

1125. Viral Infections In Outpatients With Medically Attended Acute Respiratory Illness During the 2012-13 Influenza Season

Richard K. Zimmerman, MD, MPH¹; Charles R. Rinaldo, PhD²; Mary Patricia Nowalk, PhD¹; Balasubramani Goundappa K, PhD²; Krissy Moehling, MPH¹; Arlene Bullotta²; Stephen Wisniewski, PhD²; ¹Family Medicine, University of Pittsburgh, Pittsburgh, PA; ²University of Pittsburgh, Pittsburgh, PA

Session: 133. Viral Infections: Epidemiology
Friday, October 10, 2014: 12:30 PM

Background. Respiratory tract infections are a major cause of primary care visits, yet only a portion is tested to determine the causative organism. This study examined the distribution and characteristics of viruses responsible for outpatient visits during the 2012-2013 influenza season.

Methods. Individuals presenting for outpatient visits with acute (<7 days) respiratory illness were swabbed and assayed for presence 18 viruses using a multiplex reverse transcriptase polymerase chain reaction method. Surveys provided clinical and demographic characteristics.

Results. Among 935 patients, 563 (60.2%) tested positive for single virus infections, 85 (9.1%) tested positive for ≥ 1 virus and 287 (30.7%) were negative for all tested viruses. Fever and fatigue were significantly more frequently associated with solo influenza detection while wheezing was significantly less frequently reported

among those with only CoV ($P = 0.01$). Most frequently co-detected viruses were influenza A (38 times), respiratory syncytial virus (25 times), influenza B (9 times); corona virus, human rhinovirus, adenovirus, human metapneumovirus, and parainfluenza virus also co-occurred. The percentages of single, multiple and no viruses detected varied by age. For children <18 years, the percentages of single virus, multiple viruses, and no virus detected were 63%, 14%, and 23%, respectively; whereas for younger adults 18-49 years, the percentages were 58%, 8%, and 34% and for older adults the percentages were 61%, 5%, and 32%, respectively ($P < 0.001$). Co-detections were more common than single infections in children than older adults (≥ 65 years; $P = 0.01$) and less frequent in households without children than in households with children ($P = 0.003$). Co-detections were less common if sore throat was present ($P = 0.01$) but did not vary by other symptoms. Compared with individuals with single viral infections, those with co-detections missed fewer days of school (1.1 vs 2 days; $P = 0.04$) or work (2 vs 3 days; $P = 0.03$). These groups did not vary on other measures of illness severity.

Conclusion. In this study of outpatient medically attended acute respiratory illnesses, co-infections were infrequent but varied by demographic and household characteristics.

Disclosures. R. K. Zimmerman, Sanofi: Grant Investigator, Research grant; Pfizer: Grant Investigator, Research grant M. P. Nowalk, Sanofi: Grant Investigator, Research support; Pfizer: Grant Investigator, Research support; Merck: Grant Investigator, Research support; MedImmune: Consultant, Consulting fee