



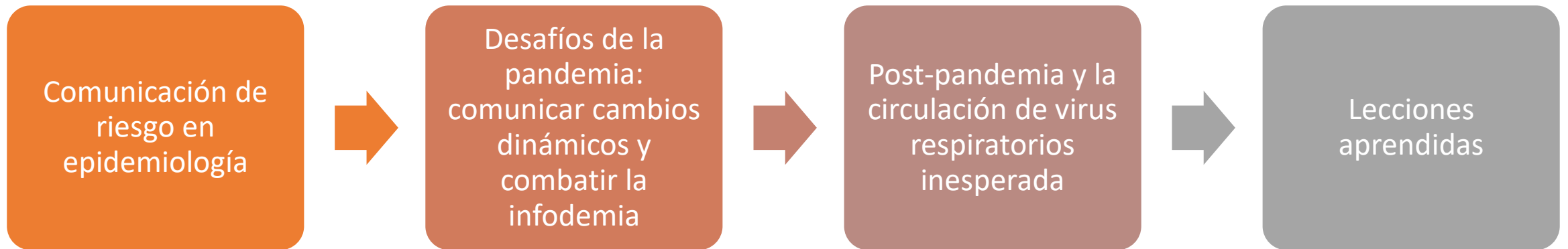
Comunicación epidemiológica al equipo de salud: circulación de virus respiratorios intra y post pandemia.

Dra. María del Valle Juárez

Epidemiología HNRG



Contenido

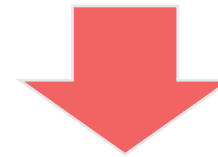




Actividades de la vigilancia epidemiológica



La vigilancia epidemiológica inicia con las actividades de detección y notificación pero requiere análisis de los datos para construir...

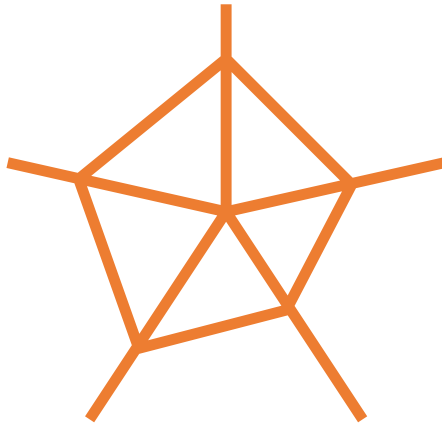


Información para la acción

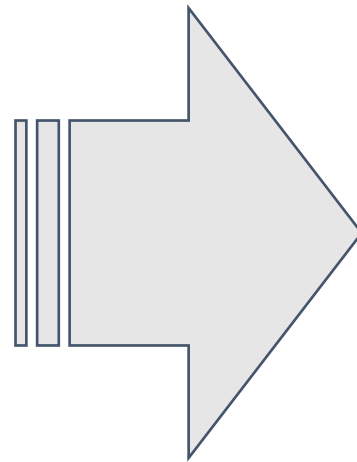


Cambio de paradigma en el flujo de información

Sistema de información radial



Diferentes formatos de información
Distintos niveles
Análisis a nivel central



Sistema de información en red

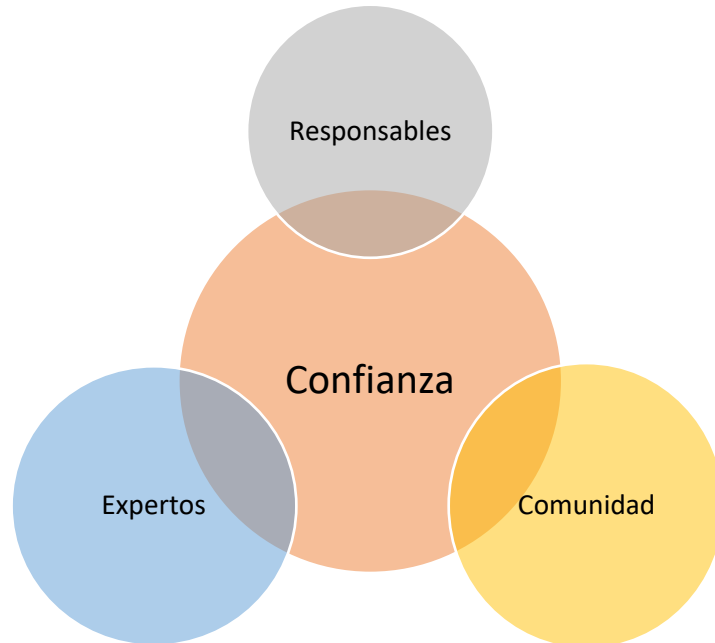


Sistema Nacional de Vigilancia de Salud (SNVS)
Todos los niveles analizan y comparten información



Comunicación de riesgo en epidemiología

Intercambio **en tiempo real**, de información, recomendaciones y opiniones, entre expertos y/o funcionarios y personas que se enfrentan a una amenaza (riesgo) para su sobrevivencia, su salud o su bienestar económico o social.⁽¹⁾



→ ***Comunicar en forma rápida y frecuente***

→ ***Comunicar aún en medio de la incertidumbre***

→ ***Comunicar con transparencia***

(1) Organización Mundial de la Salud. Comunicación de riesgos y brotes.



Detener la infodemia

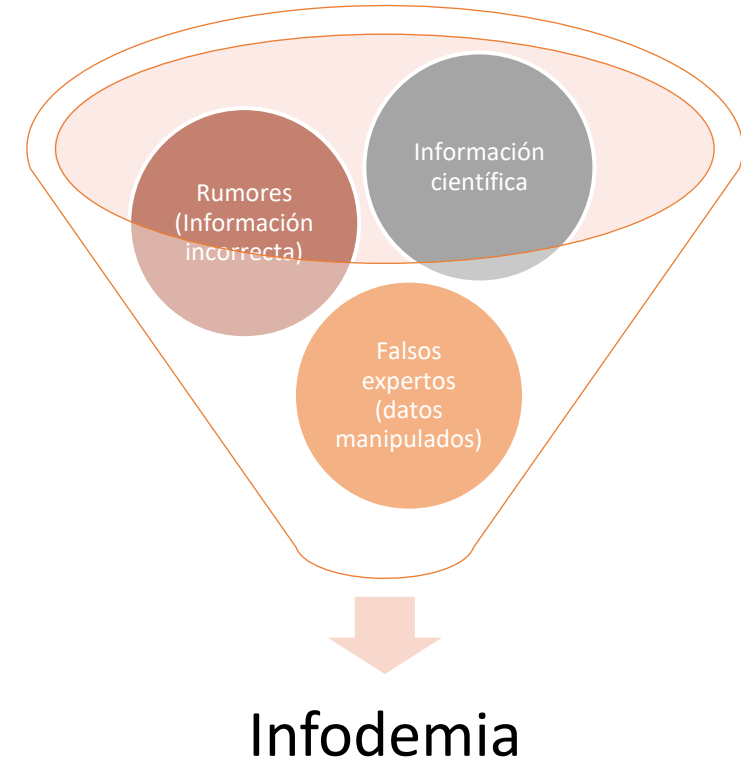


Editorial

Infodemia en tiempos de COVID-19

Sebastián García-Saisó¹, Myrna Martí¹, Ian Brooks², Walter H. Curioso³, Diego González⁴, Victoria Malek¹, Felipe Mejía Medina¹, Carlene Radix⁵, Daniel Otzoy⁶, Soraya Zacarías⁷, Eliane Pereira dos Santos¹ y Marcelo D'Agostino¹

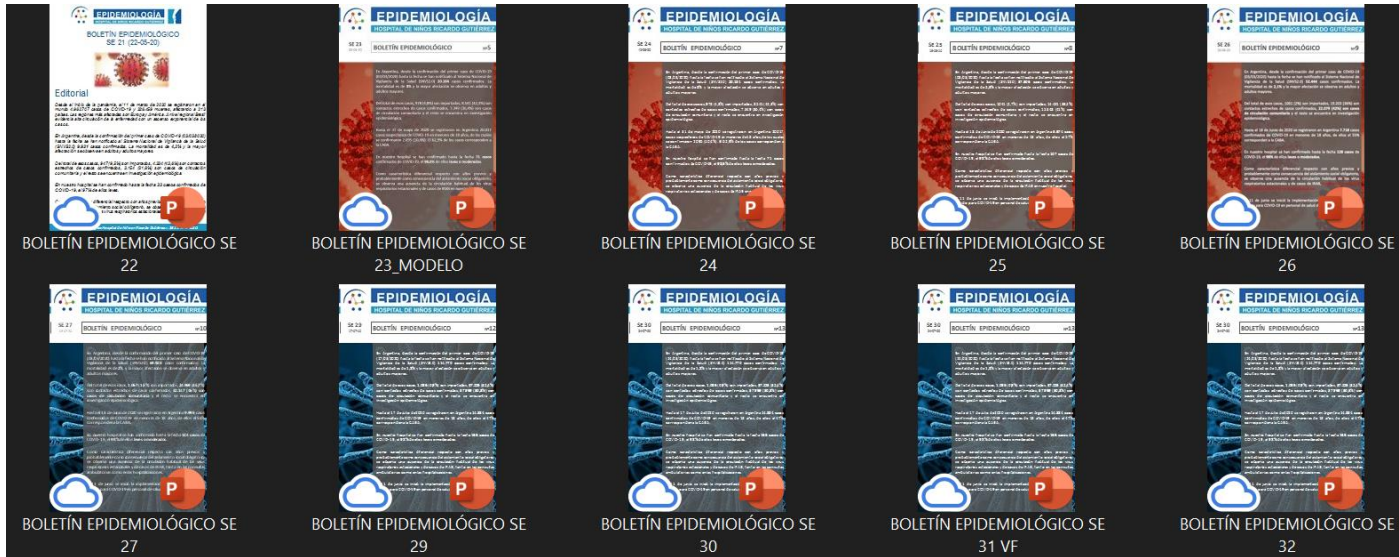
“**exceso de información (veraz o no)** que dificulta que las personas accedan a aquella proveniente de fuentes fiables y obtengan orientaciones válidas en momentos en que se hace más necesario para la toma de decisiones.” (1)



(1) Organización Panamericana de la Salud. Disponible en: <https://www.paho.org/journal/es/articulos/infodemia-tiempos-covid-19>



Comunicación de riesgo en epidemiología



El aislamiento nos cambió la forma de comunicar:

- Virtualidad
- Vértigo de los cambios
- Infodemia
- Temor





Generación de información propia

COVID-19

Situación mundial

- 129.281 nuevos casos
- 6.515.796 casos acumulados
- 387.208 muertes acumuladas

«La región de las Américas continúa siendo la más afectada.»

