Conclusion. We believe that this is the first report of the implementation of ID e-consults at a tertiary care hospital. Mortality rates appear to be comparable to in-person ID care. In the absence of in-person ID physicians, ID e-consults can be a reasonable substitute. Further study is required to compare performance of ID e-consults to in-person ID consults.

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597. The Impact of COVID-19 on Outpatient Intravenous Antimicrobial Therapy (OPAT) in Physician Office Infusion Centers (POICs)

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Session: P-27. Clinical Practice Issues

Background. The coronavirus disease 2019 (COVID-19) pandemic dramatically affected the provision of healthcare in the U.S. with sharp declines in routine and elective healthcare services. Outpatient clinic visits declined nearly 60% in the early pandemic. We investigated how COVID-19 impacted the provision of OPAT at various Infectious Disease (ID) POICs nationwide.

Methods. Patient (pt) records were evaluated from Jan 2019 – July 2019 and compared to Jan 2020 – July 2020. Data collected included new OPAT pts, demographics, infection type, location prior to OPAT and therapy characteristics. Statistical analysis was performed using Chi-square test with p<0.05 considered statistically significant.

Results. Fourteen POICs reported data with a total of 2410 new OPAT pts in 2019 and 1807 in 2020, representing a decrease of 25%. Table 1 shows the comparison of OPAT characteristics between 2019 and 2020. Mean age and gender were similar, but there was a significantly higher percentage of pts with HCC in 2020 (36% vs. 31%, P<0.001). Infection type and location prior to OPAT were consistent between 2019 and 2020. Primary antimicrobial use was comparable with the exception of cefepime, which showed a greater use in 2020 (44% vs. 36%, P<0.001). OPAT management differed significantly from 2019 to 2020 with fewer pts completing therapy as planned.

Disclosures.

Conclusion. OPAT provided through ID POICs experienced a substantial decrease in pts treated during the first half of 2020 compared to 2019. This was expected with the decline in healthcare services, especially elective procedures. Most pt and treatment characteristics were comparable between years, but interestingly, more elderly received OPAT during the pandemic and fewer completed therapy as planned. Further analysis of these differences can help determine effects of the pandemic on overall health outcomes in the OPAT population.

598. A 3-Year Evaluation of Antibiotic Resistance Patterns in Gram-Negative Genitourinary Tract Infections Treated in Outpatient Infusion Centers (POICs)

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Session: P-27. Clinical Practice Issues

Background. Resistant Gram-negative pathogens (GNP) are common causes of genitourinary tract infections (GUTI) often requiring outpatient parenteral antibiotic therapy (OPAT). Data are sparse regarding antibiotic resistance of GNP in patients (pts) treated with OPAT. We analyzed GNP of GI pts treated in Infectious Disease POICs over a 3-year period stratified by location prior to OPAT.

Methods. Records from 18 POICs were queried for GUTIs pts ≥18 yrs receiving OPAT from 2018 to 2020. Demographics, pt location prior to OPAT, infection type, GNP and GNP were recorded. Antibiotic resistance patterns were defined as extended-spectrum beta-lactamase (ESBL) or multi-drug resistant (MDR). Chi Square and Fisher’s exact test were used to determine if GNP status was associated with GNP or location prior to OPAT (hospital vs. community). The Cochran-Armitage test was used to analyze temporal trend in ESBL expression. Statistical significance was defined as P<0.05 for all tests.

Results. A total of 634 GNP were identified in 601 pts (mean age: 64±16, 58% female). Infections were 75% complicated urinary tract infection, 20% pyelonephritis, and 5% prostatitis/other. Overall, 56% (n=338) were treated directly from the community and 44% (n=262) followed hospital discharge. GNP isolated were 56% E. coli, 19% Pseudomonas spp., 16% Klebsiella spp, and 9% others. Of the 611 GNP with potential to express ESBL, 43% (n=265) were ESBL producers (Table 1). Significantly more ESBL-producing GNP occurred in pts discharged from a hospital prior to OPAT compared to expression ESBL, 43% (n=265) were ESBL producers (Table 1). Significantly more ESBL-producing GNP occurred in pts discharged from a hospital prior to OPAT compared to community (53% vs. 36%, P<0.001). Overall, the incidence of MDR constituted 36% (n=231) of GNP, which did not differ by location prior to OPAT. Evaluation of ESBL incidence by year showed a significant increase from 2018 to 2020 (P<0.003). Although a slight increase in MDR was noted from 2018 to 2020, this was not significant (Figure 1).

