

order sets and restrictions of complete respiratory panel ordering to ID physicians resulted in \$33,760 saved.

Disclosures. All authors: No reported disclosures.

1158. The Impact of Biofire Filmarray Respiratory Panel on Antibiotic Usage in the Emergency Department at an Academic Medical Center

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Background. Biofire respiratory panel is a multiplex PCR test designed to detect 17 pathogens within 1 hour. It has greater sensitivity, specificity, and number of pathogens detected compared with older testing methods. The aim of this research was to evaluate the impact of Biofire respiratory panel on antibiotic usage in the emergency department (ED) of an academic medical center.

Methods. This was an observational chart review. Patients with positive RSV or influenza rapid antigen test or PCR test, and patients with a positive Biofire test were included. RSV or influenza tests were reviewed from July to December 2015, and Biofire tests were reviewed from July to December 2016. The primary outcome was to evaluate the duration of antibiotic therapy in patients with viral respiratory infections diagnosed with RSV and influenza rapid antigen and PCR testing compared with Biofire viral respiratory panel. Secondary outcomes included virus type, antibiotic prescription rates on discharge, number of admissions, procalcitonin levels, and oseltamivir usage.

Results. In 2016, 67% (105/155) of biofire tests were positive. The most common pathogen was rhinovirus and enterovirus (42%). Of the positive results, 23/105 (22%) received antibiotics with 6 patients having antibiotics discontinued within 72 hours. Another 6 patients had bacterial coinfections. A total of 18/105 (17%) received antibiotic prescriptions on discharge. Median days of therapy (DOT) in hospital was 1 day and median DOT for prescriptions was 8.5 days. There were 5 procalcitonin tests and no oseltamivir usage. Overall 38/105 (36%) patients were admitted to inpatient. In 2015, 3% (20/1313) of RSV (14) and influenza (6) rapid antigen and PCR tests were positive. A total of 5/20 (25%) patients received antibiotics, with 3/20 (15%) patients receiving a prescription for outpatient antibiotics. Median DOT in the hospital was 3 days and median DOT for prescriptions was 10 days. There were 2 procalcitonin tests and 2 cases used oseltamivir. Overall 19 patients were admitted.

Conclusion. Antibiotics are withheld in the majority of patients with positive Biofire testing. Most patients were treated with supportive care measures only. Biofire continues to be a useful tool to identify candidates for antibiotic avoidance in the ED at our institution.

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1159. When to Order a Respiratory Viral Panel (RVP): Physician Use in Clinical Practice

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Background. Multiplex RVP assays are frequently offered at medical centers to screen for viruses using nucleic acid technology. The University of Pittsburgh Medical Center (UPMC) uses the Genmark eSensor RVP detecting 14 virus types/subtypes. This study evaluated how RVPs are used in a large medical center to better understand physician practices.

Methods. A 32 question, descriptive survey, created using the Qualtrics survey database, was sent via email to pediatric, emergency, internal, and family physicians at large academic hospitals in the UPMC network. The anonymous survey was sent 3 times between January 2017 and March 2017. Survey data were analyzed using the SPSS statistics software.

Results. 543/1,265 (43%) survey responses were received; 492 were evaluable. 56% were female; 42% see children, 45% see adults, 13% see both; 16% see patients in the ED. Training levels included 51% residents/fellows and 49% attendings. Of doctors responding, 87% order RVPs. Most (85%) have changed treatment decisions based on a RVP result; 53% changed management ~50% of the time.

Conclusion. Physicians order RVPs most frequently if they believe the results will change treatment. RVPs are ordered more for young and elderly patients, and those with underlying immunosuppression or chronic illness. Cost does not limit physician ordering and most are unaware of it. Suspected influenza or specific virus is also considered.

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Patient Characteristics: Presents with influenza like illness and

	+	-	+
	≥ 50% of time	≥ 50% of time	≥ 50% of time
Fever frequency	97%	87%	79%
RVP ordering	97%	89%	78%
ICU			Infant < 1 mon
Hospitalized organ/bone marrow transplant			Infant 1-24 mon
Hospitalized Chronic Illness	91%	68%	Adults > 65 yrs
83%			
Change management:			
Discontinue antibiotics?	+ RVP result, - pneumonia ≥ 50% of time	+ RVP result, + pneumonia ≥ 50% of time	
Influenza Cost:	82%	29%	
Knowledge of cost	28%	Does cost influence ordering?	≤ 50% of time 79%

Physicians are more likely to order a RVP if they suspect a certain virus (57%), particularly Influenza (42%). A patient's Influenza vaccine status is most commonly disregarded in regard to RVP ordering (75%). Physicians ranked impact on medical decision making (to stop or start antimicrobials) as the most important factor influencing RVP ordering (38%).

1160. A Multidisciplinary Study of the Use and Outcomes Associated with Expanded Respiratory Viral Studies at a Mid-Sized Children's Hospital

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Background. Acute respiratory infection (ARI) is a leading cause of pediatric hospitalizations in the US and are generally caused by viruses, thus antibiotics are prescribed more often than needed. Identifying viral agents using the respiratory pathogen panel (RPP) can help with judicious use of antibiotics in hospitalized patients. ProMedica Toledo Children's Hospital, a mid-sized pediatric hospital, began offering the RPP to patients in Dec 2014. This study was conducted to assess if the use of RPP would decrease the antibiotic days of therapy (DOT) and length of hospital stay for patients admitted for uncomplicated ARI and for those seen in the ED.

Methods. This was a retrospective analysis of pediatric hospital inpatient and ED data collected between December 16, 2013 and December 15, 2015. Patients before and after implementation of the RPP were compared. 299 and 263 pediatric patients between 1 month to 18 years of age with uncomplicated ARIs in the pre-RPP and post-RPP periods, respectively, were included for analysis. Similarly, 472 and 461 patients were included from the ED. Clinical data were collected by chart review. Analysis was performed using descriptive and inferential statistics.

Results. Out of 299 admitted patients in the post-RPP period, 63 (21.1%) patients did not receive the RPP (RPP-NT). 201 (67.2%) received it and tested positive (RPP-P), and 35 (11.7%) patients tested negative (RPP-N). RPP-N had an increased length of hospital stay ($P = 0.055$, borderline significance) and increased number of antibiotic DOT ($P = 0.032$) than RPP-P. Furthermore, we discovered that older patients (mean = 6.21 years) tested negative with RPP, while younger patients either did not receive the test (mean = 2.43 years) or tested positive (mean = 2.40 years). In the ED, RPP-P received fewer discharge prescriptions for antibiotics than RPP-N and RPP-NT ($P < 0.01$). The use of RPP was more prevalent in admitted patients than in ED patients ($P = 0.01$).

Conclusion. Our results suggest that the use of RPP effectively curbs unnecessary antibiotic use for pediatric patients with viral ARIs. Furthermore, age discrepancies among RPP-P, RPP-N, and RPP-NT warrant further study. Lastly, the results suggest that use of RPP in ED should be encouraged.

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1161. A Mid-Turbinate Swab Appears Comparable to Nasopharyngeal Swabs for Quantitative Detection of RSV in Infants

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