
Viral co-infections	179 (35)	174 (35.8)	5 (20.8)	.103
[0.1-4]*Respiratory support*				.010
None	51 (10)	49 (10.1)	2 (8.3)	
LFO	264 (51.9)	257 (53.1)	7 (29.2)	
HFO	98 (19.2)	94 (19.3)	4 (16.7)	
NIV	91 (17.8)	81 (16.7)	10 (41.7)	
IMV	5 (1)	4 (0.8)	1 (4.2)	
Admission to PICU	119 (23.4)	108 (22.2)	11 (45.8)	.008
Length of stay in PICU	4.3 [2.9–6.4]	4.1 [2.8–6.2]	6.3 [3.3–8]	.123
Length of hospital stay	6 [4–8]	6 [4–8]	6.5 [3.3–8]	.901

Pre-pandemia: 1 septiembre-2012 a 14 marzo-2020

Pandemia: 15 marzo-2020 a 31 agosto-2021

Junta de Andalucía
Consejería de Salud y Consumo

CONSEJERÍA DE SALUD Y CONSUMO
Dirección General de Salud Pública y Ordenación Farmacéutica
Servicio Andaluz de Salud

PROGRAMA DE PREVENCIÓN DE INFECCIÓN VRS CON NIRSEVIMAB

ANDALUCÍA, CAMPAÑA 2023-2024

INSTRUCCIÓN DGSPyOF-9/2023, versión 2
13 septiembre 2023

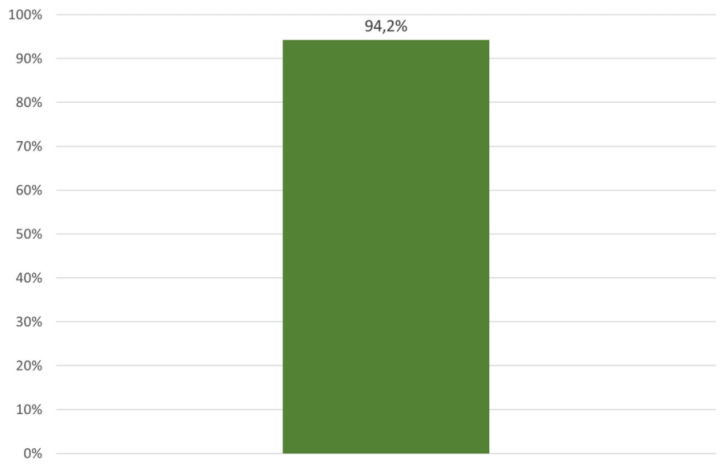
Grupo 1: menores de 6 meses:
Subgrupo 1A: nacidos entre el 1 de abril de 2023 y 30 de septiembre de 2023.
Subgrupo 1B: nacidos entre el 1 de octubre 2023 y 31 de marzo de 2024.

Grupo 2: menores de 1 año con antecedente de prematuridad de menos de 35 semanas de gestación.

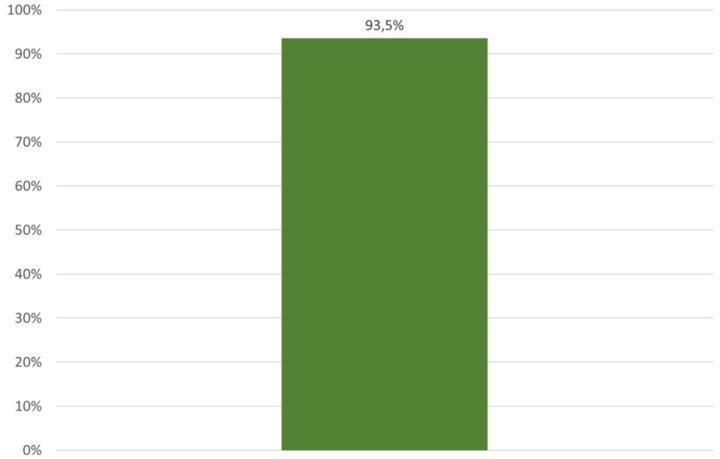
Grupo 3: menores de 2 años, con alguna de las siguientes condiciones de alto riesgo:

1. Cardiopatías congénitas con afectación hemodinámica significativa cianosantes o no cianosantes.
2. Displasia broncopulmonar.
3. Inmunodepresión grave: enfermedades oncohematológicas; inmunodeficiencias primarias sobre todo combinadas y agammaglobulinemia congénita; tratamiento con inmunosupresores de forma continuada.
4. Errores congénitos del metabolismo.
5. Enfermedades neuromusculares.
6. Enfermedades pulmonares graves.
7. Síndromes genéticos con problemas respiratorios relevantes.
8. Síndrome de Down.
9. Fibrosis quística.
10. En cuidados paliativos.

