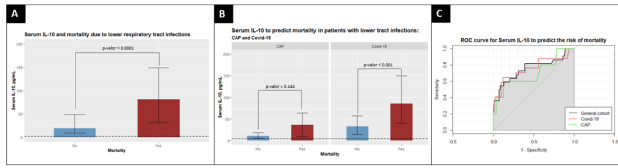


higher in those patients who died (81.1 [30.7-148.9] vs 18.8 [8.3-48.4] p-value < 0.0001). Then, comparing the study group, the median concentration of IL-10 levels among patients deceased by COVID-19 were higher than patients who survived (85.1 [40-149.8] vs 32.4 [13.9-56.7] p-value < 0.001). In addition, IL-10 levels were higher in patients who survived COVID-19 compared with those who survived CAP (32.4 [13.9-56.7] vs 10.6 [4.9-18] p-value < 0.0001). The area under curve (AUC) ROC of IL-10 to predict mortality risk was 0.754 for all cohort. DeLong's test comparing ROC curves in COVID-19 and CAP patients had a  $p = 0.744$ .



**Conclusion.** High serum levels of IL-10 are a good predictor of in-hospital mortality among COVID-19 patients. However, this risk association was not observed in CAP patients. Further studies are needed.

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

### 1336. Outcomes of COVID-19 in Recent Kidney Transplants Recipients at a Large Transplant Center in Miami

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**Session:** P-74. Respiratory Infections - Viral

**Background.** Outcomes of COVID-19 have been reported in deceased donor kidney transplant (DDKT) recipients. However, data is limited in patients that underwent recent DDKT.

**Methods.** This single-center retrospective study evaluated the differences in demographics and post-transplant outcomes between those who tested positive and negative for Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) by polymerase chain reaction, after undergoing recent DDKT. The treatments and outcomes from the SARS-CoV-2-positive patients were assessed. Patients who underwent DDKT from 3/2020 to 8/2020 were included and followed until 9/2020.

**Results.** 201 DDKT recipients were analyzed [14(7%) SARS-CoV-2-positive and 187(93%) negative]. There was no difference in delayed graft function and biopsy-proven rejection between both groups. The patient survival at the end of the study follow-up was lower among SARS-CoV-2-positive patients (Table 1). The median time from DDKT to COVID-19 diagnosis was 45 (range: 8-90) days; 5(36%) patients required intensive care unit and 4(29%) required mechanical ventilation; steroids were used in all the patients, therapeutic plasma exchange (TPE) and convalescent plasma (CP) in 7(50%) patients each, remdesivir in 6(43%) and tocilizumab in 1(7%); 9(64%) patients recovered, 3(21%) died and two were still requiring mechanical ventilation at the end of the follow-up.

**Conclusion.** Our cohort demonstrated a lower survival rate among SARS-CoV-2-positive patients, which highlights the vulnerability of the transplant population. Transplant patients must comply with the CDC recommendations to prevent COVID-19.

Table 1. Demographics and post-transplant outcomes

Variables	SARS-CoV-2-positive (N=14)	SARS-CoV-2-negative (N=187)	P-value
<b>Demographics</b>			
Age (median)	56 (20-65) years	55 (22-79) years	0.73
Gender (Male)	11(79%)	127 (68%)	0.56
Race (African American)	8 (57%)	63 (34%)	0.08
Transplant hospital stay (median)	7.15 (4-19.8) days	6.4 (3.2-65.5) days	0.87
<b>Post-transplant outcomes</b>			
Delayed graft function (DGF)	8(57%)	88(47%)	0.47
Rejection (1 <sup>st</sup> month post-transplant)	1(7%)	4(2%)	0.31
<b>Survival by the end of follow-up</b>	<b>11(79%)</b>	<b>183(98%)</b>	<b>0.008</b>
Post-transplant follow-up time	105 (60-180) days	122 (31-198) days	0.45

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

### 1337. Medically Attended (MA) Illness Due to Respiratory Syncytial Virus (RSV) Infection among Infants in the United States during the 2016-17, 2017-18, 2018-19, and 2019-20 RSV Seasons: The Need for All-Infant Protection

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**Session:** P-74. Respiratory Infections - Viral

**Background.** RSV-associated lower respiratory tract infection (LRTI) is the leading cause of infant hospitalization. Most studies of RSV have focused on infants with underlying comorbidities, including prematurity. The purpose of this analysis is to describe the burden of RSV LRTI across all medical settings and in all infants experiencing their first RSV season.

