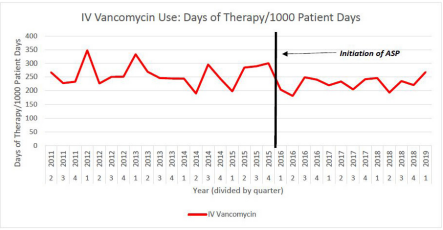
requests via electronic consults and rendered approval or disapproval. In addition, ASP requested empiric vancomycin to be discontinued for patients hospitalized for pneumonia, if PCR was negative for MRSA; PCR results were available within 24hours of admission.

Results. There were 21,330 admissions (including ICU) from March 1, 2011 to February 28, 2019. Since initiation of ASP in 2016, 4,021 total antibiotic approvals were requested and 483 were denied. 484 IV Vancomycin were requested and 43 were denied. There has been a statistically significant decrease in vancomycin use from 2011–2015 vs. 2016–2019, median by quarter (year divided in 4 quarters) 250 vs. 233, $P = 0.012$; Comparing the same time periods there has been a decrease in positive MRSA nares screening upon admission median annual rate 354 vs. 220, $P = 0.011$. There was no difference in vancomycin-resistant enterococci in clinical isolates, median 16 vs. 14.5, $P = 0.465$. Inpatient infectious diseases consultations increased by 30% since ASP was initiated.

Conclusion. Our ASP was successful in decreasing use of vancomycin through both disapproval of medication when a request was deemed inappropriate, and by promoting de-escalation of therapy by the use of MRSA nares screening in patients who were started empirically on MRSA antibiotic therapy for pneumonia.



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

1077. Reduce Anti-Microbial Use in Extracorporeal Membrane Oxygenation: Reduce AMMO Study

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Background. The use of extracorporeal membrane oxygenation (ECMO) in critically ill adults is increasing. Patients on ECMO are at high risk for infections, with 20.5% of adults acquiring infections while on ECMO. An Extracorporeal Life Support Organization (ELSO) Infectious Disease Task Force statement concluded that no antibiotic prophylaxis is needed for patients on ECMO though it also noted that this was based on limited data. We implemented an antimicrobial prophylaxis protocol for patients on ECMO at our institution and analyzed antimicrobial use and outcomes in these patients with a pre- and post-analysis.

Methods. We conducted a retrospective review of 294 patients on ECMO between July 1, 2011 and July 1, 2017. An ECMO antimicrobial prophylaxis guideline was initially implemented on July 1, 2014; there was poor adherence to the guideline and antimicrobial use actually increased. A more restrictive protocol was implemented in November 2018 with input from stakeholders including cardiac surgeons, critical care and infectious disease (ID) providers. We had a cohort of 161 patients before (July 2014–November 2018) and 37 patients after (November 2018–April 2018) the implementation of the updated protocol. We evaluated primary outcomes of gross days of antimicrobial use, percent of antibiotic-free days and days of individual antimicrobial use, adjusted for APACHE scores and ECMO duration.

Results. When adjusted for days on ECMO, mean antibiotic days decreased after implementation of the protocol; for vancomycin (0.27 vs. 0.02, $P < 0.0003$), cefepime (0.15 vs. 0.02, $P < 0.02$), meropenem (0.09 vs. 0, $P < 0.02$), zosyn (0.16 vs. 0, $P < 0.002$), caspofungin (0.346, 0.138 $P < 0.003$). This was accompanied by a nonsignificant increase in mean fluconazole use (0.29 vs. 0.37, $P < 0.3$). There was no impact on patient mortality or nosocomial infection rate. Additional results can be found in table.

Conclusion. The use of an antimicrobial prophylaxis protocol in ECMO patients led to improvement in antimicrobial usage without increasing nosocomial infections in a population at a high risk of infection.

BASELINE DATA

Character	Retrospective (N=161)	Prospective (N=37)	P- value
Sex, Female	62 (38.51%)	15 (40.54%)	0.819
Age, in median years	60.84 (71.02-45.98)	54.44 (67.85-38.24)	0.141
Apache 3 Score SAS 24 hrs. (Mean with CI)	93.39 (97.49-89.22)	102.80 (117.48-88.12)	0.0922
Length of ECMO days	4 (8-3)	7 (11-4)	0.72
Antibiotics - Total no. of days - Median (IQR) - P-Value	 2117 9 (16.5-4.5)	 358 8 (10.5-4)	 0.115

INDIVIDUAL ANTIBIOTIC DAYS

Antibiotics	Retrospective Total antibiotic days (Mean)	Prospective Total antibiotic days (Mean)	P value
Anidulafungin	128 (0.79)	93 (2.51)	0.0108
Caspofungin	383 (2.37)	46 (1.24)	0.11
Cefazolin	533 (3.31)	115 (3.1)	0.71
Cefepime	165 (1.02)	6 (0.16)	0.0459
Fluconazole	264 (1.63)	93 (2.51)	0.11
Metronidazole	11 (0.06)	0	0.49
Vancomycin	266 (1.65)	6 (0.16)	0.0016
Meropenem	148 (0.919)	0	0.0404
Zosyn	154 (0.95)	0	0.0069