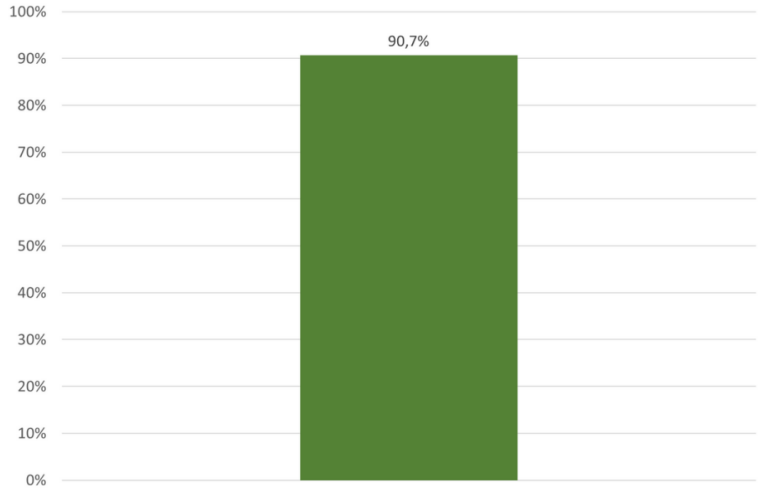
COBERTURA DE NIRSEVIMAB EN MENORES DE 6 MESES DEL GRUPO 1A



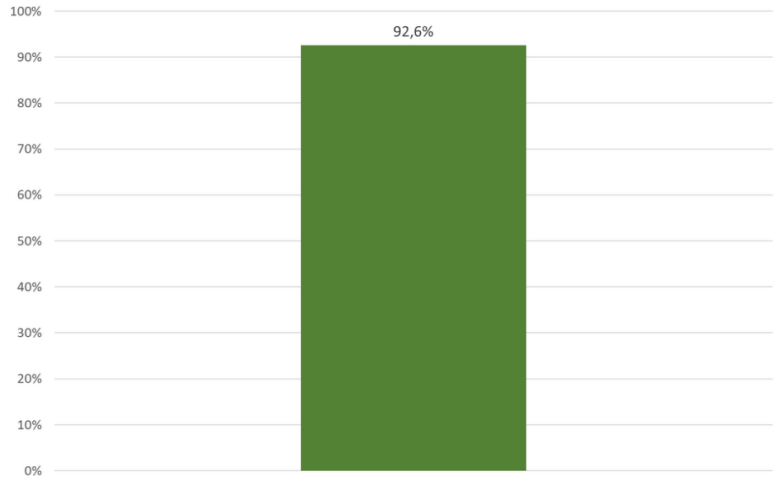
COBERTURA DE NIRSEVIMAB EN LACTANTES NACIDOS DESDE EL 1 DE ABRIL 2023



COBERTURA DE NIRSEVIMAB EN LACTANTES PREMATUROS < 35 SEMANAS

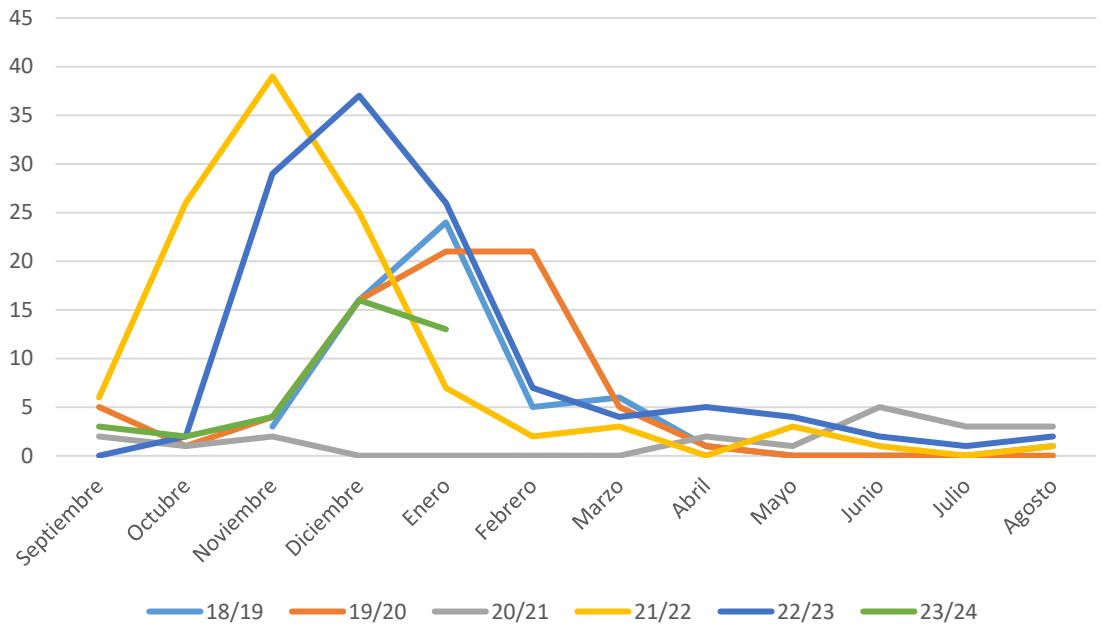


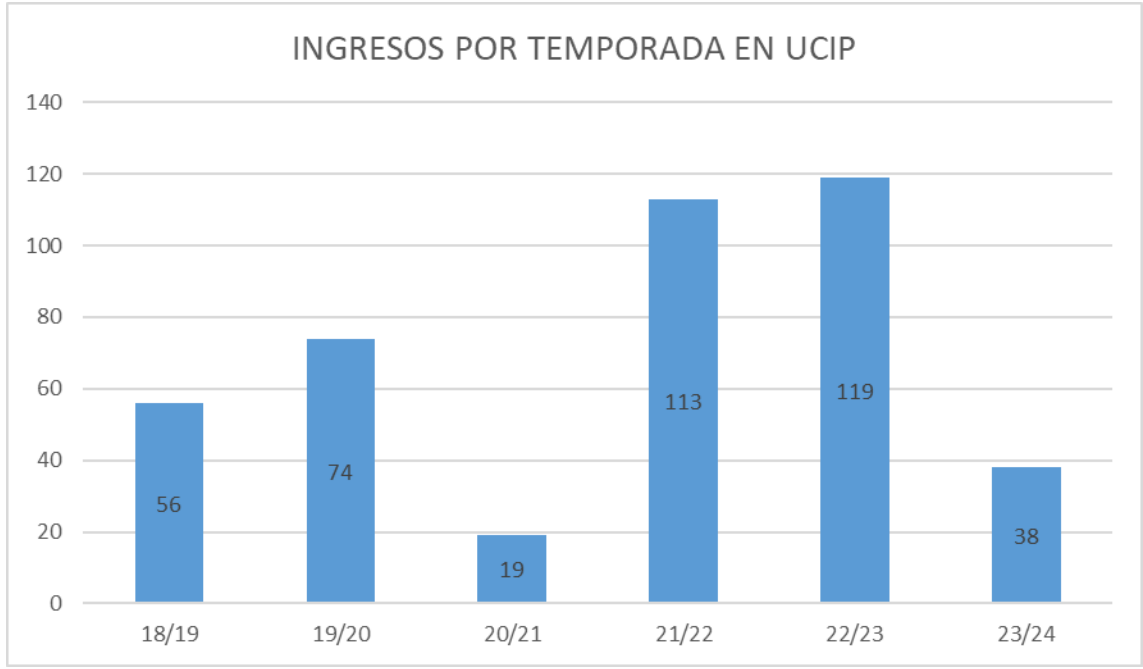
COBERTURA DE NIRSEVIMAB MENORES DE 6 MESES NACIDOS DURANTE LA TEMPORADA VRS



https://www.andavac.es/
