

## **International Conference on Flu**

June 08-10, 2015 Chicago, USA

## Influenza A: Comparison of the rates of positivity of the influenza PCR and respiratory viral panel during the 2013-2014 influenza season

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nfluenza A is associated with increased mortality making rapid diagnosis and treatment essential. Baylor Scott & White Hospital in Temple, TX employs two PCR tests for the diagnosis of influenza, the Simplexa Flu A/B & RSV (Influenza/RSV PCR) and the xTag Respiratory Viral Panel (RVP PCR). Clinical observation of patients diagnosed with influenza A during the 2013-2014 influenza season has shown that multiple patients with negative RVP PCRs had positive Influenza/RSV PCRs. Due to this observation, we determined if one of the above tests has a higher rate of positivity and which specimen sites have higher rates of positivity for influenza A. A query was run for adult patients from September 2013 through February 2014 that underwent testing for influenza by Influenza/RSV PCR or RVP PCR. The rates of positivity for each test were determined and compared. Then patients who underwent both tests for influenza within seven days with at least one positive test were identified and the rates of positivity between the two tests were determined and compared. The rate of positivity for different specimen sites was determined and within and between each test. 5056 specimens were included. The ratio of positive Influenza/RSV PCRs and RVP PCRs were 0.2970 and 0.1438 respectively (p<0.0001). Forty patients had both tests performed within seven days and the rates of positivity for the Influenza/RSV PCR and RVP PCR were 0.375 and 0.125 respectively (p<0.0035). The rates of positivity were determined for nasal, nasopharyngeal, throat, tracheal aspirate and BAL specimens for the Influenza/RSV PCR and were 0.29, 0.50, 0.36, 1.0, and 0.75 respectively (p<0.0001). The rates of positivity were determined for the same sites for the RVP PCR and were 0.13, 0.29, 0.25, 0.25, and 0.12 respectively (p<0.0001). The Influenza/RSV PCR had significantly higher rates for all specimen sites (nasal p<0.0001, nasopharyngeal p<0.0001, throat p<0.019, tracheal aspirate p<0.0001 and BAL p<0.002). The influenza/RSV PCR has a higher rate of positivity in identifying influenza A. Upper respiratory specimens are easiest for providers to obtain and out of these sites; nasopharyngeal specimens have the highest rate of positivity.

## **Biography**

Janice Koshy, MD completed her medical school at Texas A&M College of Medicine in College Station, TX and her residency in internal medicine at Baylor Scott & White Hospital in Temple, TX. She is currently a second year fellow in Infectious Diseases at Baylor Scott & White and is involved in ongoing research and quality improvement at her institution.

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