Influenza viruses can cause significant disease in all age groups, but respiratory syncytial virus (RSV) and human metapneumovirus (hMPV) are more commonly considered respiratory tract pathogens in adults. New commercially available assays are designed to detect RSV, hMPV, influenza A and influenza B efficiently without specialized testing platforms. We prospectively studied all laboratory NAAT testing performed on specimens collected from adults between November 1, 2010 and May 31, 2011. Samples were all from Veteran’s Administration Hospitals, and all specimens were eligible for inclusion. For RSV, a commercially available assay was extracted using the E2 Advanced or QScript™ and real-time RT-PCR was performed using GenProbe ProFlu- Pro+ and Pro MPV assays on the same plate using ABI 7500 technology. A total of 788 specimens from 674 patients were tested during the study period. Seventy-seven specimens were collected from the same patient within 10 days and were excluded from analysis leaving 711 specimens for analysis. 542 (76.23%) and 142 (19.97%) were nasopharyngeal and bronchial specimens, respectively. RSV, influenza A and influenza B were detected in 26, 16, 77, and 4 specimens, respectively. Among the 239 VACT specimens, the total number of cases of RSV and hMPV (total n=31) was comparable to that of influenza A (n=37). The ability to simultaneously detect influenza A, RSV, hMPV, and hMPV was incorporated into these tests into the laboratory workflow. Failure to accurately assess the presence of RSV and hMPV in adult patients is challenging. The lower viral concentrations achieved in adults renders culture and antigen assays less sensitive for the detection of RSV and hMPV. Nucleic acid amplification tests (NAAT) are the most sensitive methods to identify infection with RSV and hMPV in adults in real-time. NAATs are available for influenza viruses using open extraction and amplification platforms. High sensitivity for respiratory virus NAATs are on the market, but these require specialized equipment, and, in some cases, complex laboratory infrastructure. ProFlu and Pro MPV assays are the only FOXA-NAAT capable of simultaneously detecting RSV and hMPV. Influenza A, B, and hMPV are detected using open “amplification.” The current composition of these individual assays within the protocol is incorporated into the laboratory workflow and allow for the simultaneous detection of influenza viruses, RSV, and hMPV from one extract.

Influenza viruses are important causes of morbidity and mortality in all age groups, but RSV and hMPV are thought of primarily as pathogens in children. There is increasing recognition of the contribution of RSV and hMPV to respiratory tract infections in adults, but the identification of RSV and hMPV in adult patients is challenging. The lower viral concentrations achieved in adults renders culture and antigen assays less sensitive for the detection of RSV and hMPV. Nucleic acid amplification tests (NAAT) are the most sensitive methods to identify infection with RSV and hMPV in adults in real-time. NAATs are available for influenza viruses using open extraction and amplification platforms. High sensitivity for respiratory virus NAATs are on the market, but these require specialized equipment, and, in some cases, complex laboratory infrastructure. ProFlu and Pro MPV assays are the only FOXA-NAAT capable of simultaneously detecting RSV and hMPV. Influenza A, B, and hMPV are detected using open “amplification.” The current composition of these individual assays within the protocol is incorporated into the laboratory workflow and allow for the simultaneous detection of influenza viruses, RSV, and hMPV from one extract.

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