Situación regional

«En América del Sur se registra el 30% de los casos de toda América.»

Personal de salud

- Desde el 05/06 a la fecha se notificaron a la División Promoción y Protección de la Salud un total de 34 casos de COVID-19 en personal de salud de nuestro hospital.
- Se cumplió con el protocolo de aislamiento de COVID-19 en 9 de los 34 casos:
 - Instrucciones asistenciales entre HNRG: 6
 - HNRG: 2
 - Donación: 1
- En dos casos no se pudo identificar al nuevo epidemiológico y tres continúan en investigación.

Uso de EPP

Se recuerda a toda la comunidad hospitalaria que el uso de barbijo quirúrgico y protección ocular es obligatorio para la asistencia de cualquier paciente en cualquier ámbito del hospital.

COVID-19

Situación nacional

- 20.354 positivos en el país.
- 3.077 de 19 años (15%)
- 7.349 (36,4%) son casos de circulación comunitaria
- 608 casos fallecidos

«La mayor carga de enfermedad se registra en los adultos entre 20-50 años.»

«Los mayores de 70 años en el grupo de mayor mortalidad.»

Organización HNRG

- Manejo de pacientes con COVID 19 confirmados
 - Pacientes mayores de un año con cuadro clínico leve y sin factores de riesgo serán derivados a unidades de aislamiento extrahospitalario (hoteles) y su traslado coordinado desde la UPU o Unidad de Internación.
 - Pacientes menores de un año con cuadro clínico leve o pacientes moderados serán internados en el Hospital en la Unidad 7
 - Pacientes graves se internarán en aislamiento de UTP.
- Accesos al Hospital
 - PERSONAL DEL HOSPITAL
 - Ingreso puntual por Gallo 1330 (con barbijo quirúrgico, a ser utilizado durante toda la jornada laboral).
 - PRECINTES
 - Ingreso al Hospital por la entrada principal de Síndex de Bustamante 1330, en la parte alta de la escuela, encuentro personal médico (TRAGAJE) que le informará hacia dónde dirigirse conforme los signos/síntomas de consulta.
 - Los pacientes inmunocomprometidos ingresarán TODOS por Calle Mansilla 2120 (Consultorio y Hospital de Día de Infectología):
 - para CONTROL Clínico y de Laboratorio en Oncología y Hematología
 - por CONSULTA CON INFECTOLOGÍA, si presenta síntomas compatibles con Caso Sospechoso
 - Horario de Atención: de Lunes a Viernes de 07:00 a 15:00 hs.
 - AMBULANCIAS
 - Por Síndex de Bustamante: con pacientes para UTI, Guardia u otro sector del Hospital
 - Por Gallo 1330 con Sospechoso o Con
 - Por Mansilla 2120

Situación epidemiológica HNRG

Casos de IRAG hospitalizados entre SE 1-22. Años 2019-2020. HNRG

Casos de IRAG hospitalizados según recuento viral entre SE 1-22. Años 2019-2020. HNRG

Casos de IRAG hospitalizados según recuento viral entre SE 1-22. Años 2019-2020. HNRG

Casos confirmados y descartados de COVID-19 en el HNRG. Año 2020

«Entre el 08 de mayo y el 02 de junio se notificaron 580 casos sospechosos de los cuales se confirmaron 71 (12,4%). El 83,6% de los casos confirmados fueron leves o moderados: con edades entre 6 meses y 17 años.»

«Se registró un caso grave (estado crítico) con buena evolución clínica.»

«El 100% tenía contacto estrecho con otro que confirmó el diagnóstico.»

«De los 71 casos confirmados, 45 están internados actualmente.»

«La circulación viral durante el año 2020 muestra características diferentes respecto al año 2019:»

- En 2020 hasta el 02-11 se observaron casos de IRAG por parainfluenza y adenovirus.

Contexto epidemiológico

Situación HNRG

Organización

Prevención

[HNRG] - Boletín Epidemiológico SE 02-2023

Hospital de Niños Ricardo Gutiérrez info@guti.gov.ar a través de gmail.mcsv.net

mar, 10 ene, 16:45

HOSPITAL DE NIÑOS RICARDO GUTIÉRREZ

Enviarnos el Boletín de la Semana Epidemiológica 02 del año 2023

A partir del 2021 se verificó nuevamente la circulación de otros virus

Retwitteaste

Daniel Montero @ndanmontero · 24 may.

El perfil de circulación viral en pacientes ambulatorios muestra en primer lugar VSR seguido por Influenza A y Rhinovirus.

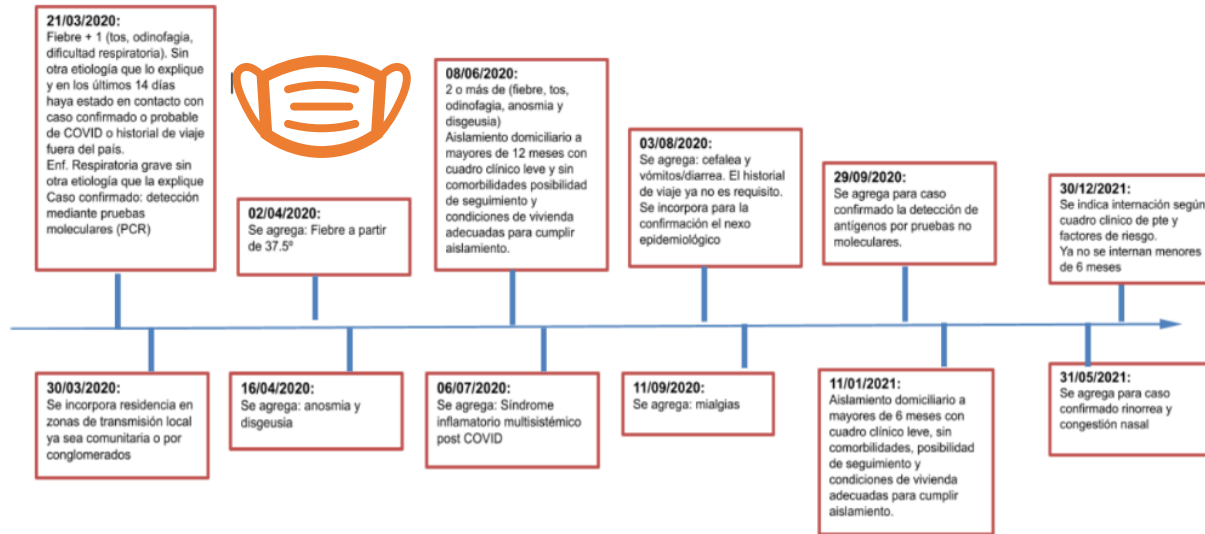
Epidemiología - HNRG - Buenos Aires - ARG

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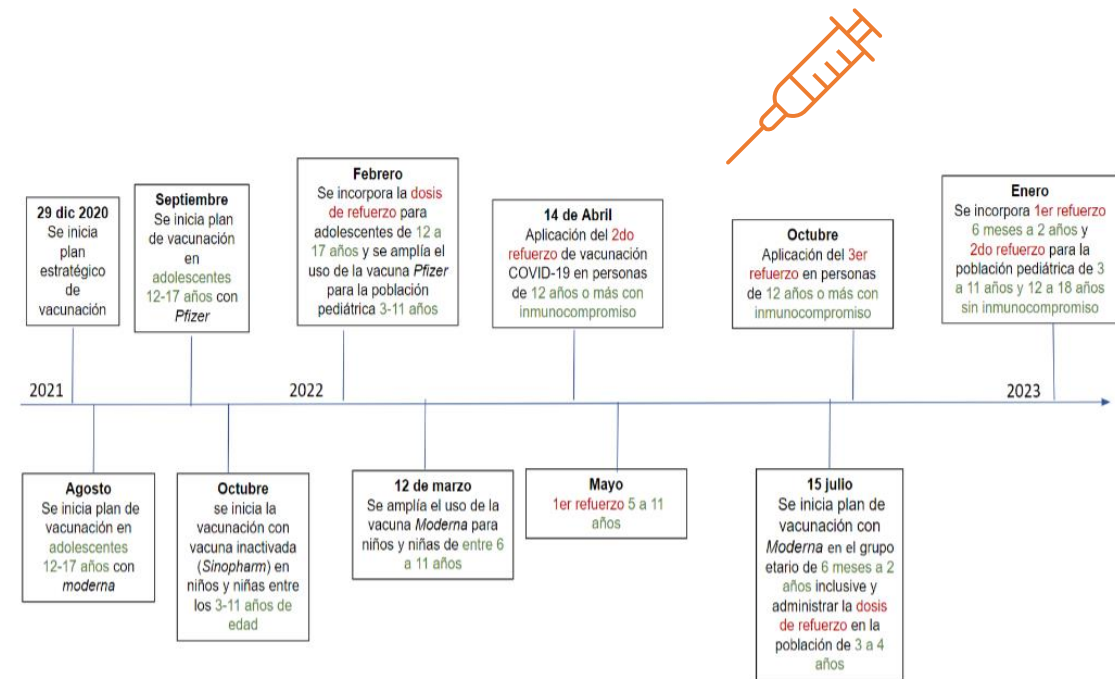


Comunicando cambios de protocolos o medidas de prevención



Cambios de los protocolos de vigilancia epidemiológica, ajustando sensibilidad y especificidad de las definiciones de acuerdo a la evolución de la pandemia.

Distintas etapas de vacunación con incorporación gradual de nuevas poblaciones objetivo y esquemas.





Vigilancia epidemiológica de virus respiratorios: ANTES

Original article

Arch Argent Pediatr 2020;118(6):386-392 / 386

Respiratory syncytial virus in preterm infants: 19 years of active epidemiological surveillance in a children's hospital

Ángela Gentile, M.D.^a, María F. Lucion, M.D.^a, María del Valle Juárez, M.D.^a, Vanesa Castellano, M.D.^a, Julia Bakir, M.D.^a, Anabella Pacchiotti, M.D.^a, María S. Areso, M.D.^a, Marianna Viegas, M.D.^a, Stephanie Goja, B.S.^a and Alicia Mistchenko, M.D.^{b,c}

ABSTRACT

Introduction. Respiratory syncytial virus (RSV) is the leading cause of acute lower respiratory tract infection (ALRTI) in pediatrics. Preterm infants are at a higher risk for complications. We aimed to describe and compare the clinical and epidemiological characteristics associated with ALRTI due to RSV in preterm and term infants and to establish the predictors of fatality among preterm infants.