Mean antibiotic days, when adjusted for length of days on ECMO

Antibiotics	Mean with upper and lower 95 % CI		P-value
	Retrospective (N=161)	Prospective (N=37)	
Anidulafungin	0.095 (0.134-0.057)	0.19 (0.307-0.075)	0.0522
Caspofungin	0.346 (0.408-0.284)	**0.138 (0.242-0.034)**	**0.0034**
Cefazolin	**0.629 (0.699-0.559)**	**0.488 (0.633-0.342)**	**0.0844**
Cefepime	**0.153 (0.206-0.1005)**	**0.023 (0.07-(-0.023))**	**0.0237**
Fluconazole	**0.294 (0.360-0.228)**	**0.374 (0.517-0.230)**	**0.3058**
Metronidazole	**0.006 (0.013-(-0.0013))**	**0**	**0.4375**
Vancomycin	**0.277 (0.341-0.213)**	**0.023 (0.070-(-0.023))**	**0.0003**
Meropenem	**0.096 (0.136-0.055)**	**0**	**0.0266**
Zosyn	**0.169 (0.221-0.117)**	**0**	**0.0024**

Contingency analysis of survival by no. of days:-

No. of days	Retrospective (N=161)	Prospective (N=37)	P-value
30-day survival	92 (57.14%)	21 (56.76%)	0.965
60-day survival	87 (54.04%)	21 (56.76%)	0.764
90-day survival	82 (50.93%)	21 (56.76%)	0.5218

Nosocomial infections {P-value (Pearson's)}

Infection type	Retrospective (N=161)	Prospective (N=37)	OR (95 % CI	P value
Bloodstream infection episodes (CLABSI)	11	1	2.64 (21.1-0.33)	0.342
C.Difficle (within 30 days of ECMO)	2	1	0.45 (5.13-0.039)	0.512
Skin/Soft tissue	3	0	-	0.402
Respiratory infections (VAP, Tracheobronchitis etc)	4	0	-	0.332
Urinary Tract infections	2	0	-	0.495

Percentage of days off antibiotics

Antibiotic	Retrospective (N=161) Mean % (CI)	Prospective (N=37) Mean % (CI)	P-Value
Anidulafungin	90.41 (94.25-86.57	80.86 (92.44-69.29	0.0522
Caspofungin	65.36 (71.57-59.15)	86.15 (96.55-75.74)	0.0034
Cefazolin	37.05 (44.05-30.05	51.19 (65.77-36.62)	0.0844
Cefepime	84.64 (89.94- 79.34)	97.68 (102.3-92.98)	0.0237
Fluconazole	70.53 (77.15-63.92)	62.56 (76.90-48.21)	0.3058
Metronidazole	99.37 (100.6-98.61)	100 (101.43-98.57)	0.4375
Vancomycin	72.20 (78.60-65.80)	97.68 (102.3-92.98)	0.0003
Meropenem	90.38 (94.06-86.71)	100 (107.65-92.34)	0.0266
Zosyn	83.08 (87.77-78.39)	100 (109.78-90.22)	0.0024

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

1078. Expectations and Attitudes Toward Antimicrobial Stewardship Among Cystic Fibrosis Care Providers

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Session: 133. Antibiotic Stewardship: Special Population
Friday, October 4, 2019: 12:15 PM

Background. Treatment of cystic fibrosis (CF) exacerbations can be challenging secondary to antimicrobial resistance due to chronic airway infection, multiple treatment courses, and frequent use of suppressive antibiotics. For these reasons, many antimicrobial stewardship (AMS) principles may not be practical for the CF population. The objective of this study was to determine perceptions of AMS among CF healthcare providers internationally.

Methods. Six questions regarding AMS were incorporated into an email survey focusing on antimicrobial resistance in CF. Healthcare providers (HCP) were identified through list-servs and CF-related organizations internationally.

Results. Three-hundred and seventy-eight HCP from 30 countries responded to the survey (see Figure 1). Within their institutions, more than half had access to a CF-specific pharmacist, infectious disease consultation, and/or written CF exacerbation guidelines. An AMS program was only available for 39% of respondents. Most HCP stated that choosing and dosing antibiotics correctly and minimizing resistance were the main goals of AMS. Stewardship activities they felt would be helpful during CF exacerbations included the following: choice of antibiotics (83%), duration of antibiotics (78%), antibiotic dosing (68%), therapeutic drug monitoring (63%), reducing drug interactions (53%), and avoiding toxicity (50%). Nine percent of HCP stated that they did not think AMS was advantageous during exacerbations.