

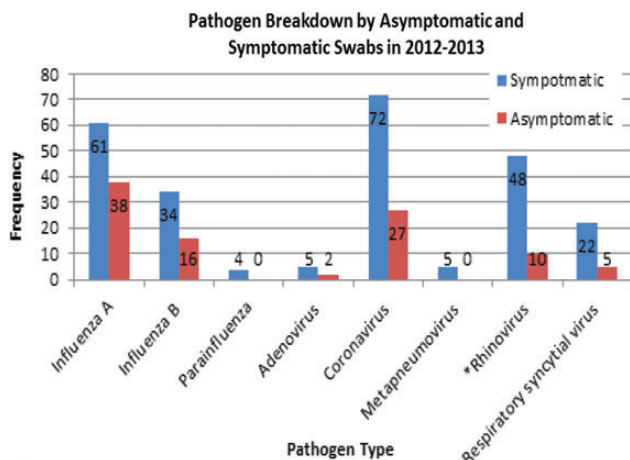
ORAL ABSTRACTS

129. Acute Respiratory Viral Infection among Outpatient Healthcare Personnel

Jenna Los, MLA¹; Charlotte Gaydos, DrPH¹; Mary Bessesen, MD²; Derek Cummings, PhD³; Cynthia Gibert, MD, MSc⁴; Jeffrey Holden, MA⁵; Ann-Christine Nyquist, MD, MSPH⁶; Connie S. Price, MD⁷; Lewis Radonovich, MD⁸; Maria Rodriguez-Barradas, MD⁹; Michael S. Simberkoff, MD¹⁰; Trish M. Perl, MD, MSc, FIDSA, FSHEA¹²; The ResPECT Study Team,¹; ¹Medicine, Johns Hopkins University, Baltimore, MD; ²Medicine, Infectious Diseases, Johns Hopkins University, Baltimore, MD; ³VA Eastern Colorado Healthcare System, Denver, CO; ⁴Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; ⁵Washington, DC, VAMC, Washington, DC; Geoffrey Gorse, MD, VA St. Louis Healthcare System, St. Louis, MO; ⁶Division of Infectious Diseases, Johns Hopkins University, Baltimore, MD; ⁷Children's Hospital Colorado, Aurora, CO; ⁸Department of Medicine, Division of Infectious Diseases, Denver Health Medical Center, Denver, CO; ⁹Department of Veterans Affairs Veterans Health Administration Office of Public Health, Gainesville, FL; ¹⁰VA Michael E. DeBakey Medical Center, Houston, TX; ¹¹VA New York Harbor Healthcare System, New York, NY; ¹²Medicine, Johns Hopkins Medical Institutions, Baltimore, MD

Session: 38. Respiratory and Staphylococcal Infections
Thursday, October 9, 2014: 10:30 AM

Background. Viral respiratory disease is a common source of morbidity among healthcare personnel (HCP). However, the causes of acute respiratory illness



* Data analysis is on-going, more data will be updated.

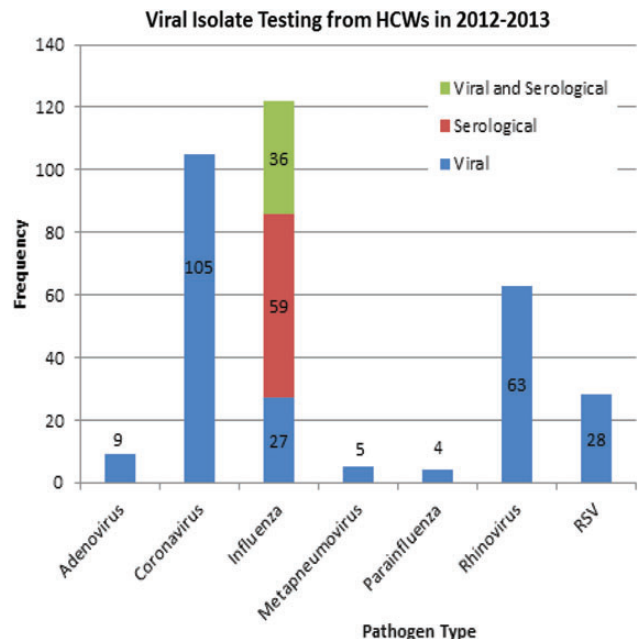
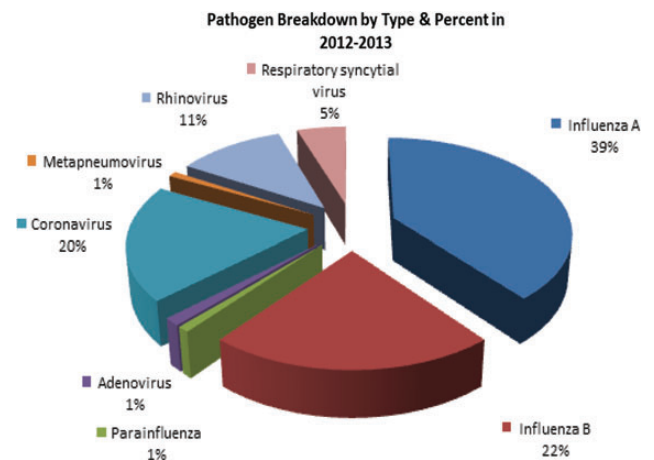
(ARI) have not been well studied. We assessed and have updated the viral causes of respiratory illness among HCP enrolled in a cluster randomized clinical trial at 99 outpatient departments and emergency departments in 7 locations across the US.

Methods. During 12 weeks of the 2011-2 (YR1), 2012-3 (YR2), and 2013-4 (YR3) respiratory seasons, HCP were surveyed for signs and symptoms of ARI. Participants with symptoms were cultured and swabs were frozen at -80°C. Two random swabs were obtained during the intervention period. Samples were tested for 13 viruses by RT-PCR/ESI-MS, (Abbott Molecular). Paired blood samples were obtained for influenza antibodies (>2-fold antibody increase).

Results. Among 3084 participants (619 YR1; 1077 YR2; 1388 YR3), 7375 swabs were obtained (1377 YR1; 2655 YR2; 3343 YR3). The vaccination rates of participants who completed the study and were vaccinated prior to the start of study are: 84% YR1 and 83% YR2. During year 1 and 2, 56% of participants reported influenza-like-illness (ILI). For years 1 and 2: 954 symptomatic (321 YR1; 633 YR2) and 3073 asymptomatic (1056 YR1; 2017 YR2) were tested. 56% of participants who had asymptomatic swabs and 100% of participants who had at least one symptomatic swab, tested positive for 8 pathogens (Figure 1). Combining the swab and serology results, YR2 samples revealed the following viral causes of respiratory infections: 39% influenza A, 22% influenza B, 1% parainfluenza, 1% adenovirus, 20% coronavirus, 1% metapneumovirus, 11% rhinovirus, and 5% respiratory syncytial virus (RSV) (Figure 2). 13 cases of influenza A were identified by serological and viral testing 10 cases of influenza B were identified by serological and viral testing (Figure 3).

Conclusion. ARIs are common among highly vaccinated HCP with 24% developing symptoms during the respiratory viral season and 30% had identifiable viral causes – most commonly (36%) influenza. A significant number of asymptomatic HCP (27%) with an identifiable virus were found. Identification of viruses in HCPs that cause morbidity to patients is critical to patient safety and prevention efforts.

Disclosures. All authors: No reported disclosures.



Serologic and nose/throat sample results.