

outbreaks. Participants were considered fully vaccinated if  $\geq 14$  days had passed since completion of a vaccine series; all others were deemed unvaccinated. A vaccine breakthrough case was defined as a positive Ag or molecular test from a fully vaccinated person's specimen. Performance characteristics of the Ag test were assessed, with molecular test as the reference standard. Cycle threshold (Ct) values were compared by one-sided independent t-tests.

**Results.** 94 unvaccinated residents and staff provided 563 paired samples; SARS-CoV-2 was detected in 21 (12 by Ag and molecular test, 6 by molecular test only, 3 by Ag test only), yielding Ag test sensitivity of 66.7% (95% CI: 43.8–83.7%) and specificity of 99.4% (95% CI: 98.4–99.8%). Mean Ct values were higher for specimens positive by PCR but negative by Ag than those positive by both (30.0 vs. 20.7,  $P < .01$ ). 81 vaccinated persons provided 925 paired samples; SARS-CoV-2 was detected in 5 (1 by Ag and molecular test, 4 by molecular test only), yielding Ag test sensitivity of 20% (95% CI: 3.6–62.5%) and specificity of 100% (95% CI: 99.6–100%). Mean Ct values for specimens from vaccinated cases were higher than those from unvaccinated cases (30.2 vs. 23.8,  $P < .05$ ). The lone Ag-positive breakthrough case had a Ct of 20; all others had Ct  $> 29$ .

**Conclusion.** Ag test performance and reduced sensitivity on specimens with high Ct values found in this population are consistent with published data. Molecular testing maximizes identification of vaccine breakthrough cases. More studies are needed to estimate the proportion of breakthrough cases missed by Ag testing and their risk of transmitting the virus in LTCFs.

**Disclosures.** All Authors: No reported disclosures

#### 496. Comparison of Severe COVID 19 and Influenza Infections in Pediatric Patients Requiring PICU in Bogota, Colombia

Ivan Felipe Gutiérrez Tobar, n/a<sup>1</sup>; Tatiana Patiño, Pediatrician<sup>2</sup>; Paola Rico, n/a<sup>3</sup>; Nicolas Figueroa, n/a<sup>4</sup>; Juan Pablo Londono-Ruiz, Fellow Pediatric Infectious Diseases<sup>5</sup>; Diana N. Avila, n/a<sup>6</sup>; Mayra A. Sanabria, n/a<sup>6</sup>; Angie Vergara, Pediatrician<sup>7</sup>; Paula Gonzalez, n/a<sup>8</sup>; Carolina Rodriguez, n/a<sup>9</sup>; Sandra Beltran, n/a<sup>9</sup>; <sup>1</sup>Clinica Infantil Colsubsidio, Clínica Infantil Santa María del Lago, Bogotá, Distrito Capital de Bogota, Colombia; <sup>2</sup>Clínica Infantil Santa María del Lago, Bogotá, Distrito Capital de Bogota, Colombia; <sup>3</sup>Clínica Pediátrica, Bogotá, Distrito Capital de Bogota, Colombia; <sup>4</sup>Clínica Infantil Colsubsidio, Bogotá, Distrito Capital de Bogota, Colombia; <sup>5</sup>Universidad El Bosque, Bogotá, Distrito Capital de Bogota, Colombia; <sup>6</sup>Fundación Universitaria Sanitas, Bogotá, Distrito Capital de Bogota, Colombia; <sup>7</sup>Universidad del Rosario, Bogotá, Distrito Capital de Bogota, Colombia; <sup>8</sup>Clínica infantil Santa María del Lago, Bogotá, Distrito Capital de Bogota, Colombia; <sup>9</sup>Clinicas Colsanitas, Bogotá, Distrito Capital de Bogota, Colombia

Colsubsidio Investiga

**Session:** P-23. COVID-19 Special populations (e.g. pregnant women, children, immunocompromised, etc)

**Background.** COVID 19 infection represents a global threat and now a frequent cause of hospitalization in pediatrics. COVID 19, as well as Influenza virus could have a severe course. There are few studies, and no local or regional information comparing severe disease between COVID 19 and Influenza virus in children.

**Methods.** Confirmed COVID 19 between March 2020 to October 2021 and influenza infections from Jan-2017 to dec-2019 were included. Asymptomatic or ambulatory COVID 19 infections were excluded. The main objective was to compare clinical, laboratory and outcome characteristic of PICU admitted patients.

**Results.** 71 patients were included, 32(45,1%) with COVID 19 and 39 (54,9%) influenza virus. COVID 19 patients were older than influenza patients: 67 (20,5-143) vs. 10 (2- 46)  $p=0.0002$ . The majority of influenza patients were younger than two years, with different distributions in COVID 19 patients. Figure 1. Respiratory distress was more frequent in influenza (92,3% vs. 62,5%)  $p=0.002$ , but exanthema (28,1% vs 2,6%), shock (68,7% vs. 7,7%) and central nervous system manifestations (40,6% vs. 7,7%) were significantly more common in COVID19 than in Influenza respectively. COVID 19 had lower platelets and lymphocyte counts than influenza. There were no differences in treatment, nor deceased either, but Influenza patients had slightly longer hospital stays 12 (7 – 23) vs. 9.5 (6–15.5)  $p=0.1592$  than COVID 19 (Table 1).