Methods. Prospective, cross-sectional study of patients admitted due to ALRTI in the 2000-2018 period. Viral diagnosis was done by indirect immunofluorescence or reverse transcription polymerase chain reaction in nasopharyngeal aspirates. Clinical and epidemiological characteristics were recorded. A multiple logistic regression model established the predictors of fatality among preterm infants.

Results. A total of 14 018 ALRTI cases were included; 13 545 (84.6%) were tested; 6047 (45%) were positive; RSV was prevalent in 81.1% (4907), with a seasonal epidemic pattern; 14% (686) were preterm infants.

Comorbidities, perinatal respiratory history, congenital heart disease, malnutrition, chronic respiratory disease, bronchopulmonary dysplasia, prior hospitalization due to ALRTI, and chronic neurological disease ($p < 0.001$) were more common among preterm infants; they required more intensive care and a longer length of stay, and had a higher fatality rate ($p < 0.01$). Congenital heart disease was an independent predictor of fatality due to RSV among preterm infants (OR: 3.67 [1.25-10.8], $p = 0.01$).

Conclusion. RSV showed an epidemic pattern and affected more preterm infants with certain comorbidities, with a higher morbidity and mortality, compared to term infants. RSV fatality among preterm infants was associated with congenital heart disease.

Key words: respiratory tract infections, respiratory syncytial virus, preterm newborn infant, epidemiology.

<https://dx.doi.org/10.5546/aap.2020.eng.386>

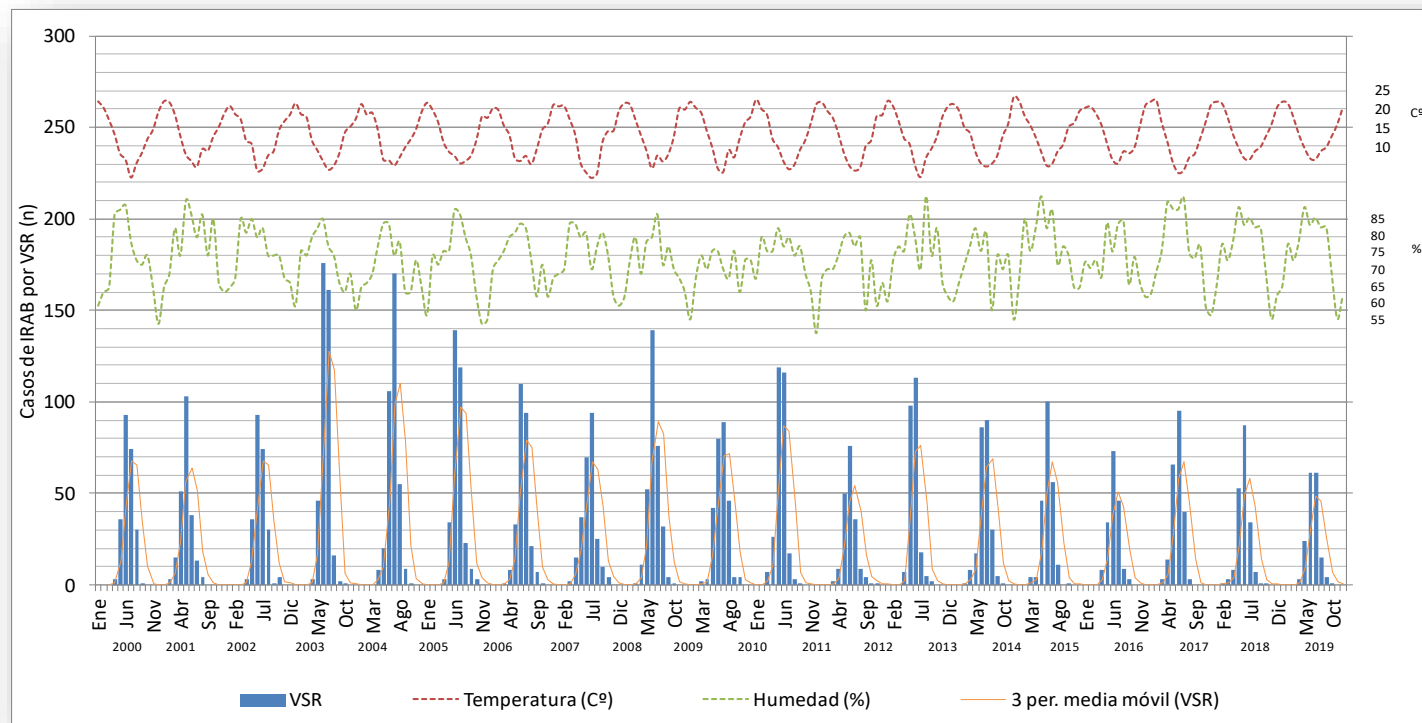
INTRODUCTION

Acute lower respiratory tract infections (ALRTIs) in children are one of the most common reasons for medical consultation, school absenteeism, complications, and pediatric hospitalization.^{1,2} In Argentina, respiratory diseases are the third cause of mortality in children younger than 5 years of age, after perinatal conditions and congenital malformations.^{3,4}

Respiratory syncytial virus (RSV) is the main cause of bronchiolitis and pneumonia among infants and children worldwide.⁵ On the one side, most previously healthy infants who experience an ALRTI due to RSV do not require hospitalization or, if they do, it is for a brief period of time (less than 5 days).^{2,5} On the other side, some pediatric populations have a high risk for severe RSV disease, such as preterm infants and those diagnosed with bronchopulmonary dysplasia, congenital heart disease with hemodynamic compromise, neuromuscular disease, and certain conditions involving immune deficiency.^{2,6-8}

Hospitalization rates are high among children younger than 5 years old, but they are even higher among infants under 6 months and preterm infants under 1 year.⁹ So far, there is no available antiviral therapy or effective vaccine approved for its prevention.

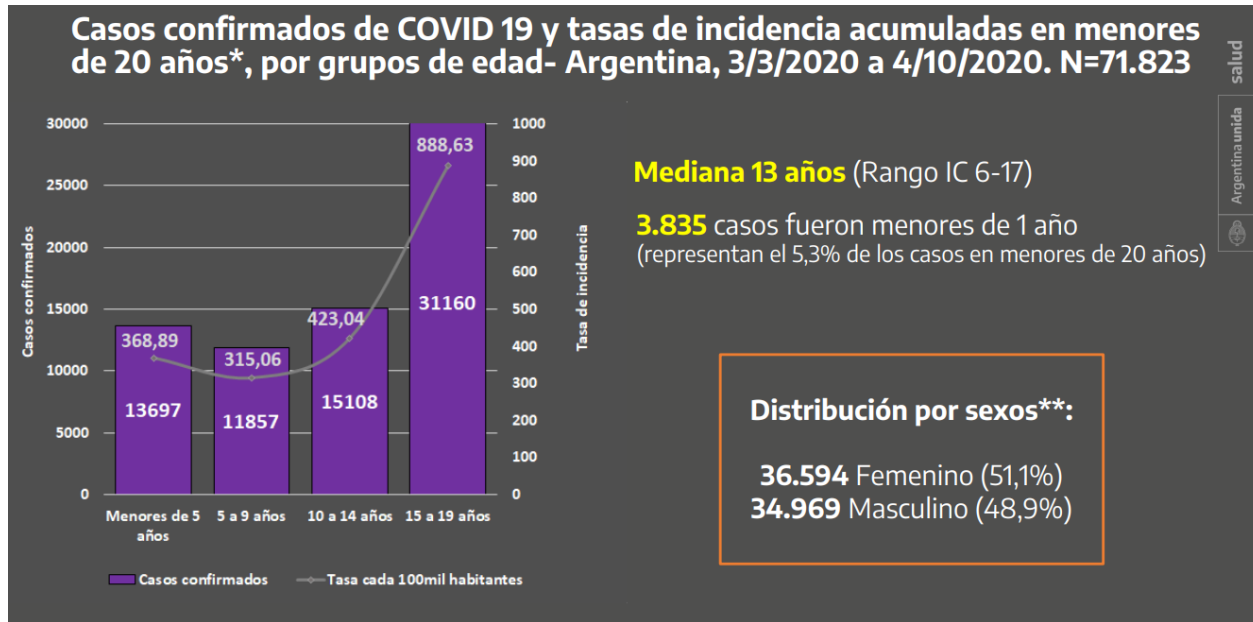
The assessment of the risk for morbidity and mortality among preterm infants is considerably relevant for a timely decision-making in relation to prevention, early diagnosis, and adequate



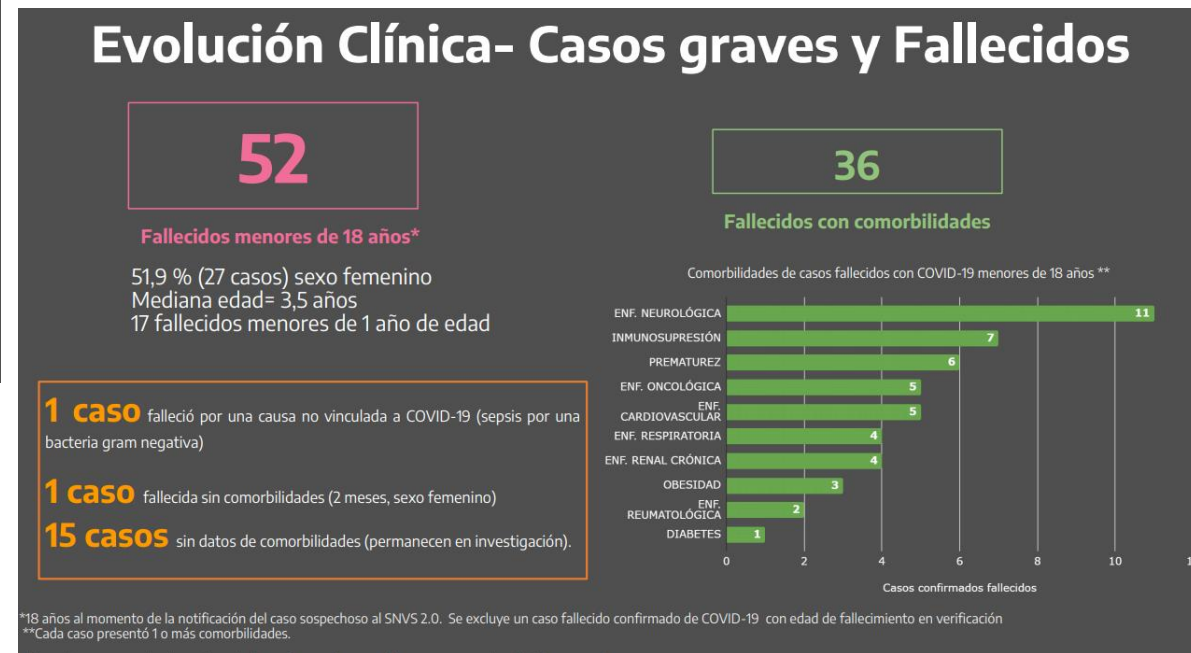
- ✓ Estacionalidad de la circulación de virus respiratorios.
- ✓ Análisis ecológico de relación con cambios climáticos.
- ✓ Carga de enfermedad y letalidad