Fuente: Consejería de Salud y Consumo de Andalucía. Fecha: 19/02/2024

Cambios epidemiológicos de la bronquiolitis aguda en la unidad de cuidados intensivos pediátricos tras la introducción de Nirsevimab



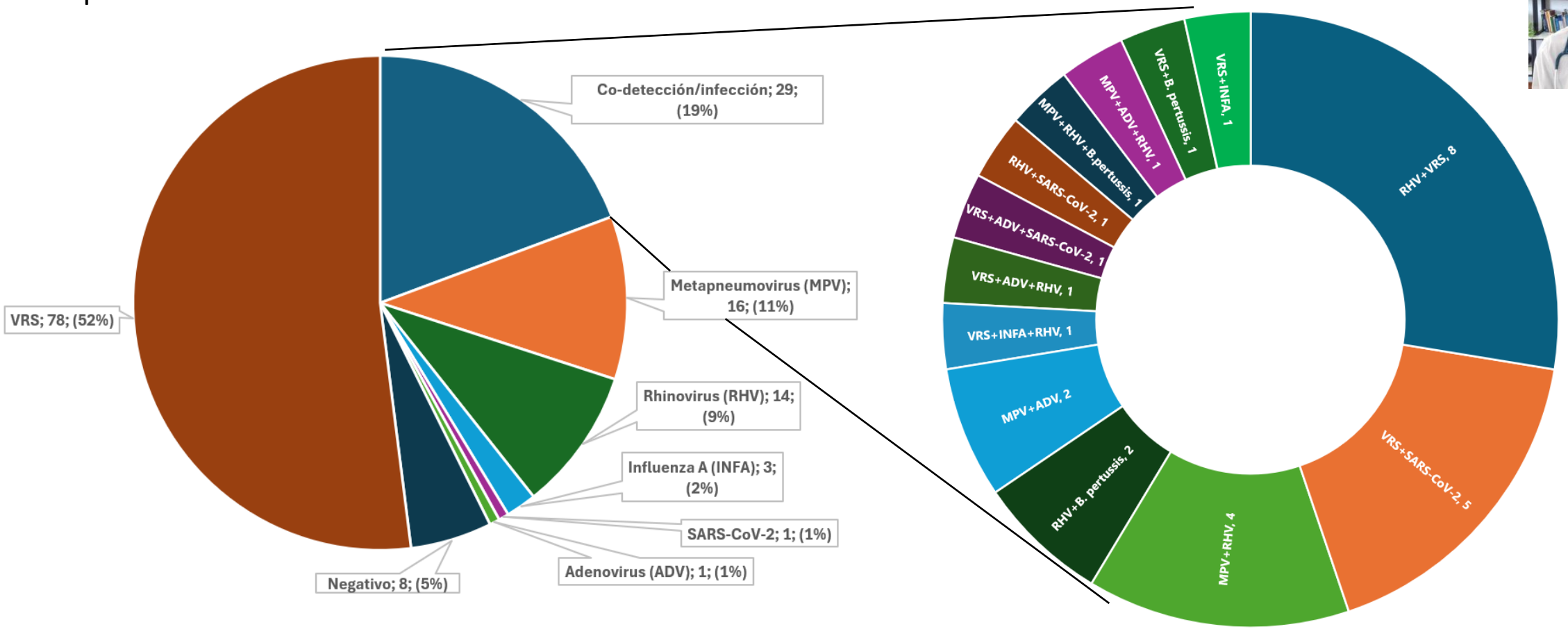


Márquez Caballero J, Parrilla Julio. Unidad de Cuidados Intensivos Pediátricos. Hospital Universitario Virgen del Rocío, Sevilla España. DATOS PENDIENTES DE PUBLICAR.
DATOS PRESENTADOS CON EL PERMISO DE LOS AUTORES. SE RUEGA NO DIVULGAR FUERA DE ESTE FORO.

