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Background: While data are limited, oral ribavirin (RBV) has been shown to be a cost-effective alternative to aerosolized RBV for the treatment of respiratory syncytial virus (RSV) in immunocompromised patients with significant reductions in acquisition and administration costs. We evaluated the clinical and economic impact of an RBV intervention program at a large, academic medical center.

Methods: This single-center, retrospective cohort study evaluated hematopoietic cell and solid-organ transplant patients admitted to Duke University Hospital (DUH) with documented or suspected RSV receiving aerosolized and/or oral RBV from July 2013 to April 2018. The ID consult service approval requirement was initiated for aerosolized RBV beginning in October 2015. Education was done at this time to promote oral RBV as the preferred therapy for immunocompromised, RSV-infected adults and children. No restrictions or treatment protocols were in place prior to that time for either formulation. Clinical outcomes, adverse effects, and drug acquisition cost were collected. A cost-avoidance analysis was performed using DUH acquisition cost for actual and alternate RBV therapy.

Results: A total of 118 treatments (115 unique adult and pediatric patients) were included. Demographics were comparable between groups with and median age was 52 years in the Oral RBV and 61 years in the Aerosol RBV group. The predominant transplant type was lung (62.5% in Oral RBV and 55.6% in Aerosol RBV) followed by hematopoietic (16.7% in Oral RBV and 27% in Aerosol RBV). The median (range) duration of therapy was 4 (1–16) days for oral RBV and 5 (1–23) days for aerosolized RBV. The total cost avoidance was $2,522,915 with oral RBV. Clinical outcomes are summarized in Table 1.

Conclusion: In our large tertiary care center, the use of oral RBV led to substantial cost avoidance with clinical outcomes comparable to aerosolized RBV in immunocompromised patients. Larger prospective trials evaluating oral RBV for RSV treatment are warranted.

Table 1. Clinical outcomes by RSV Route of Administration

	Oral RBV (n = 48) n (%)	Aerosol RBV (n = 63) n (%)	Both (n = 7) n (%)
Unfavorable outcome*	24 (50)	43 (68)	5 (71)
30-day all-cause mortality	9 (19)	10 (16)	2 (28)
ICU admission	4 (8)	8 (13)	2 (28)
New albuterol requirement	17 (35)	30 (48)	4 (57)
Anemia (decline in Hgb >=2.0 mg/dL)	5 (10)	9 (14)	3 (43)

*composite of elements below

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

2796. The Impact of Syndromic Molecular Point-of-Care Testing for Respiratory Viruses on Antibiotic Use in Adults Presenting to Hospital with Exacerbation of Airways Disease: Further Analysis From a Randomized Controlled Trial

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Background: The ResPOC study demonstrated that syndromic molecular point-of-care testing (POCT) for respiratory viruses was associated with earlier discontinuation of unnecessary antibiotics. Subgroup analysis suggests this occurs predominantly in patients with exacerbation of airways disease. Molecular POCT use is becoming widespread but there is a lack of evidence to inform the choice between multiplex syndromic panels vs. uniplex tests for influenza.

Methods: We evaluated patients with exacerbation of asthma or COPD who were treated with antibiotics. The duration of antibiotics and proportion with early discontinuation were compared between patients testing positive for viruses by POCT (FilmArray Respiratory Panel) those testing negative by POCT and controls. Patients testing positive for viruses by POCT were compared according to virus types detected. Survival curves were generated for duration of antibiotics and compared using the log-rank test.

Results: There were 118 patient with exacerbation of airways disease in the POCT group who received antibiotics and 111 in the controls. In the POCT group 49/118 (42%) patients tested positive for viruses. Of those testing positive for viruses by POCT 17/49 (35%) had early discontinuation of antibiotics vs. 9/81 (13%) in those testing negative and 7/111 (6%) in controls, $P < 0.0001$. Survival curve analysis showed a reduced time to antibiotic discontinuation in those testing positive for viruses, $P = 0.034$. Of those positive for viruses by POCT 20% were positive for influenza, 43% for rhinovirus and 37% for other viruses combined. The proportion with early discontinuation of antibiotics was not different between the virus types, $P = 0.53$.

Conclusion: Syndromic molecular POCT for viruses in adults with exacerbation of airways disease leads to early discontinuation in those positive for viruses. As most viruses detected were non-influenza viruses and there was no difference in antibiotic use between virus types, syndromic molecular POCT for respiratory viruses should be favored over uniplex POCT for influenza.

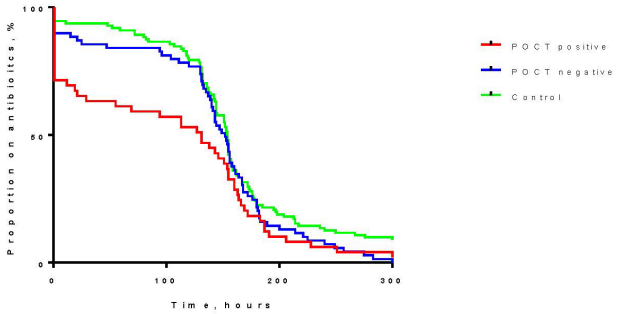

Figure 1. Kaplan Meier curve showing antibiotic use over time for patients with exacerbation of airways disease testing positive and negative by POCT and for control patients. Log rank test, p=0.034

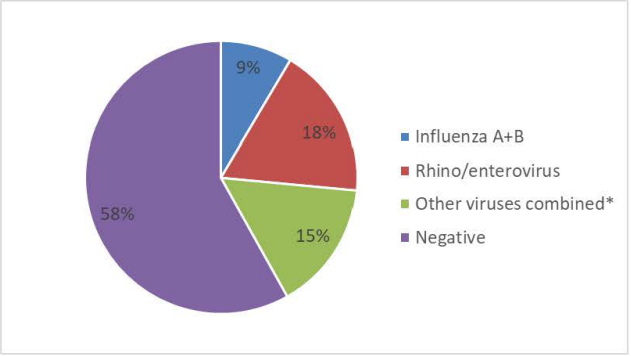

Figure 2. Proportion of patients with exacerbation airways disease with viruses detected in POCT group, n=118.*RSV, parainfluenza virus 1-4, human metapneumovirus, and human coronavirus.

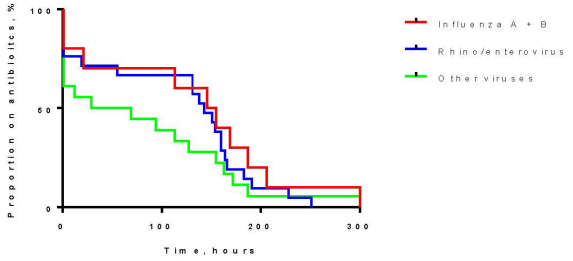

Figure 3. Kaplan Meier curve showing antibiotic use over time for patients testing positive by POCT for influenza, rhino/enterovirus and other viruses combined. Log rank test, p=0.53

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2797. Rates of Respiratory Syncytial Virus (RSV) Infection among Hospitalized Adults by Congestive Heart Failure Status—United States, 2015–2017

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Background: Respiratory syncytial virus (RSV) can cause severe disease in older adults and adults with cardiopulmonary conditions, such as congestive heart failure (CHF). RSV vaccines in development may target adults based on age or medical conditions. We assessed rates of RSV infection in hospitalized adults by CHF status using RSV surveillance conducted through the Centers for Disease Control and Prevention's Emerging Infections Program, a population-based platform in the United States

Methods: RSV surveillance was performed during two seasons (2015–2017) from October 1–April 30 at seven US sites covering an annual catchment population up