

The phylogenetic tree showed that most strains of the 2020 season clustered apart from those of the previous seasons, which indicated there was a novel ON1 variant circulating in the community associated with 2020 RSV epidemic.

Table 2 The univariate and multivariate analysis by logistic regression for the factors that were associated with O2 saturation<94%

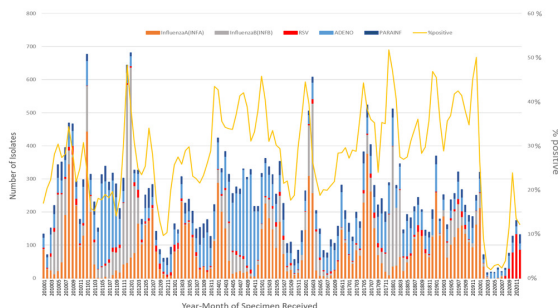
Risk factor	Univariate analysis		Multivariate analysis	
	Odds ratio(95% CI)	P value	Odds ratio(95% CI)	P value
Sex(male)	1.6(0.79-3.26)	0.19		
Age(years)	0.97(0.95-0.96)	0.018*	0.97(0.94-0.99)	0.02
Wheezing	1.93(0.99-3.76)	0.055*	1.57(0.79-3.12)	0.2
ON1 in 2020	2.4(1.09-5.25)	0.028*	2.52(1.13-5.63)	0.025
WBC/mm3 mean	1(1.0-1.0)	0.619	—	—
CRP(mg/L)	0.99(0.96-1.00)	0.772	—	—

Variables with p<0.1 in the univariate analysis were included in the multivariate analysis.

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Conclusion. An unprecedented RSV epidemic within the last 10 years caused by a novel ON1 variant has occurred in 2020 (Figure 1), suggesting the sets of mutations may confer fitness advantage. Further studies on viral replication, infectivity and virulence is needed to understand the evolution and spread of RSV.

Figure 1 National monthly respiratory virus isolation between 2010 and 2020 from national laboratory-based surveillance network established by Taiwan Centers for Disease Control (TCDC)



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1334. Outcomes Among Influenza and SARS-CoV-2 Infection in Hospitalized Adults Age ≥ 50 Years and with Underlying Chronic Obstructive Pulmonary Disease (COPD) or Congestive Heart Failure (CHF)

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Session: P-74. Respiratory Infections - Viral

Background. A significant burden of disease exists for adults infected with influenza (flu) and SARS-CoV-2, which causes COVID-19. However, data are limited comparing outcomes between hospitalized adults infected with these viruses.

Methods. Over the course of 3 consecutive winter respiratory viral seasons, adults ≥ 50 years of age admitted with acute respiratory tract infections (ARI) and adults of any age with COPD or CHF-related admissions were enrolled from 2 Atlanta area hospitals. For the 2018-19 and 2019-20 seasons, participants were approached in the hospital. If the participant enrolled, nasopharyngeal (NP) and oropharyngeal (OP) swabs were collected and tested using BioFire® FilmArray® respiratory panel. Due to the COVID-19 pandemic in 2020-21 and limitations involving participant contact, only NP standard of care (SOC) swabs were collected. A comprehensive medical chart review was completed for each subject which encompassed data on their hospitalization, past medical history, and vaccination history. Co-infected patients were excluded from the analyses.

Results. Of the eligible participants, 118 were flu positive (three RSV-influenza co-infections were excluded) and 527 were COVID-19 positive. Median age was lower for the flu cohort at 62 (IQR 56-71) than those with COVID-19 (67, IQR 59-77) (p < 0.0001). Length of stay (LOS) was shorter in flu-infected patients (median 3 d, IQR 2-6), but was longer for COVID-19 patients (median 5 d, IQR 3-10). ICU admission occurred in 20% of those with flu, and among those admitted to the ICU mechanical ventilation (MV) occurred in 12.5%. ICU admission and MV was significantly higher for those with COVID-19, with 28% of patients admitted to the ICU and 47% of those requiring MV. Among patients with COVID-19, 8.9% died. This was significantly higher than that of flu (3.4%) (p=0.008). Hospital discharge occurred more frequently to a nursing home or LTCF with COVID-19 (10.3%) than with flu (0%) (p<0.0001).

Table 1. Breakdown of age, hospitalization course, and discharge disposition for participants diagnosed with influenza or COVID-19 during hospitalization.

	Flu +	COVID +	p-value (Flu/COVID)
Total (n)	118*	527	
Age, median [IQR]	62 [56, 71]	67 [59, 77]	<0.0001
Length of stay, median [IQR]	3 [2, 6]	5 [3, 10]	<0.0001
ICU admission, n (%)	24 (20.3)	146 (27.7)	0.1007
Mechanical ventilation**	3 (12.5)	69 (47.3)	0.0014
Discharge Disposition			<0.0001
Death	3 (2.5)	48 (9.1)	
Home	109 (92.4)	406 (77.0)	
Nursing Home/LTCF	0 (0)	54 (10.3)	
Other	6 (5.1)	19 (3.6)	

*3 co-infections were removed from analysis

**Mechanical ventilation among those in ICU

Conclusion. COVID-19 resulted in a longer hospital admission, a greater chance of ICU admission and MV as compared to flu. Additionally, COVID-19 participants had a high rate of discharge to a nursing home/LTCF and a significantly higher risk of death. While the clinical course was not as severe as COVID-19, influenza contributed a significant burden.

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1335. High Serum Levels of Interleukin-10 as a Predictor Factor of In-Hospital Mortality in COVID-19 Patients

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Session: P-74. Respiratory Infections - Viral

Background. Since the spread of SARS-CoV-2 worldwide, there has been the need for scores and biomarkers to identify patients at risk of died or requiring admission to the intensive care units (ICU) admission. Interleukin-10 (IL-10) is released as a response to the infection, stimulating inflammatory pathways in the acute phase response. Thus, previous studies have shown that high serum concentrations IL-10 can be identify patients with severe community acquired pneumonia (CAP). Nevertheless, there is a lack of information regarding the capacity of IL-10 to identify severe COVID-19. Thus, the aim of this study was to determine the capacity of IL-10 as a prediction factor for mortality in hospital admitted patients with COVID-19 compared with CAP patients.

Methods. A prospective observational study was carried out at the Clinica Universidad de La Sabana, Colombia. Patients older than 18 years and old, hospitalized due to COVID 19 or CAP, were included. Patients were stratified into COVID-19 and non-COVID-19 patients. IL-10 levels were quantified in serum samples using the LUMINEX technology. Serum samples were collected within the first 24 hours of hospital admission. Afterward, concentrations of interleukin were statistically compared among groups. ROC curves were calculated.

Results. A total of 88 patients with CAP and 152 patients with COVID-19 were enrolled in the study. The median [with IQR] serum concentration of IL-10 were