Cambios epidemiológicos de la bronquiolitis aguda en la unidad de cuidados intensivos pediátricos tras la introducción de Nirsevimab

VARIABLE	TOTAL	ANTES DE NIRSEVIMAB	NIRSEVIMAB	VALOR p
EDAD (días)- mediana (RIQ)	50 (28-87)	48 (26-79)	71 (35-137)	p=0,012
PREMATURIDAD < 35SG – n (%)	180 (45%)	50%	10,5%	p<0,05
ETIOLOGÍA – n (%)				
No detectado	13,9%	15%	7,9%	p<0,05
VRS	76%	77,5%	60,5%	p<0,05
Influenza A/B	1,4%	1,2%	2,6%	p<0,05
Metapneumovirus	3,8%	3,2%	5,26%	p<0,05
Rinovirus	4,3%	2,4%	21%	p<0,05
SARS-COV2	0,3%	0,4%	0%	p<0,05
Adenovirus	0.4%	0%	2,75%	p<0,05
No realizado	0,3%	0,3%	0%	p<0,05
GRAVEDAD– n (%)				
Leve (<6 puntos)	2,1%	2%	2,6%	p=0,97
Moderada (6-10 puntos)	50,5%	53%	34,2%	p=094
Grave (>10 puntos)	47,4%	45%	63%	p<0,05
DÍAS INGRESO EN UCIP- mediana (RIQ)	7 (5-11)	8 (6-11)	4 (2-8)	p<0,05

Detección de virus respiratorios temporada actual Hospital Infantil HUVR



Ingresos en planta VRS sólo o co-detección/infección **97**

- Inmunizados **27**
- No inmunizados **70** → Elegibles **17**

¿A qué se deben estos cambios?

The Origin of Niches and Species in the Bacterial World

Fernando Baquero[1], Teresa M. Coque[1]*, Juan Carlos Galán[1] and Jose L. Martinez[2]*

[1] Division of Biology and Evolution of Microorganisms, Department of Microbiology, Ramón y Cajal Institute for Health Research (IRYCIS), Ramón y Cajal University Hospital, Madrid, Spain, [2] National Center for Biotechnology (CNB-CSIC), Madrid, Spain

frontiers in Microbiology

REVIEW
published: 17 March 2021
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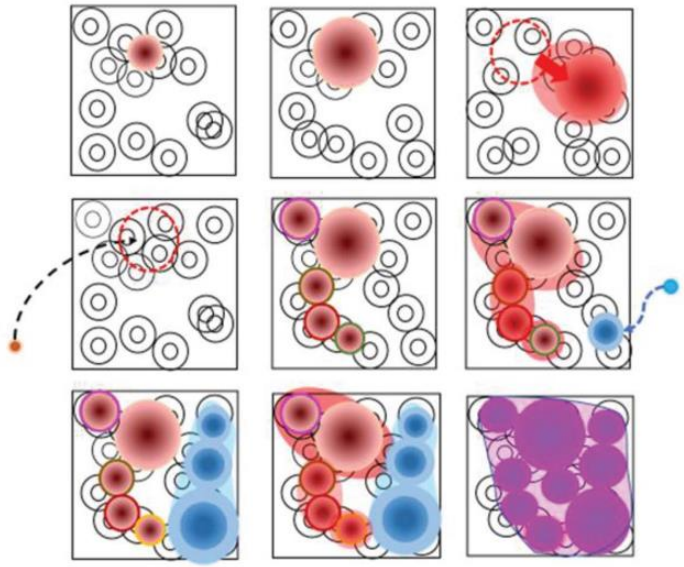


FIGURE 2 | The process of conversion of biotopes in niches. The figure represents nine successive stages of nichification of a biotope, whose constituents are depicted by target-like circles, to represent gradients. **First row: (left)**, a small bacterial population finds a selective combination of traits able to sustain its growth (brown circle); the limits are those of the current niche; the color intensity reflects the bacterial abundance; **(middle)**, the population is expanding and converting in niche the neighboring regions of the biotope; **(right)**, the combination of traits defining the niche is shifting to the right, so that the niche moves into the biotope space. **Second row: (left)**, an extinction event has eliminated the pioneering colonizer population; however, from the outside environment, a new small population of the same organism enters the biotope, recognizes the conditions of the ancient niche, and reinstalls itself; **(middle)**, the sequential variants of the pioneering population emerge. This variation allows for the expansion of the niche; **(right)**, a new invader of the biotope (blue circle) produces a new niche. **Third row: (left)**, sequential variation of the new population expands the blue niche; **(middle)**, niches of the brown and blue populations start to converge; **(right)**, this convergence facilitates genetic exchanges between brown and blue populations, creating a new pink population (species?) advancing the exploitation of the biotope's carrying capacity, which is almost entirely converted in a niche.