Table 1. Frequency of ESBL and MDR by Location prior to OPAT

Figure 2. Prevalence of ESBL producers and MDR Pathogens by Year

* Estimated using Cochran-Armitage trend test using exceed 2-fold probability.
Conclusion. Resistant GNP were observed in the OPAT setting for GUI with both ESBL and MDR pathogens. We saw a significantly higher rate of ESBL with GNP from hospital discharged pts compared to community-acquired infections and an increase in the overall incidence of ESBL over time. Management of Gram-negative gentamicin- nary infections in the OPAT setting requires close monitoring of emerging resistance patterns.

Disclosures. Kimberly A. Couch, PharmD, MA, FIDSA, FASHIP, AbbVie (Speaker’s Bureau) Lucinda J. Van Anglen, PharmD. Merck & Co. (Research Grant or Support)

599. Patient Beliefs Regarding Lyme Disease and Need for Antimicrobial Treatment when Referred for Lyme Evaluation

Background. There are limited data on patient beliefs and needs regarding Lyme disease.

Methods. Patients at the Integrated Lyme Program at the University of Maryland completed clinical intake forms which included questions on their familiarity and beliefs surrounding Lyme disease.

Results. We evaluated 146 patient records from our Lyme Program Registry which began in December 2018. There were 57 (34.5%) males and 108 (65.5%) females with mean age of 51 years. Forty seven percentage of patients were referred by a physi- cian and 53 % were self-referred. Approximately 50% (71/146) were treated with less than 30 days of antibiotics. 37% (54/146) were treated with 1-6 months of antibiotics and 11.6% (17/146) were treated with >6months of antibiotics prior to their initial evalua- tion in our Lyme program. Sixty eight percentage of patients were familiar with the term CLD but only 44% percentage were familiar with term PTLDS. Approximately half of the patients (52%) believed that they currently had Lyme disease and 63% believed that their current symptoms were due to Lyme disease. Despite this only 18% believed that they needed antibiotics for Lyme disease at the time completing the form.

Conclusions. Patient referred to our Lyme center were more familiar with term CLD vs PTLDS. Many of them believed that they currently had LD and their symptoms were due to Lyme disease. Despite this, the majority did not feel that they needed anti- biotics for Lyme disease at the time of their clinical visit. More research is needed to better understand patient beliefs and understanding regarding Lyme disease.

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600. The Effect of Medication-Assisted Treatment on Completion Rates of Outpatient Parenteral Antimicrobial Therapy

Background. Injection drug use is a nationwide epidemic associated with an increased risk of invasive Staphylococcus aureus (S. aureus) infections. Medication-assisted treatment (MAT) is effective in reducing substance use and increasing adher- ence to inpatient medical therapy in persons with injection drug use (PWID). Studies assessing the impact MAT has on completion of outpatient parenteral antibiotic therapy (OPAT) are limited.

Methods. This was a single-center, retrospective, cohort study at The Ohio State University Wexner Medical Center in patients admitted from 12/1/2017 to 12/1/2019 with a diagnosis of S. aureus bacteremia who were identified as PWID either by ICD-9 or 10 code or chart review. A formal MAT program was established on 11/30/2018. Patients were assigned to the pre-MAT group if they were discharged prior to 11/30/2018 and to the MAT group with treatment after 11/30/2018. We evaluated a composite outcome of failure to complete OPAT, recurrence of S. aureus bacteremia within the OPAT period and readmission within 30 days. A multivariable logistic re-gression analysis was performed to examine the association between MAT therapy and the primary composite outcome, while adjusting for proven confounders.

Results. A total of 709 patients were identified with 644 patients omitted based on exclusion criteria. The study population included 27 in the pre-MAT group and 17 in the MAT. Mean age was 37 years (IQR 30.6 - 46.1). There was a higher number of females in the MAT therapy group compared to the pre-MAT group (82% vs. 33%, p=0.002). Patients in the pre-MAT group had a significantly longer length of stay (25 vs. 17 days, p=0.01). The primary composite outcome was met if a patient did not complete their OPAT, if they had a recurrence of S. aureus bacteremia during their OPAT or if they were readmitted to the hospital within 30 days. In the pre-MAT group 14/27 (52%) met the composite outcome versus 6/17 (35%) of the MAT group (p=0.28).