Vigilancia epidemiológica de virus respiratorios: DURANTE



La vigilancia epidemiológica universal debido a la incorporación del SARS-CoV-2 como evento de notificación obligatoria permitía conocer el perfil general de la enfermedad





Vigilancia epidemiológica de virus respiratorios: DURANTE

Original article

Arch Argent Pediatr 2022;120(2):80-88 / 80

A multicenter study of confirmed COVID-19 cases: preliminary data of 2690 pediatric patients in Argentina during the first year of the pandemic

Ángela Gentile¹, María del Valle Juárez², Lucía Romero Bollón³, Aldo D. Cancellaro⁴, Marina Pasinovich⁵, Martín Brizuela⁶, Cristina Euliar⁷, Gabriela N. Ensinck⁸, Carola Russ⁹, Lilianna Saraceni¹⁰, Gabriela Tappone¹¹, Susana Villa Novati¹², Andrea Falaschi¹³, Analía Garnero¹⁴, Pablo Melonari¹⁵, Luciana Bellone¹⁶, Alejandra Gámano¹⁷, Víctor Pebe Floriani¹⁸, Elizabeth Bogdanowicz¹⁹, M. Soledad Areso²⁰, COVID-19 Pediatric Network²¹

ABSTRACT The current evidence indicates that the severity of the coronavirus disease 2019 (COVID-19) is lower in the pediatric population but local data are still limited. Objective: To characterize the clinical and epidemiological aspects of COVID-19 infection in patients younger than 18 years in Argentina. **Population and methods.** Cross-sectional, observational, and analytical study of confirmed COVID-19 patients aged 0-18 years seen between March 2020 and March 2021 at 19 referral children's hospitals of Argentina. A multivariate analysis was done to identify predictors of severe cases. **Results.** A total of 2690 COVID-19 cases were included; 77.7% lived in the Metropolitan Area of Buenos Aires; 50.1% were males; patients' median age was 5.6 years. Of them, 90% were seen during epidemiological weeks 20-47 of 2020; 60.4% had a history of contact with COVID-19 patients, and 96.6% in their family setting. Also, 51.4% had respiratory symptoms; 61.6%, general symptoms; 18.8%, gastrointestinal symptoms; 17.1%, neurological symptoms; 7.2%, other symptoms; and 21.5% were asymptomatic. In addition, 59.4% of patients were hospitalized and 7.4% had a severe or critical course. A

total of 57 patients developed multisystem inflammatory syndrome. A history of asthma, bronchopulmonary dysplasia, congenital heart disease, moderate to severe malnutrition, obesity, chronic neurological disease and/or age younger than 6 months were independent predictors of severity. Living in a vulnerable neighborhood was a protective factor. **Conclusions.** More than half of cases referred a history of contact with COVID-19 patients in the family setting. Hospitalization was not based on clinical criteria of severity. Severity was associated with the presence of certain comorbidities. **Key words:** coronavirus infections, COVID-19, child, multisystem inflammatory syndrome in children.

<http://dx.doi.org/10.5546/aap.2022.eng.80>

To cite: Gentile Á, Juárez MV, Romero Bollón L, Cancellaro AD, et al. A multicenter study of confirmed COVID-19 cases: preliminary data of 2690 pediatric patients in Argentina during the first year of the pandemic. Arch Argent Pediatr 2022;120(2):80-88.

E-mail address: angelagentile21@gmail.com

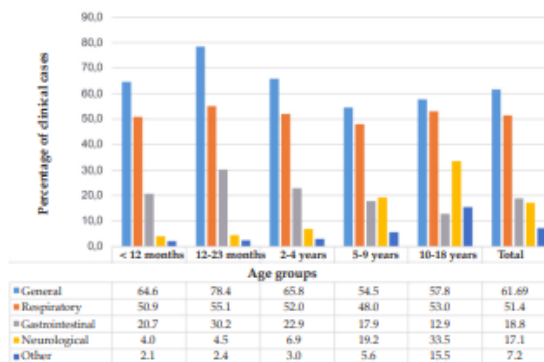
Funding: This study was conducted in the setting of a research grant awarded and funded by the Sociedad Argentina de Pediatría.

Conflict of interest: None.

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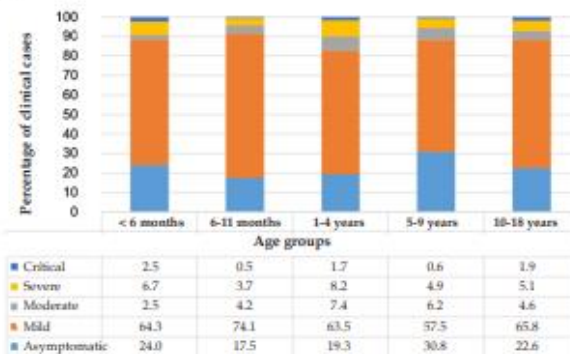
COVID-19 Pediatric Network:
Ma. Florencia Lucion, M.D.; Claudia Ferrario, M.D.; Norma Schenone, M.D.; Verónica Kozicki, M.D.; Evangelina Zabimendi, M.D.; María de los Angeles Aunburg, M.D.; Daniel Giansiracusa, M.D.; M. Mercedes Gil, M.D.; M. Agustina Chaplin, M.D.; Silvina Pedemonte, M.D.; Carola Bayle, M.D.; Valeria Nicela, M.D.; Graciela Suárez, M.D.; Miyuki Takata, M.D.; Lorena Galasso, B.S.; Leonardo Manina, M.D.; Eugenia Martínez, M.D.; Karina Rodríguez, M.D.; M. Shirley Gareis, M.D.; Andrés Gomila, M.D.; Lilianna Lima, M.D.; Verónica Del Negro, M.D.; Constanza Lavric, M.D.; Leila Menta, M.D.; Belén Hunter, M.D.; Karina Blanco, M.D.; Diego Ripenu, M.D.; Néstor Abramovich, M.D. and M. Laura Verdier, M.D.

FIGURE 3. Clinical presentation profile of confirmed COVID-19 cases by age group (n = 2690)



Note: Some cases had more than one presenting sign or symptom. Symptoms:

FIGURE 4. Distribution of confirmed COVID-19 cases who were hospitalized based on final classification upon discharge, by age group (n = 1542)



El análisis de los datos locales a través de la vigilancia activa en 19 centros de referencia del país permitió describir el perfil clínico epidemiológico de la enfermedad en la población pediátrica.



Vigilancia epidemiológica de virus respiratorios: DURANTE

COVID REPORTS

COVID-19 in Children

Correlation Between Epidemiologic, Clinical Characteristics, and RT-qPCR Cycle Threshold Values

Angela Gentile, MD,* Maria del Valle Juarez, MD,* Maria Florencia Lucion, MD,* Maria Natalia Pejito, MD,* Sofia Alexay, PhD,† Ana Sofia Orqueda MD,* Lucia Romero Bollon, MD,* and Alicia Mistchenko, PhD†

Background: Initially, the impact of SARS-CoV-2 infection on children was unknown. Standard COVID-19 diagnosis is confirmed using real-time qPCR. Cycle threshold (Ct) values of RT-qPCR are inversely proportional to viral load and the test indirectly quantifies viral RNA copy numbers. The objective of this study was to determine the correlation between epidemiologic, clinical characteristics, severity of confirmed COVID-19 cases, and Ct values.

Methods: An observational, analytical, cross-sectional study. All children with COVID-19 under 18 years old admitted to the Ricardo Gutiérrez Children's Hospital between March 1, 2020, and February 28, 2021, were included. SARS-CoV-2 infection was confirmed using RT-qPCR.

Results: Median age of patients was 7 years. Ct values were estimated in 419 cases, median Ct value was 23.5 (interquartile range [IQR]: 18.8–30.9). Levels were significantly lower in symptomatic than asymptomatic patients (Ct: 22.1, IQR: 18.4–22.1), in children <2 years of age (Ct: 20.6, IQR: 17.3–27.3) and when sample collection was <4 days after symptom onset (Ct: 21.1, IQR: 18.1–27.5). In children >2 years of age, Ct values were significantly lower in symptomatic (Ct: 22.6, IQR: 18.7–29.3) than asymptomatic (Ct: 31.2, IQR: 24.5–33.3) patients.

Conclusions: Children younger than 2 years with COVID-19 have lower values of Ct—as a proxy for higher viral load—than older children. Symptomatic children over 2 years of age had lower Ct values compared with asymptomatic children.

Key Words: SARS-CoV-2, COVID-19, children, cycle threshold value, viral load

(*Pediatr Infect Dis J* 2022;41:666–670)

The novel severe acute respiratory syndrome, COVID-19, caused by coronavirus-2 (SARS-CoV-2) was first reported in December 2019 in a group of patients in Wuhan, China.^{1,2} Three months later, WHO declared COVID-19 a pandemic, leading to an unprecedented global public health emergency because of the high speed of transmission, wide spectrum of clinical presentation in all age groups and high mortality rates in adults.³

Initially, containment measures focused on case detection and isolation, and quarantine of contacts.⁴ Whole genome sequencing of SARS-CoV-2 enabled the development of a real-time reverse

transcription polymerase chain reaction (RT-qPCR) assay for the detection and quantification of viral load. This technique is now the standard for COVID-19 diagnosis. The assay detects different regions of the genes coding for: nucleocapsid (N); envelope (E); RNA-dependent RNA polymerase (RdRp); polyprotein (ORF1ab); and spike (S) proteins. Although most RT-qPCR kits are intended for qualitative detection of COVID-19 (results reported as “detected” or “not detected”), cycle threshold (Ct) values (number of amplification cycles required for fluorescent signal to exceed threshold level) can be used for a semiquantitative estimation of viral load.

