

ORAL ABSTRACTS

1756. Acute Respiratory Infections (ARIs) Among Outpatient Healthcare Personnel (HCP)

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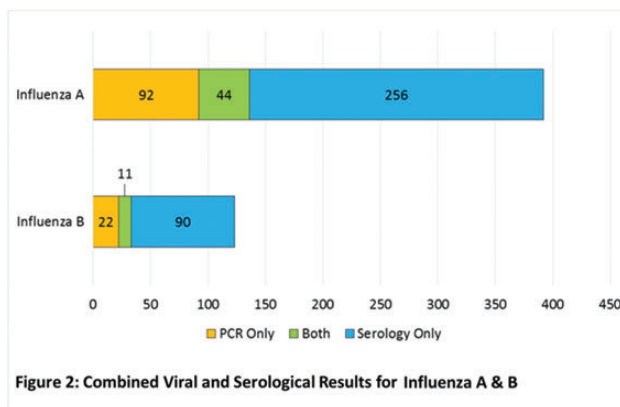
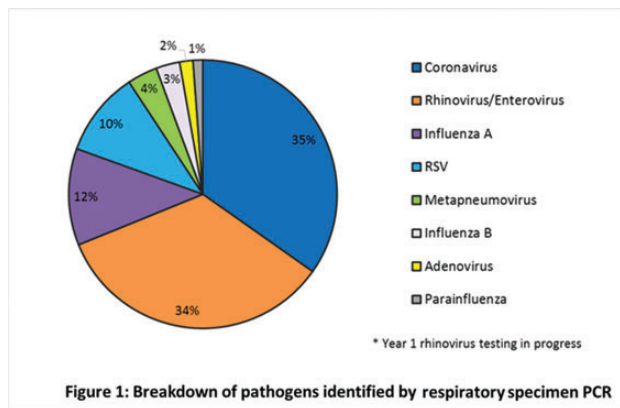
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Background. Acute respiratory illness (ARI) is common among healthcare personnel (HCP); however, the causes of ARI in this high-risk population are not well studied. Over the last 4 respiratory virus seasons, we assessed the viral causes of ARI in enrolled HCP at 116 outpatient and emergency departments in 7 geographic locations across the US.

Methods. During 12 weeks of the 2011–2, 2012–3, 2013–4, and 2014–5 respiratory virus seasons, participants were surveyed for ARI symptoms. A combined nasal and throat swab was obtained when participants reported symptoms. In addition, two swabs were obtained at randomly assigned times regardless of participant symptoms. Samples were tested for 13 viruses by RT-PCR/ESI-MS (Abbott Molecular). Paired blood samples, pre- and post-season, were tested for influenza antibodies with a ≥ 4 -fold antibody increase defined as influenza infection.

Results. Among 5185 eligible participants (662 YR1; 1182 YR2; 1528 YR3; 1813 YR4), 11,876 swabs were obtained (1511 YR1; 2734 YR2; 3485 YR3; 4146 YR4). 59% of participants received the flu vaccine prior to study activation. ARI was identified in 42% of participants. To date 97.5% of swabs have been tested: 3043 symptomatic and 8540 asymptomatic. Virus was identified in 4% of asymptomatic swabs and 28% of symptomatic swabs. Twenty percent of HCP had at least one swab test positive. Overall, ARI were associated with coronavirus (35%), rhinovirus/enterovirus (34%), influenza A virus (12%), respiratory syncytial virus (RSV, 10%), metapneumovirus (4%), influenza B virus (3%), adenovirus (2%), and parainfluenza (1%) (Figure 1). Sixty-seven percent of participants with influenza infection were identified by serology

alone (346 cases: 256 influenza A, 90 influenza B; Figure 2).



Conclusion. ARIs were common in a high risk population of front-line HCP with 42% developing symptoms during the respiratory viral season and 28% of those with PCR identifiable viral causes, most commonly coronavirus (35%). Serologic testing added to the number of likely influenza infections that occurred. Identification of viruses in HCP that could be transmitted to patients and others supports efforts to promote use of respiratory precautions to reduce transmission.

Disclosures. All authors: No reported disclosures.

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