Special Series: Microbial Communities

Review

The Ecology and Evolution of Microbial Competition

Melanie Ghoul[1] and Sara Mitri[2,*]

Trends in Microbiology

CellPress

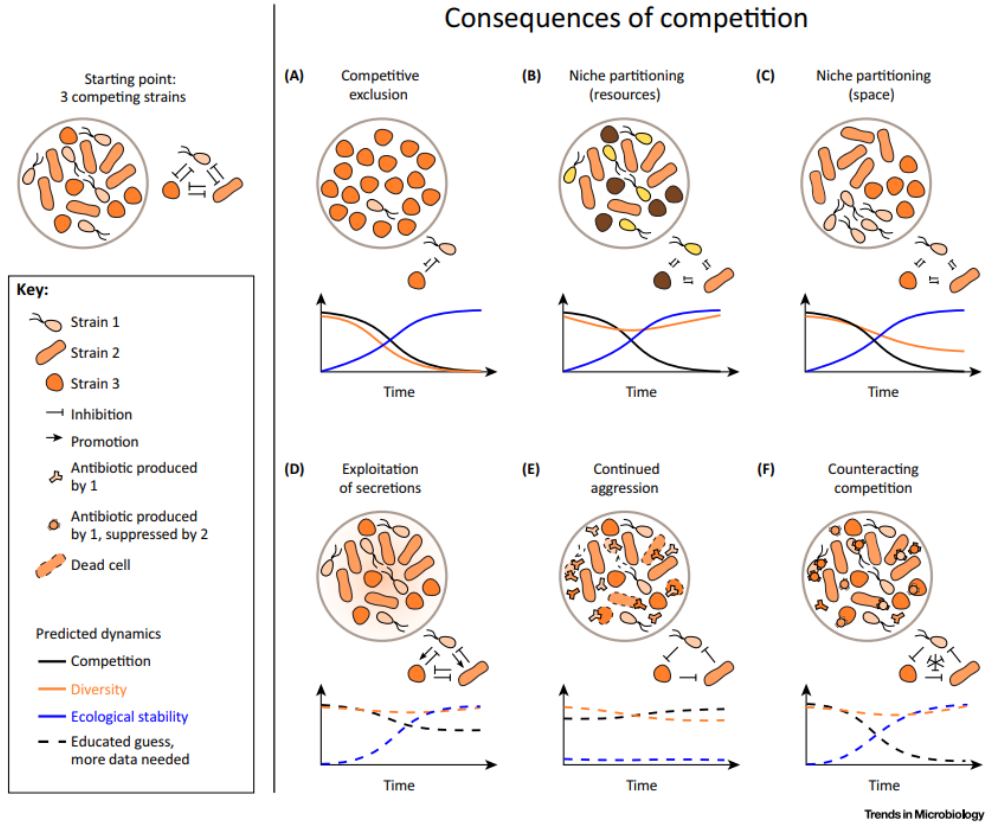


Figure 3. We show three strains of microbe that compete with one another initially (high competition, high diversity and low stability, see top left) and the possible outcomes of this competition as proposed in the literature. Under the top three scenarios (A–C), we plot the predicted dynamics in competition, community diversity, and ecological stability over time, beginning from high competition and diversity, and low stability. The dynamics of competition, diversity and stability in the bottom three scenarios (D–F) are less well understood. Broken lines represent theoretical predictions that have not yet been extensively tested experimentally.

- Baquero F, Coque TM, Galán JC, Martinez JL. The Origin of Niches and Species in the Bacterial World. Front Microbiol. 2021 Mar 17;12:657986.
- Ghoul M, Mitri S. The Ecology and Evolution of Microbial Competition. Trends Microbiol. 2016 Oct;24(10):833-845.

¿Existen nichos ecológicos virales? ¿es posible la competencia entre virus?

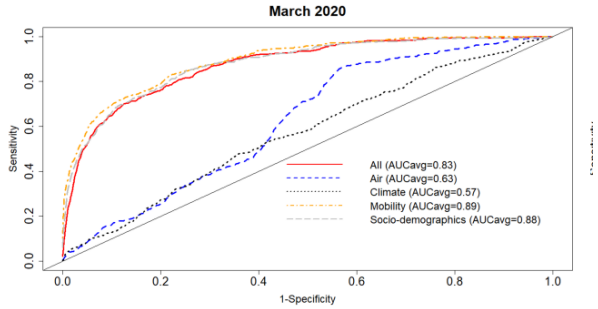
Tropical Medicine and Infectious Disease

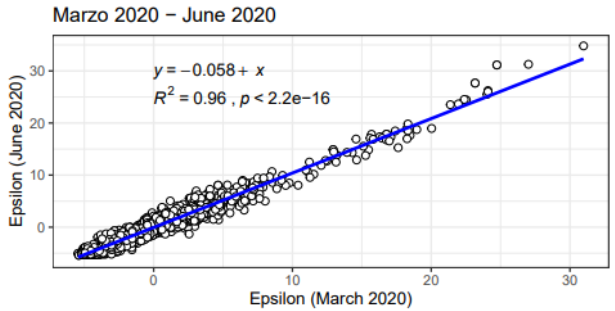
MDPI

Article

"Does a Respiratory Virus Have an Ecological Niche, and If So, Can It Be Mapped?" Yes and Yes

Christopher R. Stephens [1,2,*], Constantino González-Salazar [1,3] and Pedro Romero-Martínez [1]





RESEARCH ARTICLE

Coinfections of the Respiratory Tract: Viral Competition for Resources

Lubna Pinky, Hana M. Dobrovolny*

Physics and Astronomy Department, Texas Christian University, Fort Worth, Texas, United States of America