Ct values are inversely proportional to viral load and provide an indirect quantification of viral RNA copy numbers in samples.⁵ Values are affected by preanalytical, analytic and postanalytical variables. Correct interpretation of these factors is crucial to estimate the correlation between viral load and disease severity. A systematic review of the clinical utility of cycle threshold values have suggested that Ct values are useful to predict clinical outcome of COVID-19 patients.⁶

Another important factor is the time interval between the onset of symptoms and the date of sample collection. The diagnosis protocol in Argentina did not establish a time limit to perform the RT-PCR test, although it is known that in the beginning of the pandemic, the isolation period was 10–14 days.⁷ At the onset of the pandemic, adults were more severely affected than children and information regarding the impact of disease in children was scarce. This brought about long periods of confinement and lockdown of schools generating major psychologic and socioemotional consequences. Understanding COVID-19 behavior in children is crucial.

The objective of this study was to assess the correlation between epidemiologic, clinical features, and severity of COVID-19 in children and Ct values as estimates of viral load.

MATERIALS AND METHODS

This was a cross-sectional, observational and analytical study. All children under 18 years of age with a confirmed diagnosis of COVID-19, who assisted to the Ricardo Gutiérrez Children's Hospital between March 1, 2020 and February 28, 2021, and in whom a semiquantitative estimate of viral load was performed in our laboratory were included.

Patients were defined as a symptomatic COVID-19 when they met 2 or more of the following symptoms according to the Argentine Ministry of Health protocols: fever, cough, runny nose, odynophagia, diarrhea/vomiting, respiratory distress, anosmia, dysgeusia, myalgia, headache; or as asymptomatic if close contact with a laboratory confirmed COVID-19 case was reported.

A case report form was designed for epidemiologic and clinical data collection. This included: date of symptom onset as well as of consult or hospitalization, patient demographics, diagnosis at admission, time since symptom onset or contact with a

TABLE 2. Comparison of Ct Values According To Age, Presence of Symptoms, Disease Severity and Time From Symptom Onset to Sample Collection

Variables	Categories	n	Ct Value (Median)	Ct Value (IQR)	P
Age (y)	<2	106	20.6	17.3–27.3	<0.001
	2–4	62	23.8	20.3–31.4	
	5–9	90	24.4	18.8–30.9	
	>10	161	24.5	19.8–31.8	
	Asymptomatic	105	29.0	23.5–32.9	
Presence of symptoms	Symptomatic	314	22.1	18.4–22.1	<0.001
	Asymptomatic	105	29.0	23.5–32.9	
Severity	Mild	296	21.8	18.4–28.5	<0.001
	Moderate	7	27.3	24.2–33.1	
	Severe	7	28.0	17.8–32.3	
	Critical	4	22.2	19.6–27.4	
Time from onset of symptoms to sample collection (d)	<4	257	21.1	18.1–27.5	<0.001
	≥4	57	26.3	21.9–32.7	

The bold refers to statistical significance between groups.

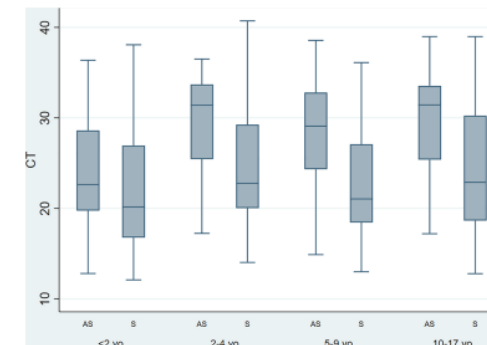


FIGURE 5. Comparison of Ct values according to symptoms in different age groups. Median is represented as a solid line, interquartile ranges are depicted by boxes, upper and lower adjacent values are represented by whiskers and outliers are represented by isolated points. yo, years old; AS, asymptomatic; S, symptomatic. [full color on line](#)

- ✓ Responder a la incertidumbre sobre el rol de la población pediátrica en la transmisibilidad.
- ✓ Utilizar el dato de Ct como proxy de la carga viral.
- ✓ Informar que los menores de 2 años y sintomáticos era la población con mayor carga viral.

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From the *Epidemiology, Ricardo Gutiérrez Children's Hospital, Buenos Aires, Argentina; and †Virology, Ricardo Gutiérrez Children's Hospital, Buenos Aires, Argentina.
The authors have no funding or conflicts of interest to disclose.
Address for correspondence: Angela Gentile, Ricardo Gutiérrez Children's Hospital, Gallo 1330 (1425) Buenos Aires City, Argentina. E-mail: angelag@ricg.org.ar
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Vigilancia epidemiológica de virus respiratorios: DURANTE

COVID REPORTS

Comparison of Epidemiologic and Clinical COVID-19 Profiles in Children in Argentina, During Circulation of Original and Variant (Alpha, Gamma and Lambda) Strains

Angela Gentile¹, MD,* María Del Valle Juárez², MD,† Lucía Romero Bollón³, MD,‡
Valeria Aprea⁴, MD,§ Erika Matteucci⁵, MD,* Andrea Falaschi⁶, MD,† Martín Brizuela⁷, MD,**
Cristina Euliarte⁸, MD,†† Gabriela Gregorio⁹, MD,‡‡ María Paula Della Latta¹⁰, MD,§§
Carlota Russ¹¹, MD,¶¶ Gabriela Nidia Ensínck¹², MD,|| Lilliana Saraceni¹³, MD,***
Miriam Bruno¹⁴, MD,††† Analía Garnera¹⁵, MD,‡‡‡ Laura Cohen Arazi¹⁶, MD,§§§ Pablo Melonari¹⁷, MD,¶¶¶
Victor Pebe Florian¹⁸, MD,||| Elizabeth Bogdanowicz¹⁹, MD,**** Alejandra Gaiano²⁰, MD,††††
Luciana Bellone²¹, MD,‡‡‡† and María Soledad Areso²², MD,§§§§ on behalf of the COVID-19 Pediatric Network*

Background: Information on the impact of the different variants in children in Latin America is scarce. The objective of this study was to describe epidemiologic and clinical features of COVID-19 infection in children under 18 years of age in Argentina, comparing the periods before and after the circulation of new variants.
Methods: Observational, cross-sectional, multicentric, analytical study. All patients under 18 years of age with confirmed SARS-CoV-2 infection

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¹Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ²Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ³Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ⁴Hospital de Niños Pedro de Elizalde, Ciudad Autónoma de Buenos Aires, Argentina; ⁵Hospital de Niños Pedro de Elizalde, Ciudad Autónoma de Buenos Aires, Argentina; ⁶Hospital de Niños Pedro de Elizalde, Ciudad Autónoma de Buenos Aires, Argentina; ⁷Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ⁸Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ⁹Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ¹⁰Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ¹¹Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ¹²Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ¹³Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ¹⁴Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ¹⁵Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ¹⁶Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ¹⁷Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ¹⁸Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ¹⁹Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ²⁰Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ²¹Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina; ²²Hospital de Niños Ricardo Gutiérrez, Ciudad Autónoma de Buenos Aires, Argentina.

There are no conflicts of interest.
Address for Correspondence: Angela Gentile, MD, Hospital de Niños Ricardo Gutiérrez, Gallo 1336, Ciudad Autónoma de Buenos Aires, Argentina.
E-mail: angelagentile21@gmail.com
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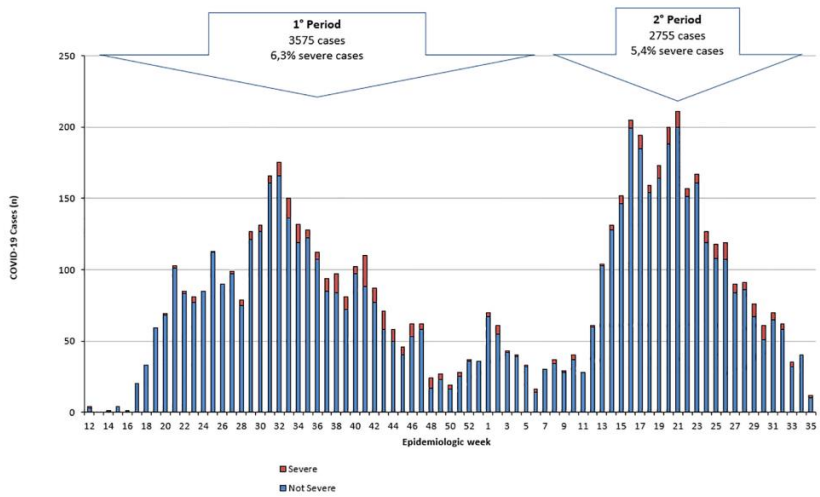
established: Period 1 (EW19-2020 to EW12-2021) for the Wuhan strain; Period 2 (EW13 to EW35 2021) for Alpha, Gamma, Delta and Lambda variants.
Findings: A total of 6330 confirmed cases were included. Period 1: 3575 (56.3%), period 2: 2755 (43.7%). During period 2, a lower number of asymptomatic cases was observed, while general, respiratory and neurologic signs and symptoms increased in all age groups. Oxygen therapy requirement was higher during the first period (36.7% vs 19.1%; $P < 0.001$). No significant differences were observed in the rates of severe or critical cases (6.3% vs 5.4%; $P = 0.102$), intensive care admission (2.1% vs 2%; $P = 0.656$) or case fatality (0.3% vs 0.5%; $P = 0.229$). MIS-C cases occurred more frequently during the first period (1.9% vs 1.1%; $P = 0.009$).
Interpretation: The clinical spectrum of COVID-19 in Argentina has evolved. With the emergence of new variants, although the number of asymptomatic cases declined, numbers of severe and critical cases, as well as case fatality rates in children, remained unchanged.
Key Words: SARS-CoV-2, COVID-19, children, variants.
(Pediatr Infect Dis J 2023;42:136-142)

INTRODUCTION
Since the beginning of the pandemic in March 2020, the spread of COVID-19, a severe acute respiratory syndrome caused by coronavirus type 2 (SARS-CoV-2), has had a significant impact on global health, as well as on society and the economy, worldwide.¹ In Argentina, the first case was reported on March 3, 2020, and by November 2021 over 5.2 million cases and 116 057 deaths had been recorded.^{1,2} Children under 18 years of age represented 8.5% of all confirmed cases and case fatality in this age group was estimated to be 0.06%.³
Although initial reports showed children and adolescents generally presented mild symptoms (15–35% asymptomatic), usually recovering within 1 to 2 weeks of disease onset,^{4,5} severe and acute COVID-19 cases requiring mechanical ventilation (0.14%) were also described,⁶ as well as a multisystem inflammatory syndrome (MIS-C), a rare but severe complication in children. Additionally, patients with comorbidities presented an increased risk of severe disease.⁷ In a prior study conducted in Argentina, a history of asthma, bronchopulmonary dysplasia, congenital heart disease, moderate to severe malnutrition, obesity and chronic neurologic conditions, were associated with greater disease severity.⁸
In December 2020, the World Health Organization (WHO) issued an alert regarding the circulation of new SARS-CoV-2 variants of interest, exhibiting improved transmission, increased severity and in some cases, potential to evade vaccine-induced immunity.