**Methods.** Using de-identified claims data from two commercial (MarketScan Commercial, MSC; Optum Clinformatics, OC) and one public (MarketScan Medicaid, MSM) insurance database, we estimated the prevalence of MA RSV LRTI among infants born between April 1, 2016 and June 30, 2019 in their first RSV season. Estimates were made by gestational age, presence/absence of comorbidities, and setting (inpatient, emergency department and outpatient). Due to limited laboratory testing, we defined MA RSV LRTI using two sets of ICD-10-CM diagnosis codes: a specific definition (identifying RSV explicitly) and a sensitive definition that included unspecified bronchiolitis. The first specific diagnosis triggered a search for another MA RSV LRTI diagnosis (either specific or sensitive) within the next 7 days. In the sensitive analysis, the first diagnosis was allowed to meet the sensitive definition. Setting was recorded as the highest level of care attached to a MA RSV LRTI diagnosis within this 7-day period.

**Results.** Using the specific (sensitive) definitions, 4.2% (12.2%), 6.8% (16.8%), and 2.7% (7.2%) of newborns had an MA RSV LRTI diagnosis during their first respiratory season across the MSC, MSM, and OC datasets (Table 1). Term infants without comorbidities accounted for 77% (83%), 79% (86%), and 80 (81%) of all MA RSV LRTI, and 21% (10%), 19% (10%), and 21% (10%) of all infants with MA RSV LRTI had an inpatient hospital stay (Table 2). Term infants without comorbidities accounted for 69% (68%), 67% (79%), and 73% (73%) of all MA RSV LRTI inpatients (Table 2).

Table 1. Medically attended RSV-associated lower respiratory tract infections among infants born between April 1, 2016 and June 30, 2019 in their first RSV season, stratified by gestational age, comorbidity group, and diagnosis setting (percentage among infants per 10,000)\*

	MarketScan Commercial†				MarketScan Medicaid†				Children's Commercial†			
	IP	ER	OP	Total	IP	ER	OP	Total	IP	ER	OP	Total
A: 37+ wGA, term infants, otherwise healthy	59	60	282	342	172	271	532	42	44	131	217	
B: Palivivomab-eligible	(8)	(4)	(32)	(44)	(15)	(11)	(41)	(6)	(5)	(24)	(35)	
IP: All-previous < 29 wGA	5	0	15	20	0	0	0	0	0	0	0	
MSM	(1)	(1)	(4)	(6)	(0)	(5)	(0)	(5)	(0)	(0)	(0)	
OC: Previous 28-31 wGA, CLD	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
OC: Hemodynamically significant CHD (CP)	2	2	6	10	5	4	7	16	4	3	7	
infants	(4)	(3)	(0)	(7)	(6)	(6)	(0)	(12)	(5)	(3)	(8)	
C: Not Palivivomab-eligible	22	14	44	80	34	34	83	122	12	8	28	39
IP: Previous 28-31 wGA, no CLD, no CHD	(3)	(2)	(7)	(12)	(6)	(7)	(10)	(23)	(4)	(0)	(1)	(5)
OC: Previous 28-30 wGA, no CHD	14	7	31	52	23	22	31	76	6	4	9	19
OC: Previous wGA unknown, no CLD, no CHD	(19)	(19)	(79)	(107)	(38)	(69)	(83)	(190)	(7)	(7)	(34)	(48)
C: 37+ term infants with SMC, no CHD	2	1	5	8	3	3	5	11	3	2	4	9
Total	86	79	284	416	191	214	334	678	58	44	163	270
IP: inpatient; ER: emergency room; OP: outpatient	(129)	(178)	(925)	(1,232)	(185)	(588)	(925)	(1,698)	(72)	(103)	(446)	(721)

\* wGA = weeks gestational age; IP = inpatient; ER = emergency room; OP = outpatient; † All quantities presented are percentages per 10,000 - specific rate (sensitive rate) corresponding to the MA RSV LRTI diagnosis definition. All rates calculated using the N for the corresponding data set as the denominator. In the specific analysis, the first specific MA RSV LRTI diagnosis triggers a search for another specific or sensitive MA RSV LRTI diagnosis within the next 7 days. The diagnosis setting is assigned as the highest level of care attached to a MA RSV LRTI diagnosis within this 7-day period. Sensitive analysis allows the first diagnosis to fit the sensitive definition. For comparison across emergency room claims, we used the first 4 discharge diagnosis positions, and for the inpatient setting, we used the first 15.