PLOS ONE

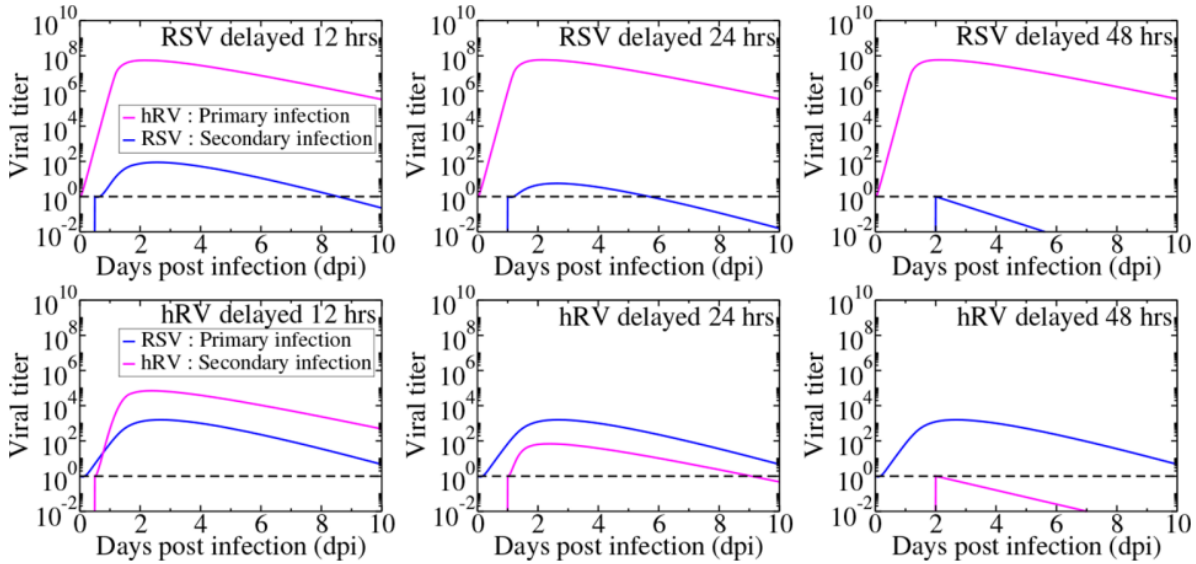


Fig 7. Simultaneous infection of rhinovirus and RSV with various time delays between the initiation of the infections. The dashed line indicates a typical experimental threshold of detection.