TABLE 2. Comparison of Clinical Presentation of COVID-19 Between Periods

Population	Symptoms	Period 1	Period 2	OR (95%CI)	p
Overall	Asymptomatic	18.8	8.5	2.5 (2.1–2.9)	<0.001
	General	62.0	69.9	0.7 (0.6–0.8)	<0.001
	Respiratory	51.5	63.5	0.6 (0.5–0.7)	<0.001
	Gastrointestinal	22.0	19.7	1.1 (1.01–1.3)	0.02
	Neurologic	17.7	33.2	0.4 (0.3–0.5)	<0.001
	Others	7.2	9.9	0.7 (0.6–0.8)	<0.001

Note: Some cases had more than one sign or symptom. Symptom reference: • General: fever, malaise and myalgias. • Respiratory: cough, sore throat, runny nose and shortness of breath. • Gastrointestinal: vomiting, nausea, diarrhea and abdominal pain. • Neurologic: headache and seizures. • Others: anosmia, dysgeusia and non-specific rash.



- ✓ Comparación del perfil clínico con la introducción de nuevas variantes del virus SARS-CoV-2.
- ✓ Disminución de la proporción de casos asintomáticos.
- ✓ Mantenimiento de la severidad en 5%.





Vigilancia epidemiológica de virus respiratorios: DURANTE

Original article

Arch Argent Pediatr 2022;120(2):99-105 / 99

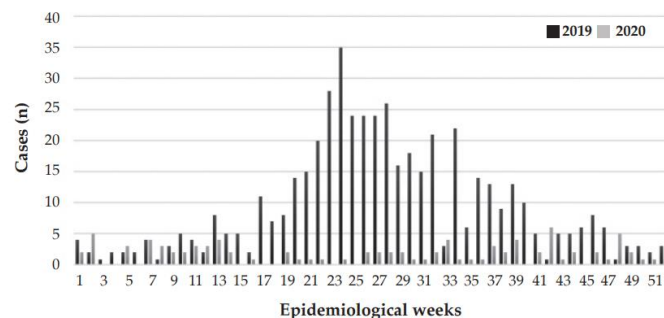
Impact of COVID-19 on the circulation of respiratory viruses in a children's hospital: an expected absence

M. Florencia Lucion^a, M. del Valle Juárez^a, M. Natalia Pejito^a, Ana S. Orqueda^a, Lucía Romero Bollón^a, Alicia S. Mistchenko^a, Ángela Gentile^a

ABSTRACT
Introduction. Respiratory viruses are the main cause of acute lower respiratory tract infection (ALRTI) in the pediatric population.

INTRODUCTION
Acute respiratory tract infections are the main cause of morbidity and

FIGURE 1. Distribution of cases of acute lower respiratory tract infection hospitalized at Hospital de Niños Ricardo Gutiérrez during 2019 and 2020



Bruchkiddis, COVID-19 epidemiological surveillance. <http://dx.doi.org/10.5546/aap.2022.eng.99>

Children with SARS-CoV-2 usually have short, mild symptoms, and 15-35% may be asymptomatic. Most have a documented family contact, who usually develops symptoms before them.⁷

In our country, since the onset of the pandemic until June 12th, 2021, more than 400 000 cases had been confirmed in individuals younger than 20 years, which account for 10% of all confirmed cases in Argentina. The median age of confirmed

Reducción de 73% de las IRAB en 2020

a. Department of Epidemiology, Hospital de Niños Ricardo Gutiérrez, Autonomous City of Buenos Aires, Argentina.
b. Research Council of the province of Buenos Aires, Argentina.
E-mail address: M. Florencia Lucion: flucion@yahoo.com
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Brief report

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Respiratory syncytial virus and influenza surveillance in schoolchildren seen at a children's hospital over 2 months of the second semester of 2021

Ana S. Orqueda^a, María F. Lucion^a, María del V. Juárez^a, Raquel Barquez^a, Patricia Stach^a, Ana Nieves^a, Luisina F. Losi^a, Ramiro F. Suárez^a, Lucía Romero Bollón^a, María N. Pejito^a, Alicia S. Mistchenko^a, Ángela Gentile^a

ABSTRACT
Introduction. Reporting of respiratory infections reduced during the COVID-19 pandemic. The objective was to estimate the prevalence of respiratory syncytial virus (RSV) and influenza in schoolchildren seen at a children's hospital during the return to school.

Methods. Cross-sectional study of patients aged 3-18 years suspected of COVID-19 with a negative test for SARS-CoV-2 between August and October 2021. Participants were stratified by level of education. PCR was used to detect RSV and influenza.
Results. A total of 619 children were included: 234 in pre-school, 224 in primary and 161 in secondary school; 25.5% (158) tested positive for RSV (36.3% in the pre-school level versus 21% in primary and 16% in secondary school). Infection among adolescents was associated with school contact with symptomatic cases (OR 2.5; 95%CI 1-6.80; p = 0.04). No case of influenza was detected.

Conclusion. RSV was isolated in one fourth of the study population, with a higher frequency in pre-school; among adolescents, it was associated with school contact with symptomatic cases. No case of influenza was detected.
Key words: respiratory syncytial virus, respiratory infections, COVID-19, education, influenza.

<http://dx.doi.org/10.5546/aap.2022.eng.269>

Title: Orqueda A, Lucion MF, Juárez MV, Barquez R, et al. Respiratory syncytial virus and influenza surveillance in schoolchildren seen at a children's hospital over 2 months of the second semester of 2021. Arch Argent Pediatr 2022;120(4):269-273.

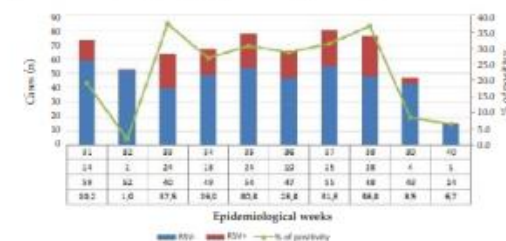
a. Department of Epidemiology, Hospital de Niños Ricardo Gutiérrez, City of Buenos Aires, Argentina.
b. Department of Virology, Hospital de Niños Ricardo Gutiérrez, City of Buenos Aires, Argentina.
c. Emergency Department, Hospital de Niños Ricardo Gutiérrez, City of Buenos Aires, Argentina.
d. Research Council of the province of Buenos Aires, Argentina.

E-mail address: Ana S. Orqueda: a_orqueda@yahoo.com.ar
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FIGURE 1. Percentage of positive results for respiratory syncytial virus by epidemiological week



INTRODUCTION
Acute respiratory infections leading cause of morbidity and pediatric respiratory viruses agents involved.¹ In March 2020, Health Organization declared the spread of severe acute respiratory coronavirus 2 (SARS-CoV-2), which were restricted and control measures strengthened, which affected the respiratory viruses worldwide.

During 2020 and 2021, influenza virus circulation remained below expectations across all regions of the world.² In South America, respiratory virus activity was also low, with the exception of SARS-CoV-2, which remained at moderate to high levels in all countries in the region.^{3,4} In Argentina, clinical reports of influenza-like illness, bronchitis, and pneumonia in 2021 were lower than in the same period of previous years.⁵

Active surveillance of acute lower respiratory tract infections (ALRTIs) is a critical tool for the rapid detection of any increase in the number of cases, the identification of high risk groups, and the determination of characteristics of disease causing microorganisms.⁶

At Hospital de Niños Ricardo Gutiérrez (HNRG), a completely atypical virus circulation pattern was observed during 2020, marked by the absence of cases of respiratory syncytial virus (RSV) and influenza (IF) infections, with isolated cases of ALRTIs caused by rhinovirus (RV), adenovirus (AV), and parainfluenza (PIF).⁷

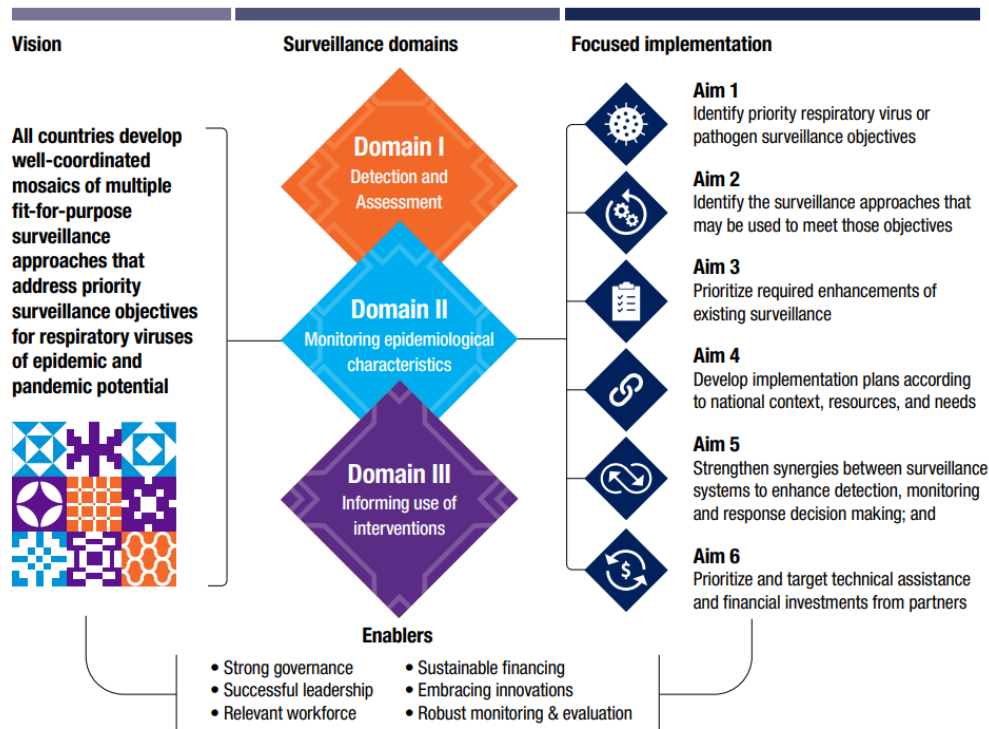
The objective of this study was to estimate the prevalence of RSV and IF in school children and adolescents seen at HNRG during 2 months of the second semester of 2021 in the context of the return to in-person activities.

Se incluyeron 619 niños: 234 del nivel inicial, 224 del primario y 161 del secundario; **25,5 %** (158) fueron positivos para **VSR (36,3 %** del nivel inicial versus **21 %** del primario y **16 %** del secundario); en adolescentes se asoció la infección al contacto escolar con caso sintomático. No se aisló influenza.