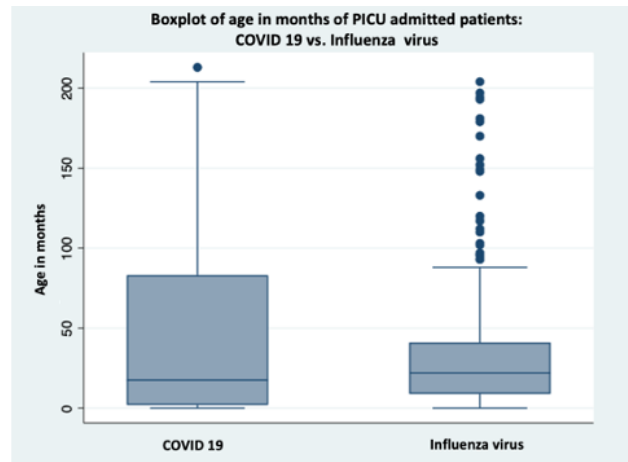


Table 1. Comparison of demographic and clinical characteristics of COVID 19 vs. Influenza patients.

Characteristics	PICU admission		P value
	COVID 19 (n=32)	Influenza (n=39)	
Age in months (Median, IQR)	67 (20.5- 143)	10 (2- 46)	0.0002 <sup>1</sup>
Male	14 (43,7)	26 (66,7)	0.053 <sup>2</sup>
Age categories			< 0.001
0 – ≤ 2 years	8 (25,0)	26 (66,7)	
> 2 – ≤ 5 years	6 (18,7)	8 (20,5)	
> 5 – ≤ 12 years	11 (34,4)	5 (12,8)	
> 12 years	7 (21,9)	0	
Comorbidities	15 (46,9)	21 (53,8)	0.559 <sup>2</sup>
Signs and symptoms			
Fever	26 (81,2)	24 (61,5)	0.070 <sup>2</sup>
Respiratory distress	20 (62,5)	36 (92,3)	0.002 <sup>2</sup>
Altered consciousness	5 (15,6)	3 (7,7)	0.293 <sup>2</sup>
Exanthema	9 (28,1)	1 (2,6)	< 0.001 <sup>1</sup>
Shock	22 (68,7)	3 (7,7)	< 0.001 <sup>1</sup>
Central nervous systems manifestations	13 (40,6)	3 (7,7)	0.001 <sup>1</sup>
Gastrointestinal manifestations	13 (40,6)	8 (21,0)	0.075 <sup>2</sup>
Laboratories			
Leucocytes	10470 (6610 - 12710)	11330 (8585 - 17660)	0.0940 <sup>3</sup>
Lymphocytes	1595 (1020 - 4700)	3390 (1810 - 6160)	0.0021 <sup>1</sup>
Platelets	252000 (212000 - 372000)	385500 (296000 - 474000)	0.0019 <sup>1</sup>
CRP mg/dl	7,7 (0,69 – 30,7)	17,7 (2,9 – 75,2)	0.1511 <sup>1</sup>
X rays			
Complicate pneumonia	1 (3,1)	2 (5,1)	0.676 <sup>2</sup>
Interstitial opacities	17 (53,1)	18 (46,1)	0.559 <sup>2</sup>
Alveolar / Lobar consolidation	10 (31,2)	18 (46,1)	0.201 <sup>2</sup>
Treatment			
Mechanical ventilation	11 (34,4)	13 (33,3)	0.926 <sup>2</sup>
Vasoactive support	18 (56,2)	12 (30,7)	0.031 <sup>2</sup>
Antibiotics	26 (46,4)	30 (53,6)	0.657 <sup>2</sup>
Bacterial infection	5 (17,8)	7 (35)	0.176 <sup>2</sup>
Length of hospitalization	9.5 (6 – 15.5)	12 (7 – 23)	0.1592 <sup>1</sup>
Deceased	4 (12,5)	1 (2,6)	0.103

<sup>1</sup> Wilcoxon test <sup>2</sup> Chi-square <sup>3</sup> Fisher

**Conclusion.** COVID 19 and influenza severe infections can have some differences including age of presentation. Influenza main manifestation requiring UCIP is respiratory distress, while COVID19 can have other presentations including shock and central nervous manifestation. Lower lymphocyte counts as well as lower platelets were significantly more common in COVID 19 patients. Although there are no unique characteristics of each infection, some particularities could guide clinician to the etiology of the infection.

**Disclosures.** Ivan Felipe Gutiérrez Tobar, n/a, Pfizer and MSD (Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau, Has received support from Pfizer and MSD for participation in congresses and has received conference payments from Pfizer) Pfizer and MSD (Speaker's Bureau, Other Financial or Material Support, Has received support from Pfizer for participation in congresses) Sandra Beltran, n/a, Pfizer (Other Financial or Material Support, Has received support from Pfizer for participation in congresses)