Interferencias entre los virus explicadas por las interacciones inmunológicas

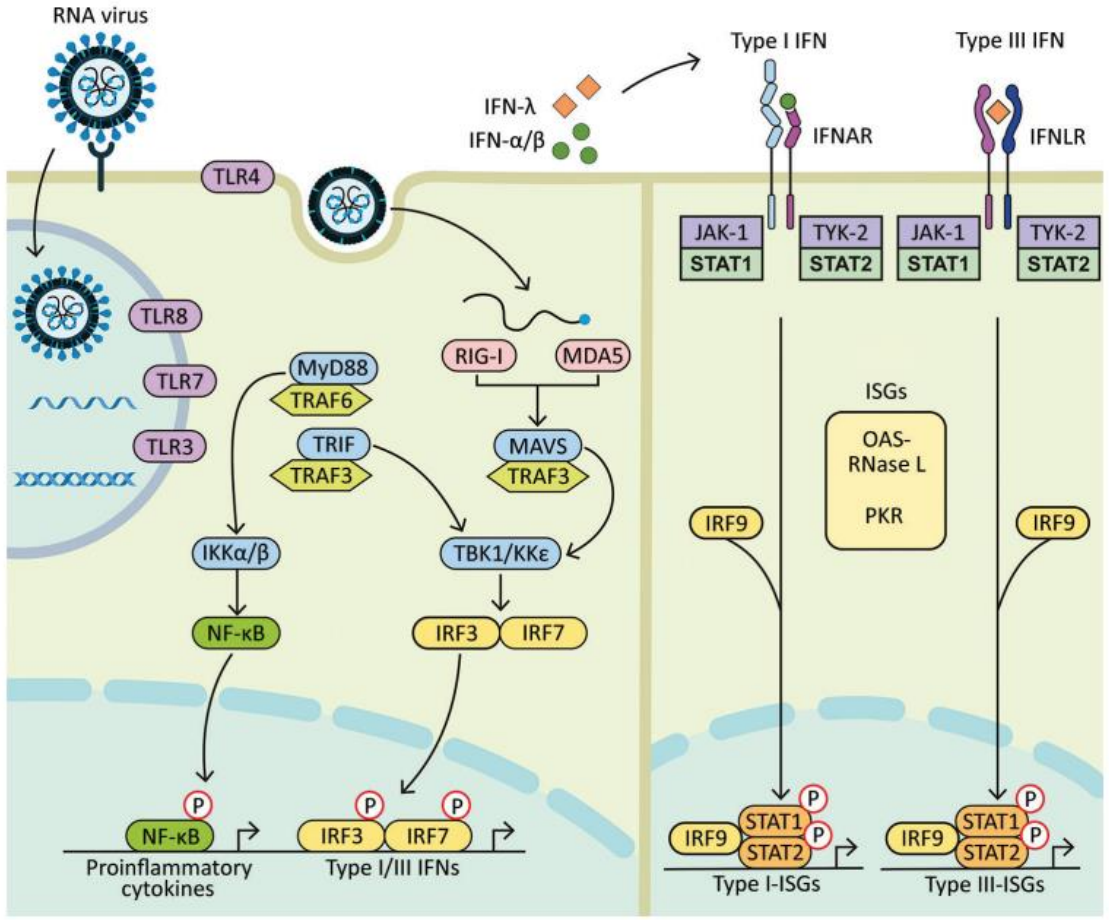


Table 1. Evasion mechanisms of human respiratory viruses to type I interferon*

Virus	Viral proteins interfering with interferon induction and signaling	Reference
Human rhinovirus	IFN induction: VPg interferes with viral RNA recognition by RNA sensors; 2A protease reduces cap-dependent translation of cellular mRNA; 2A and 3C proteases cleave MAVS. IFN signaling: 3C protease inhibits activation of antiviral protein complexes.	(*5*)
Human metapneumovirus	IFN induction: G interferes with TLR4 signaling; SH inhibits NF-κB signaling; M2.2 protein interferes with MAVS and inhibits IRF7 phosphorylation. IFN signaling: SH prevents STAT1 phosphorylation.	(*6*)
Respiratory syncytial virus	IFN induction: NS1 inhibits IRF3 phosphorylation, inhibits TRIM25-mediated RIG-I ubiquitination; NS2 binds to RIG-I and reduces IRF3 activation; G reduces IFN-λ production. IFN signaling: NS1 promotes OASL degradation and inhibits IFNAR1 expression; NS1 and NS2 induce STAT2 degradation.	(*5*)
Influenza virus	IFN induction: NS1 interferes with viral RNA sensing by TLR and RIG-I, binds to viral RNA and reduces RIG-I activation, inhibits TRIM25-mediated RIG-I ubiquitination and prevents the export of cellular mRNA to cytoplasm; PB1-F2 and PB2 interfere with MAVS; PA reduces IRF3 activation; M2 protein interacts with MAVS. IFN signaling: NS1 reduces PKR and OASL activation; HA induces IFNAR1 degradation; SOCS inhibits STAT2; NP and M2 protein interfere with PKR activation.	(*7*)
Severe acute respiratory syndrome coronavirus	IFN induction: NSP14 methylates capped RNA transcripts; NSP15 cleaves 5′-polyuridines from viral RNA; NSP16 and NSP10 methylate viral RNA cap; N protein inhibits TRIM25-mediated RIG-I ubiquitination; NSP3 deubiquitinates cellular substrates (possibly RIG-I) and inhibits IRF3 phosphorylation; ORF9b targets MAVS, TRAF3 and TRAF6 to degradation; M protein impedes TRAF3/TBK1/IKKε complex formation; ORF3b might target MAVS; NSP1 promotes cellular mRNA degradation and prevents host mRNA translation. IFN signaling: ORF3a promotes IFNAR1 degradation; NSP1 decreases STAT1 phosphorylation; ORF6 inhibits nuclear translocation of STAT1.	(*8*)

*G, glycoprotein; HA, hemagglutinin; IFN, interferon; IFNAR1, IFN-α/β receptor 1; IRF, IFN regulatory factor; M, matrix; MAVS, mitochondrial antiviral signaling protein; N, nucleocapsid; NP, nucleocapsid protein; NS, nonstructural; NSP, nonstructural protein, OASL, 2′-5′ oligoadenylate synthetase-ribonuclease L; ORF, open reading frame; PA, polymerase acidic; PB, polymerase basic; PKR, protein kinase receptor; RIG-I, retinoic acid–inducible gene I; SH, viroporin protein; SOCS, suppressor of cytokine signaling; STAT, signal transducer and activator of transcription; TANK, TRAF family member–associated NF-κB activator; TBK1, TANK binding kinase 1; TLR, Toll-like receptor; TRAF, tumor necrosis factor receptor–associated factor; TRIM25, tripartite motif containing 25.

Table 2. Potential viral interferences between respiratory viruses*

Interfering virus	Second virus	Observed effect in patients, animal models, and ex vivo systems	Results and statistical significance	Reference
pH1N1	H3N2	Prevents A(H3N2) shedding in ferret model	No H3N2 virus shedding	(*17*)
	IBV	Prevents or delays IBV shedding in ferret model	Peak delayed by 1.8 d (p = 0.014)	(*17*)
IAV	RSV	Reduced likelihood of co-detection in patients	OR 0.11 (95% CI 0.00–0.92)	(*18*)
		Reduced likelihood of co-detection in patients	OR 0.37 (95% CI 0.24–0.57)	(*19*)
		Prevents or delays RSV shedding in ferret model	Peak delayed by 2 d (p = 0.009)	(*3*)
RSV	HMPV	Reduced likelihood of co-detection in patients	OR 0.27 (95% CI 0.09–0.80)	(*19*)
		Reduces HMPV replication in HAEC model	By 1 or 2 log after 5 d (p<0.05)	(*20*)
HRV	IAV	Reduced likelihood of co-detection in patients	OR 0.06 (95% CI 0.01–0.24)	(*18*)
		Reduced likelihood of co-detection in patients	OR 0.08 (95% CI 0.02–0.30)	(*21*)
		Reduced likelihood of co-detection in patients	OR 0.15 (95% CI 0.04–0.53)	(*22*)
		Reduced likelihood of co-detection in patients	OR 0.16 (95% CI 0.09–0.28)	(*23*)
		Reduces IAV replication in HAEC model	>15-fold after 24 h (p = 0.0002)	(*23*)
RSV	HRV	Reduced infection rate with HRV in patients	8% vs. 14% (p<0.049)	(*24*)
		Reduced likelihood of co-infection in patients	OR 0.17 (95% CI 0.09–0.33)	(*18*)
		TCRI study	OR 0.30 (95% CI 0.22–0.40)	(25)
		INSPIRE study	OR 0.18 (95% CI 0.11–0.28)	(*25*)
		MAKI trial	OR 0.34 (95% CI 0.16–0.72)	(*25*)
HRV	SARS-CoV-2	Reduces SARS-CoV-2 replication in HAEC model	By 3 log after 48 h (p = 0.006)	(*26*)
			By 3.5 log after 72 h (p<0.0001)	(*27*)

*HAEC, human airway epithelial cells; HMPV, human metapneumovirus; HRV, human rhinovirus; IAV, influenza A virus; IBV, influenza B virus; INSPIRE, Infant Susceptibility to Pulmonary Infections and Asthma Following RSV Exposure (in a region of the southeastern United States); MAKI, trial on the effects of RSV prophylaxis with palivizumab in healthy preterm infants in the Netherlands; OR, odds ratio; RSV, respiratory syncytial virus; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2; TCRI, Tennessee Children's Respiratory Initiative.