Propuesta de la OMS de vigilancia en la post-pandemia

MARCO “MOSAICO” PARA VIGILANCIA DE INFECCIONES RESPIRATORIAS



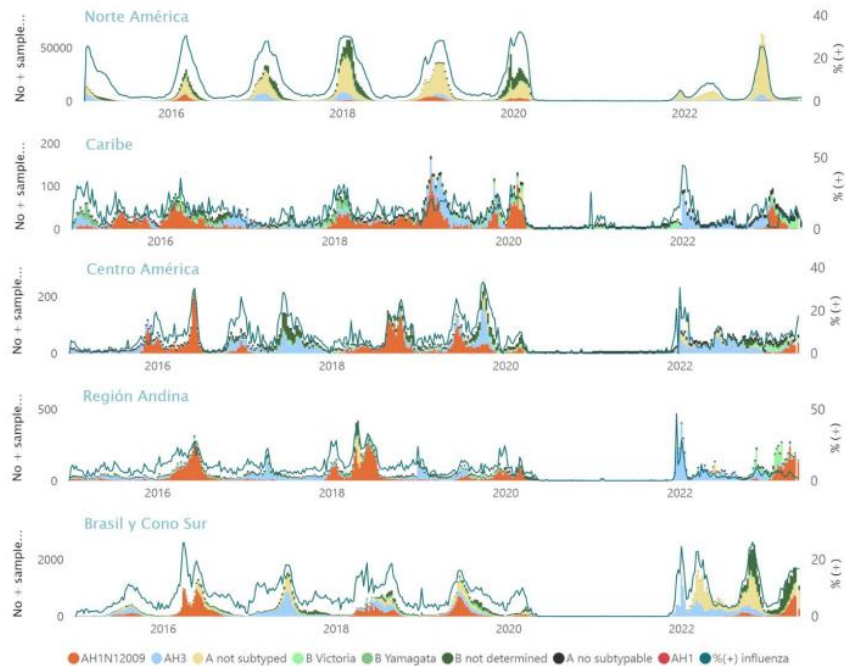
- Desarrollar **estrategias de vigilancia sostenibles** para monitorear la influenza, el SARS-CoV-2, el virus respiratorio sincicial (RSV) y otros virus respiratorios con potencial epidémico y pandémico.
- La expansión de la población, los patrones de viaje y el comercio global presentan un riesgo continuo de nuevas pandemias y una necesidad continua de fortalecer la vigilancia de **alerta temprana**.
- Para enfrentar estos desafíos, los países deben **aumentar la cantidad de enfoques de vigilancia efectivos** para abordar diversos objetivos de vigilancia.
- Abordar las necesidades complejas de la vigilancia de virus respiratorios es imposible con un solo sistema entonces se deben **ajustar los múltiples enfoques de vigilancia que deben encajar como mosaicos**.

Sistemas coordinados y colaborativos, bien adaptados a objetivos prioritarios específicos.

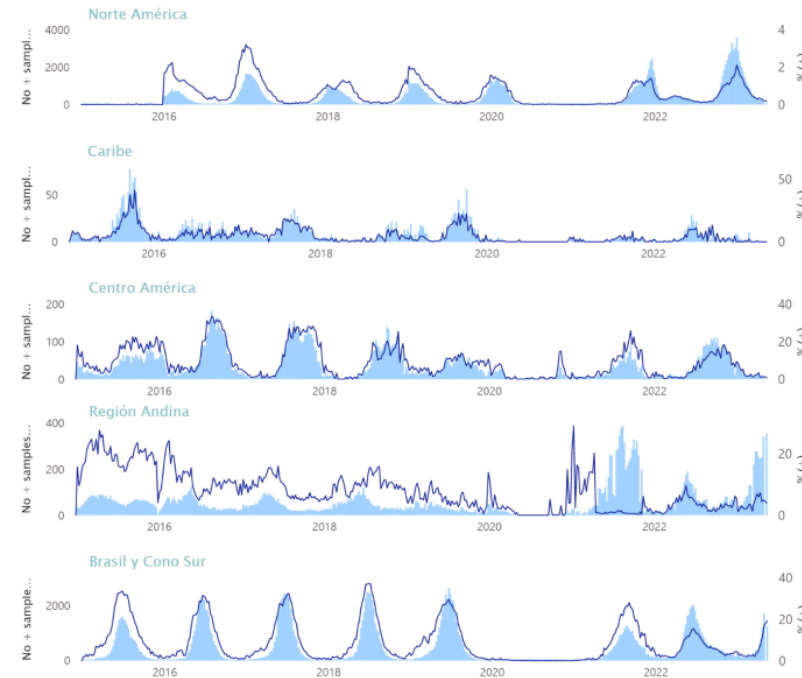


Vigilancia epidemiológica: DESPUES

Distribución del virus de la influenza y porcentaje de positividad por subregión, 2015-2023, Región de las Américas



Distribución del virus respiratorio sincitial y porcentaje de positividad por subregión, 2015-2023, Región de las Américas



- ✓ Sistema de vigilancia de virus respiratorios fortalecido.
- ✓ Circulación viral (influenza y VSR) atípica en la post-pandemia.
- ✓ Brotes de VSR de gran magnitud en el hemisferio norte.
- ✓ Curva bimodal de circulación de influenza.



Modelo de vigilancia en Argentina

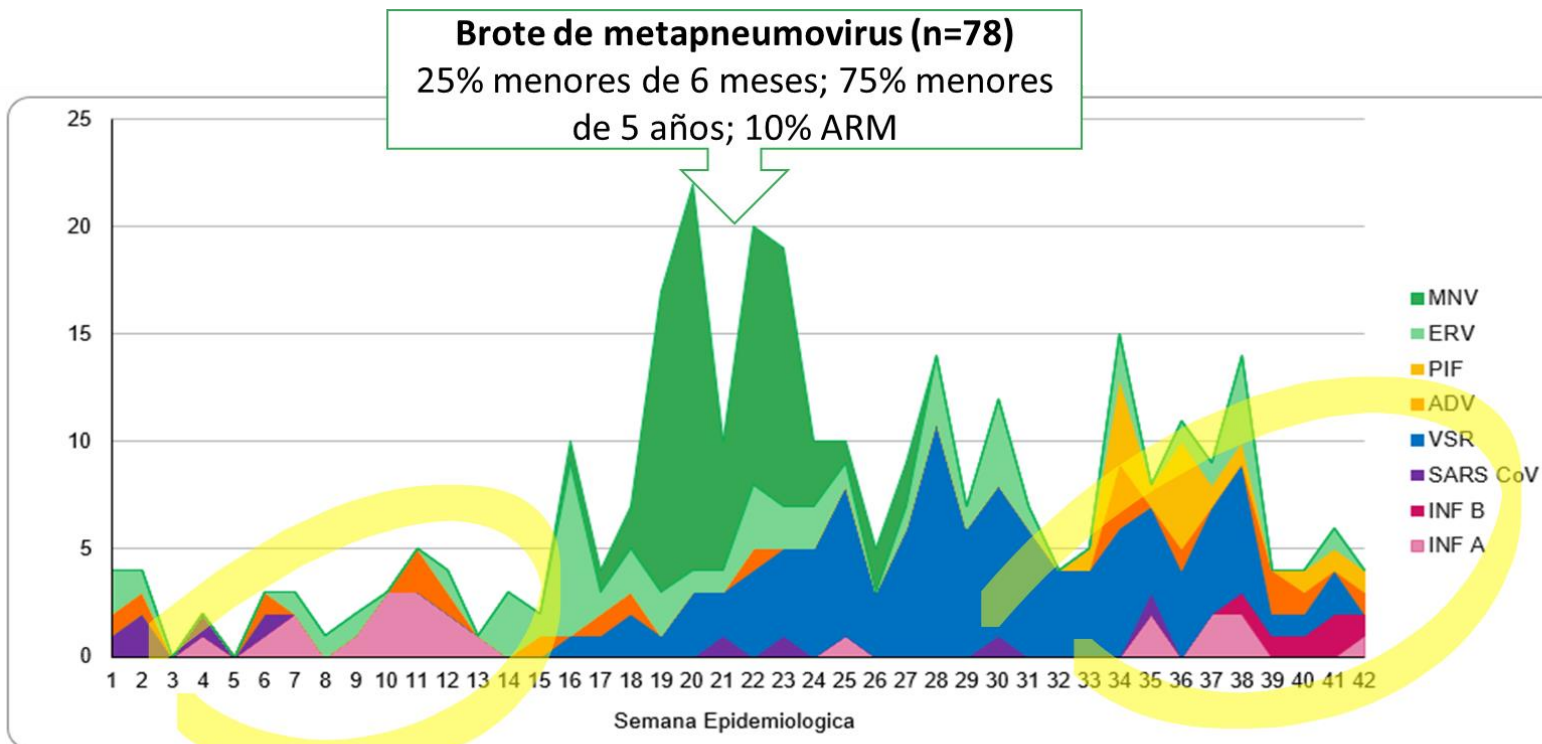
Componentes de la Estrategia de vigilancia de infecciones respiratorias agudas



Argentina está implementando desde abril de 2022 la **transición para el abordaje integrado de SARS-CoV-2 con otros virus respiratorios**, adecuando las recomendaciones y fortaleciendo el sistema de vigilancia e integrando SARS CoV-2 a la estrategia integrada con otros virus respiratorios (como influenza y virus sincial respiratorio).



Vigilancia epidemiológica de virus respiratorios: DESPUES



Brote inusual de Influenza A en verano

Circulación de Influenza A y B

Se hospitalizaron 448 pacientes menores de 18 años.