Table 2. Medically attended RSV-associated lower respiratory tract infections among infants born between April 1, 2016 and June 30, 2019 in their first RSV season, stratified by comorbidity group and diagnosis setting (percentage among infants with MA RSV LRTI)\*

	MarketScan Commercial†				MarketScan Medicaid†				Children's Commercial†			
	IP	ER	OP	Total	IP	ER	OP	Total	IP	ER	OP	Total
A: 37+ wGA term infants, otherwise healthy	14.3	14.5	48.6	77.3	13.1	25.5	40.0	78.5	15.6	16.4	48.5	80.8
B & C: Infants with known comorbidity	6.3	3.9	12.5	22.7	6.3	5.8	9.3	21.8	5.8	3.8	10.0	19.4
Total	20.6	18.3	61.1	100	19.4	31.3	49.3	100	21.4	20.2	58.4	100
IP: inpatient; ER: emergency room; OP: outpatient	(9.8)	(14.5)	(75.4)	(100)	(9.9)	(14.9)	(55.2)	(100)	(10.0)	(14.2)	(57.8)	(100)

\* wGA = weeks gestational age; IP = inpatient; ER = emergency room; OP = outpatient; † All quantities presented are specific % (sensitive %) using the corresponding MA RSV LRTI definition's denominator (N, number of cases).

**Conclusion.** In commercial and public claims data, during their first RSV season, term infants without comorbidities accounted for a sizable majority of inpatient, emergency room, and outpatient encounters for RSV LRTI in the US. To address the burden of RSV LRTI, future RSV prevention efforts should target all infants.

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### 1338. Before and After: The Impact of the COVID-19 Pandemic on Influenza-Like Illness Trends in PAIVED

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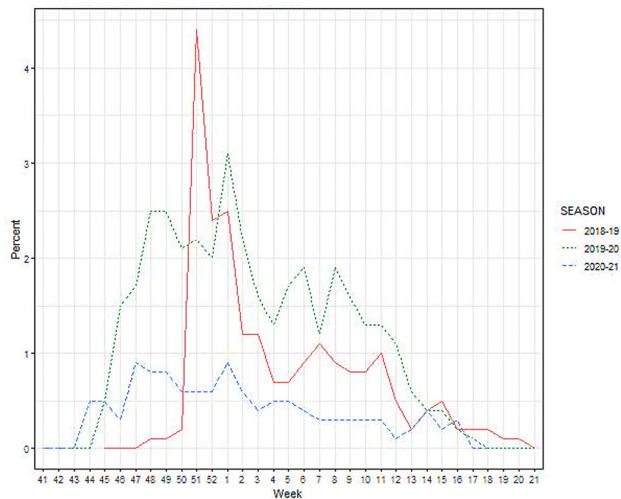
**Session:** P-74. Respiratory Infections - Viral

**Background.** The Pragmatic Assessment of Influenza Vaccine Effectiveness in the DoD (PAIVED) is a multicenter study assessing influenza vaccine effectiveness in active duty service members, retirees, and dependents. PAIVED recently completed its third year and offers a unique opportunity to examine influenza-like illness (ILI) trends prior to and during the COVID-19 pandemic in a prospective, well-defined cohort.

**Methods.** During the 2018-19, 2019-20, and 2020-21 influenza seasons, PAIVED enrolled DoD beneficiaries presenting for annual influenza vaccination. After collecting baseline demographic data, participants were randomized to receive egg-based, cell-based, or recombinant-derived influenza vaccine. Weekly throughout the influenza season of enrollment, participants were surveyed electronically for ILI, defined as (1) having cough or sore throat, plus (2) feeling feverish/having chills or having body aches/fatigue. Participants with ILI completed a daily symptom diary for seven days and submitted a nasal swab for pathogen detection.

**Results.** Over the three seasons, there were 10,656 PAIVED participants: 1514 (14.2%) in 2018-19, 5876 (55.1%) in 2019-20, and 3266 (30.6%) in 2020-21. The majority were male (68-73% per year) with a mean age of 34±14.8 years at enrollment. 2266 participants reported a total of 2673 unique ILIs. The highest percentage of participants with ILI was in 2019-20 (28.2%), versus 19.6% in 2018-19 and 9.6% in 2020-21. Figure 1 depicts the percent of individuals reporting ILI by week of the season for each of the PAIVED seasons. Notably, after March 21, 2020, the weekly incidence of participants reporting ILI never exceeded 1%.

