Conclusion. Although most CF HCP have access to individual aspects of AMS, fewer had access to a formal AMS program. Help with antibiotics during exacerbations was identified as an important aspect for input from AMS programs.

Figure 1: Respondent Characteristics

| Role in CF care | % of respondents |
|-----------------|------------------|
| Physician       | 48               |
| CF nurse specialist | 16              |
| CF pharmacist   | 10               |
| Physical-Resp. therapist | 9          |
| Other (self defined) | 7               |
| Other groups (Inf. Clin. int. nurse, del.ion, SW, Advanced care practioner) | 10               |

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1079. Impact of Antimicrobial Stewardship Program (ASP) on Patients with Neurological Conditions

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Background. Rising rates of antimicrobial resistance worldwide has dire consequences on patient care, as infections with resistant organisms impair patients’ recovery, resulting in protracted illness and increased hospital stay. Antimicrobial Stewardship Programs (ASPs) have shown to effectively reduce antibiotic resistance. Locally, we observed that patients with neurological conditions were often initiated on antibiotics for change in mental state or isolated fevers. Little is known whether these patients truly require antibiotics and hence, we aim to study the impact of ASP in these patients.

Methods. Retrospective review of ASP database between January 2014 and December 2017 was conducted, among all patients admitted to the neurological department in SGH and in whom the ASP team recommended discontinuation of empiric use of antibiotics. Demographics were collected. Clinical outcomes, duration of antibiotics therapy, length of hospital stay (LOS), infection-related readmissions and mortality, were compared between interventions accepted and rejected groups.

Results. The ASP team recommended 184 interventions [overall acceptance rate of 82.6% (152/184)]. There was no significant difference in underlying demographics, and Charlson Co-morbidity score between the 2 groups. However, the interventions acceptance group had shorter duration of therapy by 1.67 days (4.99 ± 2.50 days vs. 6.66 ± 2.34 days; P < 0.01) and LOS by 2 days (22.5 ± 51.4 days vs. 24.5 ± 3.04 days; P = 0.83). There were no significant differences in 14-day mortality and readmission rates between the 2 groups.

Conclusion. In patients with neurological conditions, ASP interventions were safe, and associated with a significant reduction in the duration of therapy and LOS.

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1081. Use of Antimicrobials at the End of Life (EOL): A Retrospective Cohort Study Analyzing Providers’ Reasons for Prescribing Antimicrobials at the EOL, Their Benefits and Adverse Effects

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Background. Infections are common terminally ill patients, and although antibiotics are frequently prescribed, their benefit for symptom relief is not clear. Antimicrobials at the end of life (EOL) increase the risk of antimicrobial resistance and Clostridium difficile infection. Very few studies have described the risks and benefits of antimicrobials in patients at EOL. Here, we describe a retrospective chart review of antimicrobial use at EOL.

Methods. We reviewed electronic medical records of patients admitted in a palliative care unit of a tertiary care hospital between 2017 and 2018 and assessed antimicrobial use at the last 14 days of life. The analysis excluded neutropenic patients. Differences in demographics and symptom control between patients who did or did not receive antibiotics (AB+ or AB−) were analyzed using chi-square analyses; P-values were computed using Mann-Whitney tests.

Results. Of a total of 133 patients included, 89 (67%) received antimicrobials (AB+); however, the role of antibiotics was documented in only 12% of patients. The AB− and AB+ groups were similar with respect to demographics, including sex, and Charlson Comorbidity Index except for age (table). Documented infections were similar between AB− and AB+ groups, except urinary tract infections. No statistically significant differences were noted in documented symptoms including pain, dyspnea, fever, lethargy, and alteration of mental state or length of stay (LOS).

Conclusion. Our study did not show differences in frequencies of documented symptoms with use of antimicrobials at EOL. These results indicate that the risks of antimicrobial use may outweigh potential benefits and their use should be a part of goals of care discussions at EOL.
Emergency Department: A Multi-Hospital Cohort Study

1083. Risk Factors Associated with Treatment of Asymptomatic Bacteriuria in the Emergency Department: A Multi-Hospital Cohort Study

Methods. - Between November 2017 and March 2019, data were abstracted from medical records of adult non-ICU medical patients at 43 Michigan hospitals admitted through the Emergency Department (ED) with a positive urine culture (Ucx) collected on day 1 or 2 of hospitalization. Exclusions included pregnancy, urologic surgery or abnormality, immune-compromise, severe sepsis, or concomitant infection. ASB was defined as a positive Ucx without signs or symptoms of a urinary tract infection (UTI). The treatment group included patients receiving 21 antibiotic doses ordered by an EM clinician. Patient factors associated with ASB treatment by EM clinicians vs. no treatment were evaluated using logistic generalized estimating equation models.

Results. - Of 1,778 patients with ASB, 74.7% (N = 1,323) had a Ucx ordered by an EM clinician (Figure 1), and 74.4% (N = 1,323) were treated with antibiotics (Figure 2). Of those treated for ASB, 64.3% (851/1328) had the first dose ordered by an EM clinician (Figure 2). Patient variables associated with EM treatment included nonambulatory status, incontinence, presence of a urinary catheter, acutely altered mental status (AMS), leukocytosis, and positive urinalysis (Table 1). When EM initiated treatment, most patients (80%) remained on antibiotics for ≥3 days (Figure 3), with a median treatment duration of 6 days ([IQR 4–9]).

Conclusion. - Among patients with ASB admitted through the ED with a Ucx collected on day 1 or 2 of hospitalization, most were treated with antibiotics. The majority of testing and initial treatment for ASB was by EM clinicians. The strongest predictors of EM treatment of ASB were positive urinalysis and AMS. Once started by EM, patients often received a full course for UTI. Given the burden of ASB testing and treatment, stewardship into the ED is critical and should start with addressing interpretation of urinalyses in patients without specific urinary symptoms.

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