

POSTER ABSTRACTS

257. Prevalence of Respiratory Viruses, Including Influenza, Among Nursing Home Residents and High-Touch Room Surfaces

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Background. Nursing homes (NH) are a unique environment for the spread of respiratory viruses. Outbreaks due to influenza A have been previously reported, but

there are few data on viral etiologies in non-outbreak settings. The advent of rapid molecular multiplex methods now provide the ability to understand more about non-outbreak viral respiratory infections in NH residents and the potential of shedding to high-touch surfaces.

Methods. Nursing home residents with acute onset respiratory symptoms were identified from 3 Southern California NHs from June-August 2015. Bilateral nares swabs were obtained and 5 high touch room surfaces were sampled: (1) table/bedrails, (2) call button/remote/phones, (3) light switches, (4) bathroom rail/handles, and (5) door/handles. All samples were processed utilizing the FilmArray Respiratory Panel (RP) (Biofire Diagnostics), an FDA-approved automated multiplex nested PCR system. The FilmArray instrument system tests for a standard panel of viruses (influenza A, A/H1, H3, and H1-2009), influenza B, RSV, parainfluenza virus 1-4, adenovirus, coronavirus (299E, HKU1, OC43, NL63), human metapneumovirus, and human rhinovirus/enterovirus).

Results. A total of 52 residents and 260 environmental surfaces underwent multiplex testing. Among these residents, 19% (10 of 52) had a detectable viral pathogen: parainfluenza-3 (n = 4), rhinovirus/enterovirus (n = 4), RSV (n = 1), and influenza B (n = 1). Environmental contamination was found in 20% (2 of 10) of total room surface swabs (bedrail n = 1, door n = 1). Viral species from environmental swabs were all concordant with positive patient results.

Conclusion. In a non-outbreak setting, we identified viral respiratory pathogens in one-fifth of NH residents during the summer. One fifth of high touch room surfaces were contaminated with the same virus, suggesting some environmental contamination. Our findings confirm that viral infections are common with summer respiratory symptoms in NH residents and subsequent environmental contamination may facilitate further spread. Findings may have implications for care of NH residents with respiratory symptoms and environmental cleaning of their rooms.

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