Piret J, Boivin G. Viral Interference between Respiratory Viruses. Emerg Infect Dis. 2022 Feb;28(2):273-281.

¿Existe la deuda inmunológica?

Anales de Pediatría 98 (2023) 155–156

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EDITORIAL

Changes in the epidemiology of infections in children. Is there an immune debt? Only for respiratory viruses?

Cambios en la epidemiología de las infecciones en niños. ¿Existe la deuda inmunitaria? ¿solo para los virus respiratorios?

Cristina Calvo

Servicio de Pediatría, Enfermedades Infecciosas y Tropicales, Hospital Universitario La Paz, Fundación IdiPaz, Red de Investigación Traslacional en Infectología Pediátrica (RITIP), CIBERINFEC, ISCIII, Madrid, Spain

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Volume 36, Number 1, 2023

Pp. 1–2
DOI: 10.1089/vim.2022.0204

Editorial

Open camera or QR reader and scan code to access this article and other resources online.

Immunity Debt, a Gap in Learning, or Immune Dysfunction?

Robert F. Needle[1,2] and Rodney S. Russell[1]

Infectious Diseases Now 53 (2023) 104638

Editorial

Immune debt: Recrudescence of disease and confirmation of a contested concept

Medical News & Perspectives

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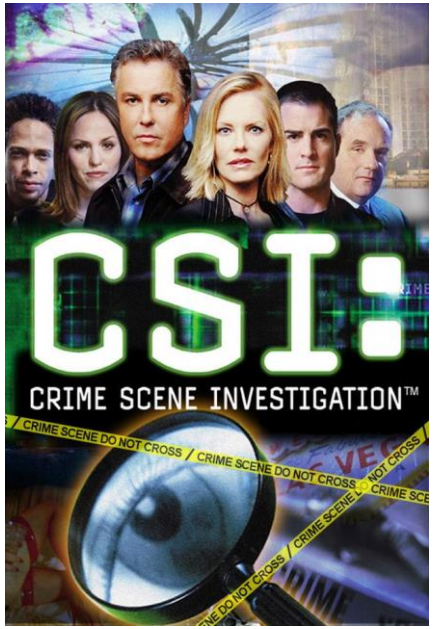
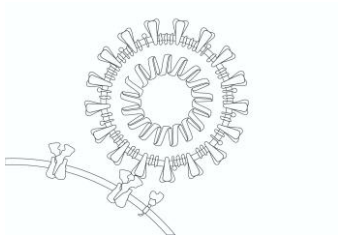
From "Immunity Debt" to "Immunity Theft"—How COVID-19 Might Be Tied to Recent Respiratory Disease Surges

Rita Rubin, MA

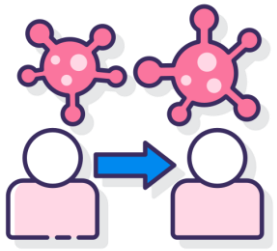
JAMA. 2024;331(5):378-381. doi:10.1001/jama.2023.26608

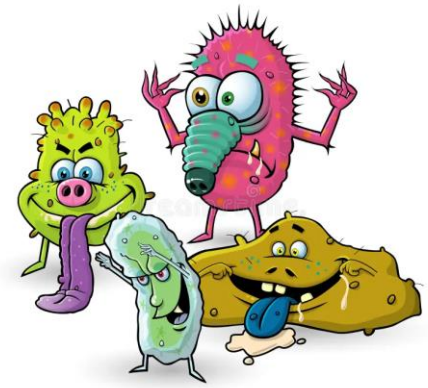


Motivo

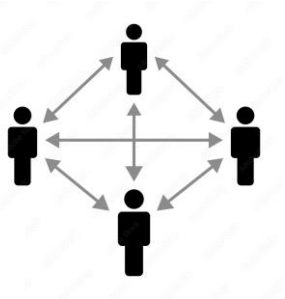


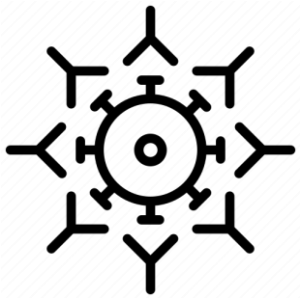
Medios





Oportunidad





Mensajes para llevar a casa

- No tenemos nuevos virus respiratorios circulando desde la pandemia por SARS-CoV-2, pero sí cambios epidemiológicos de los virus previamente existentes mejor descritos debido a una mayor capacidad de detección.

- Los cambios evidenciados pueden estar en relación a varios factores sustentados por múltiples teorías (nichos ecológicos microbianos, interferencia por interacciones inmunológicas, ¿deuda inmunológica?).

- La inmunización frente a determinados patógenos demuestra una repercusión directa sobre la epidemiología de los mismos, habiéndose evidenciado previamente en Gripe, SARS-CoV-2 y desde la última temporada con VRS.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