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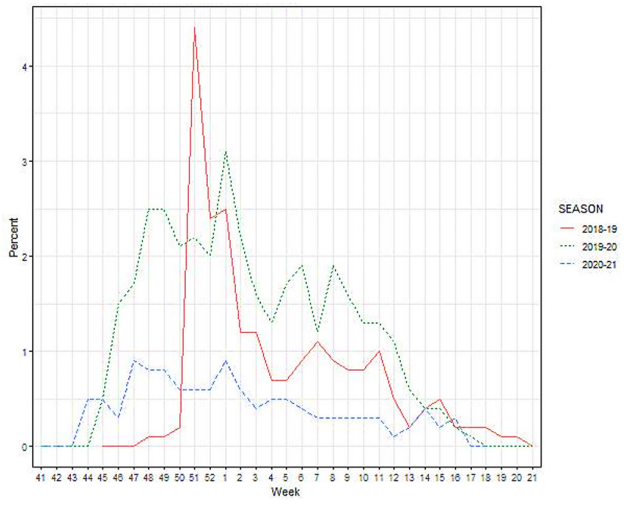
Session: P-74. Respiratory Infections - Viral

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.

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.

Disclosures. **Ryan C. Maves, MD**, **EMD Serono** (Advisor or Review Panel member)**Heron Therapeutics** (Advisor or Review Panel member) **Jitu Modi, MD**, **GSK** (Speaker's Bureau)

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

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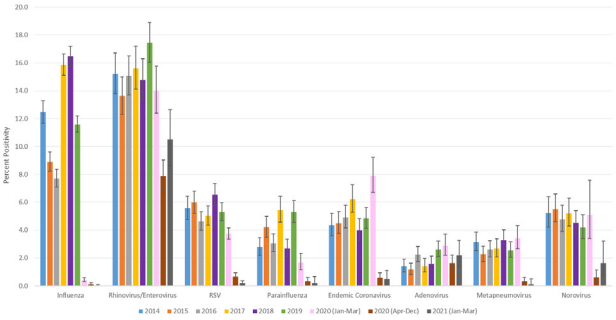
Session: P-74. Respiratory Infections - Viral

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.

Disclosures. **David J. Weber, MD, MPH, PDI** (Consultant) **Melissa B. Miller, PhD, D(ABMM), F(AAM)**, **Abbott Molecular** (Grant/Research Support)**Agena Bioscience** (Consultant)**ArcBio** (Grant/Research Support)**Cepheid** (Consultant)**Luminex Molecular Diagnostics** (Consultant)**QIAGEN** (Consultant)**Sherlock Biosciences** (Consultant)**Talis Biomedical** (Consultant)**Werfen** (Consultant)

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