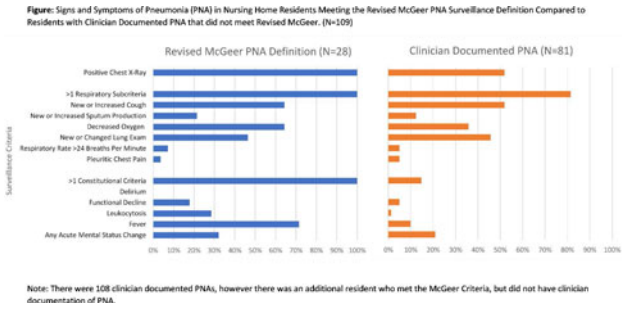

Fig. 2.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.865

Presentation Type:
Poster Presentation

Imunocromatografic Tests Improving Point-of-Care Management of Respiratory Virus Infection in Children

Elisa Teixeira Mendes, Pontifical Catholic University of Campinas (PUC Campinas), Center for Life Sciences; Hadassa Louback Paranhos, Puc-Campinas; Isabela Cristina Moreira Santos, Puc-Campinas; Nathália Reis Sartori Barbosa,, PUC-Campinas; Raquel Vieira da Silva , PUC-Campinas; Maria Patelli Juliani Souza Lima, Puc-Campinas

Background: Respiratory syncytial virus (RSV) and influenza virus (flu) contribute substantially to the overall burden of severe respiratory tract infection in children. However, the molecular etiological diagnostic methods of viral infection are still insufficiently accessible in public hospitals. Rapid immunochromatographic tests can add important information at the point of care, including antiviral or antibiotic indication, viral , and effective precaution measures to prevent outbreaks. The aim of this study was to evaluate this impact for pediatric patients under 5 years of age in our hospital. **Methods:** We conducted a retrospective, observational study of clinical outcomes of children under 5 years requiring hospitalization from 2013 to 2018 for viral respiratory disease, and who had positive RSV and/or flu immunochromatographic rapid test results. **Results:** In total, we identified 221 cases: RSV, 193; flu, 6; codetections, 19. (Table 1). The mortality rate was 1.8% (2 cases), and 88% of our patients were <1 year of age. Variables significantly associated with orotracheal intubation, the most intensive intervention, were younger age in months, comorbidities, RSV and flu codetection, and bacterial pneumonia diagnosis during hospitalization. **Conclusions:** In the multivariate analysis, RSV and flu codetection was associated with the least favorable clinical prognoses. Rapid test diagnosis may provide important information at the point of care, and molecular panels are not yet widely accessible in public hospitals. Hence, we believe that immunochromatographic rapid tests represent a valuable and feasible diagnostic alternative facilitating timely evaluation and treatment implementation.

Table 1. Factors associated with orotracheal intubation (OTI) in children <5 years hospitalized for respiratory viral infection, obtained in a univariate and multiple logistic model, PUC-Campinas Hospital, Brazil 2013-2018

Variable	With OTI N (%)	OR gross (95% CI)	OR aj (95% CI)
Age in months		0.94 (0.88-0.99)	0.89 0.82-0.98
RT+ * Only RSV	64 (34.7)	0.12 (0.42- 0.32)	-
RT+ * Only Influenza A	6 (66.7)	3.05 (0.74-12.5)	-
RT+ * Flu+RSV	17 (89.)	15.0 (3.4- 66.9)	14.3 3.0-68.2
Comorbidity**	17 (58.6)	1.9 (0.9-4.5)	2.7 1.02-7.11
Prematurity (< 37 weeks)	16 (55.2)	1.3 (0.5-2.9)	-
Associated bacterial pneumonia	25 (75.8)	5.9 (2.5 -13.8)	4.78 (1.83-12.55)

*RT – Rapid Test,
**Comorbidity: congenital heart disease, Down syndrome, other GIT congenital malformations, renal failure, bronchopulmonary dysplasia

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.866

Presentation Type:
Poster Presentation

In Vitro Activity of Cefiderocol Against Multidrug-Resistant Gram-Negative Clinical Isolates

Sandra Boyd, Centers for Disease Control and Prevention; Karen Anderson, Centers for Disease Control and Prevention; J. Kamile Rasheed Maria Karlsson

Background: New antimicrobials are being developed as a response to the global threat of multidrug-resistant and panresistant bacterial pathogens. Cefiderocol (FDC; Shionogi & Co) is a novel parenteral siderophore cephalosporin with activity against gram-negative rods. Here, we report on the *in vitro* activity of FDC against multidrug-resistant gram-negative isolates collected by the CDC, including isolates available through the CDC and FDA Antibiotic Resistance Isolate Bank (AR Isolate Bank). **Methods:** The challenge set of gram-negative isolates (n = 339), most of which were obtained from the AR isolate bank (n = 258), comprised 188 Enterobacteriaceae (ENT), 72 *Pseudomonas aeruginosa* (PSA), and 79 *Acinetobacter baumannii* (ACB). Minimum inhibitory concentrations (MICs) for FDC in iron-depleted cation-adjusted Mueller-Hinton broth were determined using frozen reference broth microdilution panels (IHMA, Schaumburg, IL) according to CLSI guidelines. Isolates displaying nonsusceptibility to FDC (MIC >4 μg/mL) underwent additional testing with β-lactamase inhibitors (FDC with 4 μg/mL avibactam, FDC with 100 μg/ml dipicolinic acid (DPA), and FDC with both 100 μg/mL dipicolinic acid (DPA) and 4 μg/mL avibactam). **Results:** Cefiderocol MICs ranged from ≤0.03 to >64 μg/mL, and 313 (92.3%) isolates displayed susceptibility to FDC (MIC ≤4 μg/mL). The proportions of susceptible ENT, PSA, and ACB were 93.1%, 94.4%, and 88.6%, respectively. Among isolates harboring Ambler class A, class B, or class D carbapenemases, the proportions of susceptible isolates were 96.5%, 79.5%, and 94.0%, respectively. Overall, 26 (7.7%) isolates were categorized as FDC nonsusceptible (MIC ≥ 8 μg/mL); 65% of these were NDM producers. We selected 23 isolates for testing with β-lactamase inhibitors. The combination FDC-avibactam reduced the MIC to susceptible for all isolates harboring an Ambler class A or D carbapenemase, except for 1 OXA-71–producing ACB and 1 KPC-producing *Citrobacter farmeri*. The combination FDC-DPA reduced the MIC to susceptible for 9 of 13 (69.2%)