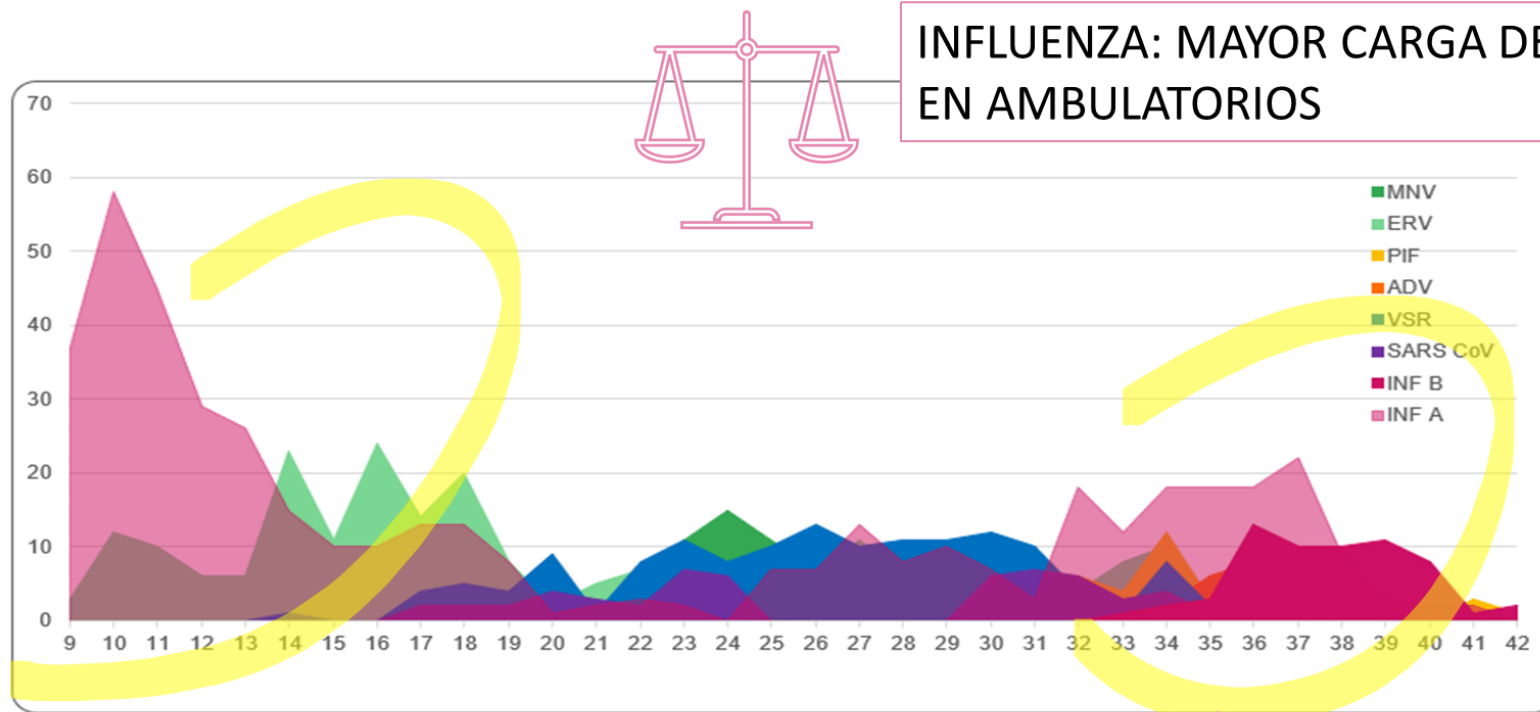
El 67,8% tuvo rescate viral. El 4% presentó coinfección, las más frecuentes fueron VSR con rinoenterovirus, adenovirus y parainfluenza.

Se observa la predominancia de Metapneumovirus y Enterorinovirus.

Los casos de Influenza tuvieron picos coincidentes con lo observado en ambulatorio.



Vigilancia epidemiológica de virus respiratorios: DESPUES



INFLUENZA: MAYOR CARGA DE ENFERMEDAD EN AMBULATORIOS

Brote inusual de Influenza A en verano

Circulación de influenza A y B

Se testearon 3959 menores de 18 años.

SE 9-22: búsqueda de VSR, IF y SARS-CoV-2
SE 23-29: panel completo

El 30% (n=1212) tuvo rescate viral. Y de estos el 4,5% presentó coinfección (n=55).

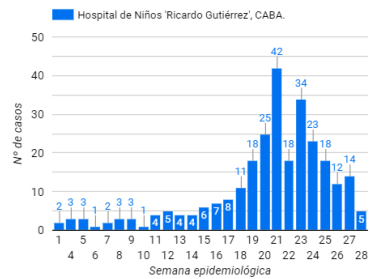
Se observan dos picos para Influenza A y a partir de la de la SE 38 Influenza B



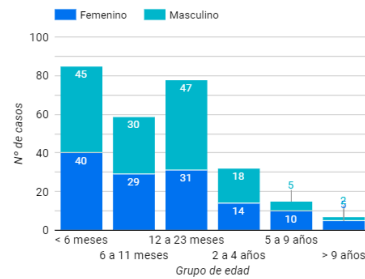
Vigilancia epidemiológica de virus respiratorios: DESPUES

TABLEROS DE VISUALIZACIÓN DE DATOS

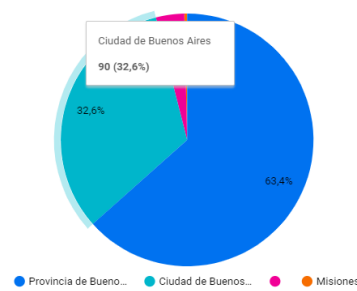
Casos de IRAB por semana epidemiológica y centro asistencial



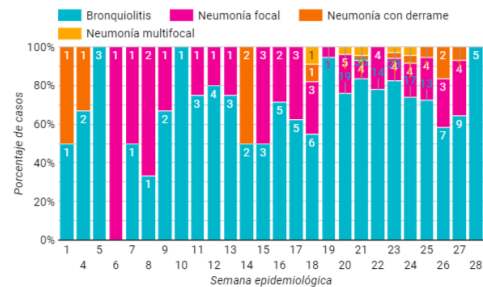
Casos de IRAB por grupo de edad y sexo



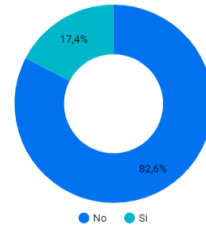
Casos de IRAB según provincia de residencia



Casos de IRAB según diagnóstico inicial



Casos de IRAB según internación en terapia intensiva



N° Días de internación total (mediana)
6

N° Días en Terapia Intensiva (mediana)
10

EPIDEMIOLOGÍA
HOSPITAL DE NIÑOS RICARDO GUTIERREZ

Vigilancia de Infecciones Respiratorias Agudas en Pacientes Ambulatorios

Año - Muestras Estudiadas
181

SE - Casos Positivos
134

Caracterización de los Casos Positivos

Asistencia a Instituciones Educativas o Guardería	74,6 %
Contacto con casos sintomáticos	47,0 %
Internaciones previas por cuadros respiratorios	28,4 %
Presencia de Comorbilidades	48,5 %

Procedencia

Esquema de Vacunación

Casos Positivos por Sexo y Grupo de Edad

VSR -

IA -

IB -

ERV -

MNV -

PI -

ADV -

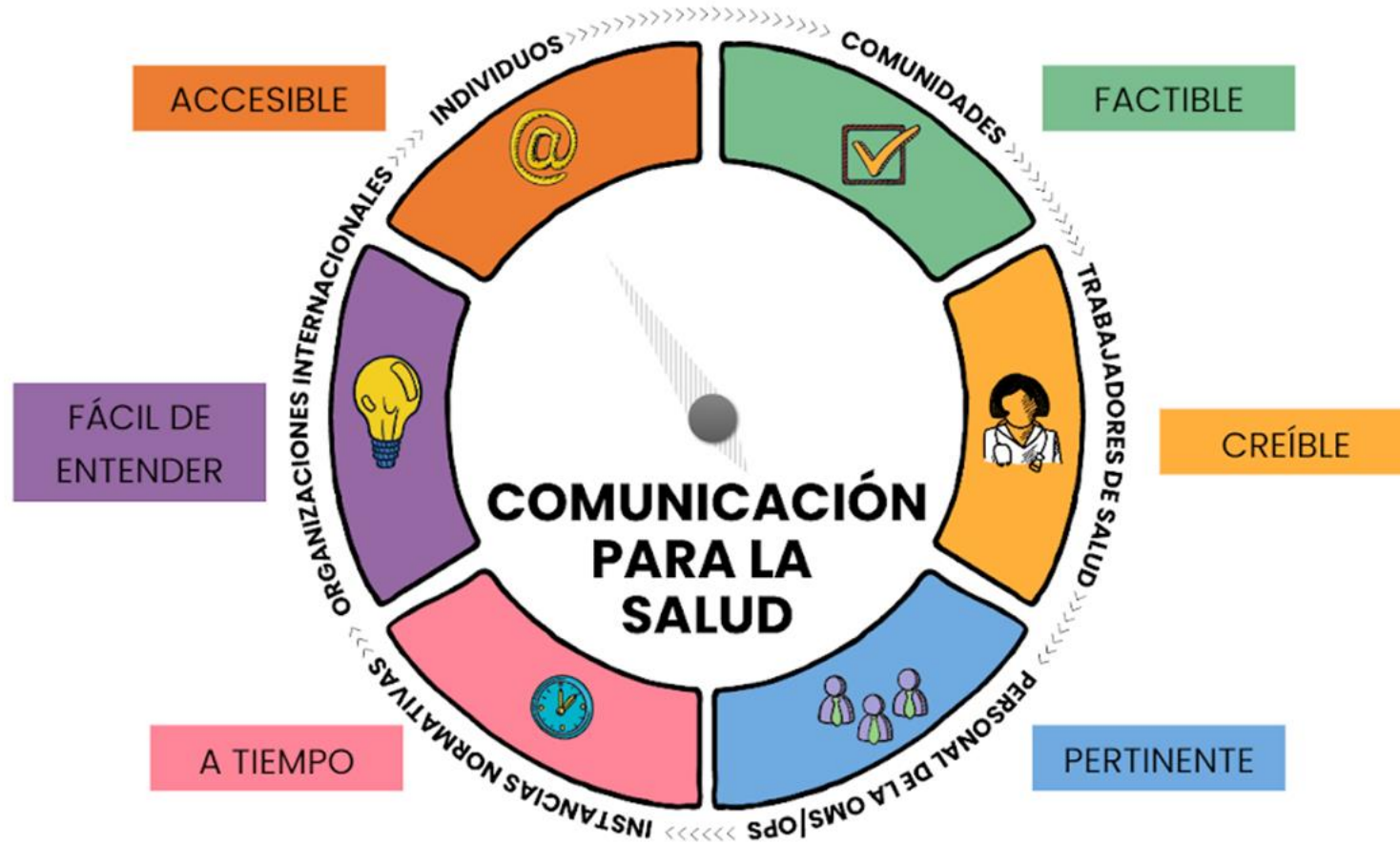
COVI... -

SARS... -

Epidemiología-Virología-Dto. Urgencias-Consultorios Externos



Difundir la información





¿Qué nos dejó la pandemia?

- Sistemas de vigilancia epidemiológica fortalecidos
- Acceso a métodos de detección viral con mayor sensibilidad
- Herramientas de visualización de datos
- Baja percepción de riesgo de otras enfermedades
- Agotamiento del sistema de salud



Muchas gracias



mavijuarez@gmail.com