Figure 1. Percent of PAIVED participants reporting ILI by week of season.



**Conclusion.** The low incidence of reported ILI in PAIVED participants during the COVID-19 pandemic is consistent with national influenza surveillance reports of influenza and outpatient ILI activity, suggesting that mitigation measures taken to reduce transmission of SARS-CoV-2 reduced the spread of other respiratory viruses.

**Disclaimer.**

Views expressed are those of the author(s) and do not reflect the official policy/position of USU, DHA, Henry M. Jackson Foundation; BAMC; MAMC; WRNMMC; US Army Medical Department; US Army Office of the Surgeon General; Department of the Army, Air Force, or Navy; DOD; or the USG. Investigators followed human subjects protection-45CFR46 policies.

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**1339. Impact of COVID-19 Pandemic on Activity of Other Respiratory Viral Pathogen and Norovirus**

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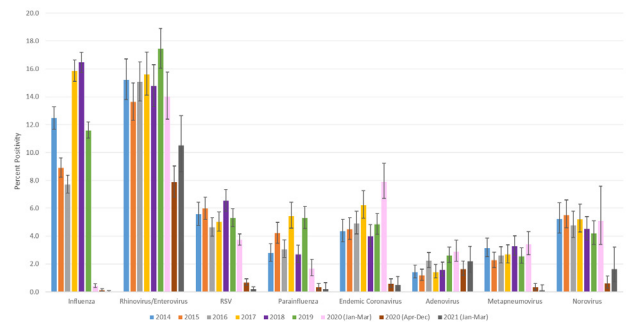
**Session:** P-74. Respiratory Infections - Viral

**Background.** The COVID-19 pandemic led to the implementation of several strategies (e.g., masking, physical distancing, daycare/school and business closures, hand hygiene, surface disinfection) intended to mitigate the spread of disease in the community. Our objective was to evaluate the impact of these strategies on the activity of respiratory viral pathogens (other than SARS-CoV-2) and norovirus.

**Methods.** At University of North Carolina (UNC) Hospitals, we compared the percent positivity for respiratory viral pathogens and norovirus by calendar year for 2014-2019 and the first three months of 2020 to the percent positivity in the subsequent months of 2020 and the first quarter of 2021. Patients were included in the study if they had a positive specimen obtained in a clinic, ED or as an inpatient. Three molecular tests were used to detect these viruses: adenoviruses, endemic coronaviruses (OC43, 229E, NL63, HKU1), influenza A (subtypes H3, H1, H1N1pdm), influenza B, metapneumovirus (MPV), parainfluenza viruses 1-4 (PIV), rhinovirus and/or enterovirus (RhV/EV), and respiratory syncytial virus (RSV). Two molecular tests were used to detect norovirus. We calculated point prevalence rates with 95% confidence intervals to assess statistical differences in percent positivity.

**Results.** There was a statistically significant decline in percent positivity for endemic coronaviruses, influenza, MPV, PIV, RSV and norovirus during the time-periods after March 2020 when compared to all other time-periods (Figure). RhV/EV, followed by adenovirus were the most prevalent types of respiratory viruses circulating during height of COVID-19. There was a statistically significant decline seen in RhV/ EV in April-Dec 2020, but activity increased in 2021. There was no difference seen in adenovirus activity across time-periods.

Percent Positivity of Respiratory Viral Pathogens and Norovirus by Time Period



**Conclusion.** Our study demonstrated statistically significant decreases in the percent positivity of several respiratory viral pathogens, as well as norovirus, during the time-period of high community prevalence of SARS-CoV-2. Strategies put in place to mitigate SARS-CoV-2 transmission likely contributed to these differences. Non-enveloped viruses like rhinovirus and adenoviruses may have been less impacted by these strategies since they are more resistant to disinfection.

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**1340. The Burden of Influenza and Rhinovirus Among Hospitalized Adults Post the COVID-19 Pandemic**

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**Session:** P-74. Respiratory Infections - Viral

**Background.** Acute respiratory tract infections (ARIs) are a significant cause of morbidity in adults. Influenza is associated with about 490,600 hospitalizations and