Conclusion. There is a significant difference in the completion rates of OPAT between the pre- and MAT groups with a higher completion rate in the MAT group as compared to the pre-MAT group. A larger sample size and longer follow-up periods are needed to better understand the impact of MAT on OPAT completion rates.

Disclosures. All Authors: No reported disclosures

601. Assessment of a Nursing and Pharmacy Collaborative Outpatient Parenteral Antimicrobial Therapy Management Program

Background. At our facility a collaborative team of nurse and pharmacist manage patients receiving outpatient parenteral antimicrobial therapy (OPAT). This pro- ject aims to characterize this collaboration and assess the effectiveness by reviewing interventions made by the nurse and pharmacist, and assessing patient outcomes such as OPAT failure or infection related hospital admissions or ED visits, infection clearance, and mortality.

Methods. A retrospective cohort study was performed on patients started on OPAT between 1/1/19 and 12/31/20. This time period was split into three: Period 1 where the clinic only included the PharmD and they saw patients for in-person appointments, Period 2 where the clinic included both the OPAT RN and PharmD and the PharmD performed in-person appointments, and Period 3 where the clinic included both but due to COVID the in-person PharmD appointments were on hold. OPAT or infection related hospital admissions, ED visits, infection clearance, and death were compared for each period.

Results. A total of 388 patients were included in the review. There were 158 (40.7%) and 148 (38.1%) OPAT-related phone calls from the PharmD and RN, respectively. The two most common reasons for both PharmD and RN phone calls were a medication stop order/confirmation, and weekly lab obtainment. The third most com- mon reason for the PharmD was dose change, and for the RN it was patient educa- tion. During Period 1 and 2 the PharmD had in-person appointments with 28.9% of patients. The overall OPAT/infection related hospital admission and ED visit rates were 7.7% and 5.4%, respectively. Periods 2 and 3, which utilized the combined efforts of RN and PharmD, had consistently lower hospital admissions related to OPAT/infection (46.50% vs 62% Period 1), and ED visits due to OPAT/infection (33.36% vs 47% for Period 1). Clearance of infection was high for all 3 periods (89-95%), and mean mortality was low (2.1%).

Conclusion. Collaborative management allowed for the nurse and pharmacist to function as substitutes for each other without losing the specific focus of their special- ties, with the RN performing more patient education, and the PharmD performing more medication dosing. The collaboration had positive effects on OPAT patient outcomes.

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602. Intravenous Push Versus Intravenous Piggyback Administration of Cephalosporin Antibiotics: Impact on Safety, Workflow, and Cost

Background. Cephalosporins are a class of beta-lactam antibiotics that are commonly used for the treatment of infections. While the intravenous push method is commonly used, the intravenous piggyback method is gaining popularity.

Methods. This was a single-center, retrospective, cohort study at The Ohio State University Wexner Medical Center in patients admitted from 12/1/2017 to 12/1/2019 with a diagnosis of S. aureus bacteremia who were identified as PWID either by ICD-9 or 10 code or chart review. A formal MAT program was established on 11/30/2018. Patients were assigned to the pre-MAT group if they were discharged prior to 11/30/2018 and to the MAT group with treatment after 11/30/2018. We evaluated a composite outcome of failure to complete OPAT, recurrence of S. aureus bacteremia within the OPAT period and readmission within 30 days. A multivariable logistic re-gression analysis was performed to examine the association between MAT therapy and the primary composite outcome, while adjusting for proven confounders.

Results. A total of 709 patients were identified with 644 patients omitted based on exclusion criteria. The study population included 27 in the pre-MAT group and 17 in the MAT. Mean age was 37 years (IQR 30.6 - 46.1). There was a higher number of females in the MAT therapy group compared to the pre-MAT group (82% vs. 33%, p=0.002). Patients in the pre-MAT group had a significantly longer length of stay (25 vs. 17 days, p=0.01). The primary composite outcome was met if a patient did not complete their OPAT, if they had a recurrence of S. aureus bacteremia during their OPAT or if they were readmitted to the hospital within 30 days. In the pre-MAT group 14/27 (52%) met the composite outcome versus 6/17 (35%) of the MAT group (p=0.28).

Conclusion. There is a significant difference in the completion rates of OPAT between the pre- and MAT groups with a higher completion rate in the MAT group as compared to the pre-MAT group. A larger sample size and longer follow-up periods are needed to better understand the impact of MAT on OPAT completion rates.

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