ORAL ABSTRACTS

607. Identification of Viral Infection Using a Polymerase Chain Reaction (PCR)-based Respiratory Virus Panel (RVP) Decreases Antibacterial Use

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Background. The RVP at Wake Forest Baptist Medical Center utilizes PCR technology to detect 17 respiratory viruses with a turn-around-time less than 4 hrs. The purpose of this study was to evaluate the impact of a positive RVP on antibacterial de-escalation (ABX-DE) practices.

Methods. This was a single-center, prospective, observational study comparing patients with negative and positive RVPs. The medical records of inpatients with a RVP from October 2013 through March 2014 were screened within 24 hrs of RVP collection. Patients were included if ≥18 yrs and prescribed antibacterials for suspected respiratory infection (RI) within 24 hrs of RVP collection. Patients were excluded if immunocompromised, died within 72 hrs after antibacterial initiation, or if signs and symptoms of RI were absent. Patients were enrolled in a 2:1 ratio (negative to positive RVP) during the study period. ABX-DE was evaluated at 24, 48, 72, and 96 hrs after antibacterial initiation. Days of antibacterial therapy (DOT), length of stay (LOS), and in-hospital mortality were also compared. ABX-DE was defined as the discontinuation or modification of 1 or more antibacterials when change narrowed spectrum of activity. DOT was defined as the aggregate sum of total days of each antibacterial given at least once in 24 hrs.

Results. One-hundred fifty patients were included, 100 with negative and 50 with positive RVPs. There was no difference in patient characteristics between the groups. The most common viruses identified were 2009 H1N1 influenza (34%), RSV (20%), metapneumovirus (20%), and rhinovirus/enterovirus (18%). ABX-DE occurred earlier in the positive RVP group, which resulted in less overall antibacterial use without impacting LOS or mortality.

Outcomes	Negative RVP (n=100)	Positive RVP (n=50)	P
Antibacterial de-escalation, n (%)			
24 hrs	8 (8)	13 (26)	0.003
48 hrs	38 (38)	23 (46)	0.35
72 hrs	60 (60)	33 (66)	0.48
96 hrs	74 (74)	42 (84)	0.17
DOT, median (range)	9 (1-35)	6 (1-53)	0.03
LOS, median (range), d	4.3 (0.4-39.9)	3.6 (0.9-26)	0.25
In-hospital mortality, n (%)	3 (3)	2 (4)	0.75

Conclusion. Patients with a positive RVP had significantly less antibacterial exposure compared to patients with a negative RVP. The significanceof ABX-DE following a positive RVP was greatest in the first 24 hrs. A PCR-based RVP is a useful tool to facilitate antibiotic stewardship.

Disclosures. **All authors:** No reported disclosures.

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