Background. Cefiderocol is a siderophore cephalosporin discovered by Shionogi & Co., Ltd., which exhibits potent efficacy against Gram-negative carbapenem-resistant bacteria. Pediatric clinical studies are planned. Cefiderocol is mainly renally eliminated. A 2-g infusion of cefiderocol over 3 hours, every 8 hours (q8h) is the recommended dose regimen in adults. In this study, dose regimens for pediatric subjects (birth to <18 years old) are proposed based on predictions of pharmacokinetics (PK) in pediatrics using data from adults to provide adequate exposure.

Methods. The PK model developed based on data in adults was modified for predicting PK in pediatrics. Total clearance and volume of distribution at steady state in pediatrics were scaled using allometric relationships developed for parenteral β-lactam antibiotics. The maturation factor of renal function was also incorporated into the model to predict PK in neonates and infants whose glomeruli are immature. The dose was selected to provide area under the concentration curve (AUC) comparable to adults. Monte-Carlo simulations were performed to calculate probability of target attainment (PTA) for 75% of fraction of time during which the free plasma concentrations exceed the minimum inhibitory concentration (MIC) over the dosing interval ($fT_{>MIC}$) for age groups at the proposed doses against an MIC range from 0.25 to 16 μg/mL.

Results. The dose regimens for pediatrics were proposed based on age and body weight as shown in the table below. The dose of 60 mg/kg (maximum 2 g) q8h was selected as a standard dose. The dose for pediatrics aged <3 months was adjusted based on age. AUC predicted in pediatrics from birth to <18 years old for the proposed dose was comparable to that observed in adults. The proposed dose provided >90% PTA for 75% $fT_{>MIC}$ against MICs up to 4 μg/mL.

Conclusion. The proposed dose regimens provide comparable (to adults) exposure in pediatric patients for target carbapenem-nonsusceptible pathogens, 98% of which are susceptible to cefiderocol at a MIC of ≤4 μg/mL.

Table. Proposed Doses of Cefiderocol for Pediatric Subjects

Chronological age	Gestational age <32 weeks	≥32 weeks
<2 months	30 mg/kg	40 mg/kg
2 to <3 months	40 mg/kg	60 mg/kg
	Body weight <34 kg	≥34 kg
3 months to <18 years	60 mg/kg	2 g
Dosing: 3-hr infusion (1-hr infusion for <3 months), q8h		

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

740. A Comparison of Process Outcomes Among Patients Receiving Outpatient Parenteral Antibiotic Therapy in Different Settings: A Quality Improvement Project

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Background. Outpatient parenteral antibiotic therapy (OPAT) is an effective way to provide long-term antibiotic therapy and simultaneously decrease hospital length of stay, minimize costs and improve patient satisfaction. However, OPAT is not always an efficient process and there are systemic challenges to providing adequate care and ensuring close follow-up. The aims of this project are to define the OPAT process at three New Orleans hospitals staffed by the Tulane Infectious Diseases Section and to determine process outcomes among patients receiving OPAT in different settings.

Methods. We utilized the knowledge of medicine residents, infectious diseases (ID) fellows and social workers to create a process map defining the current OPAT system [Figure 1]. We performed a retrospective chart review identifying patients who were discharged with OPAT from August 1, 2018 to November 30, 2018. The patients received OPAT in a variety of settings: long-term acute care facilities (LTACs), infusion centers, home, hemodialysis centers and prison. We measured the following process outcomes: if the patient arrived to an ID appointment, if safety laboratory results were available for review and if the patient completed the pre-specified antibiotic course. These outcomes were compared amongst the OPAT delivery settings.

Results. Our retrospective analysis identified 62 patients discharged with OPAT, although 2 patients were excluded due to lack of availability of records. Only 42% completed the pre-specified antibiotic course, 54% arrived to ID follow-up, and 38% had laboratory results available. We compared the completion of antibiotic course amongst the different OPAT settings (Figure 2). The highest rates of incompletion were amongst LTAC patients ($n = 19$, 73%) and prisoners ($n = 3$, 75%). Given that the highest number of patients who did not complete antibiotics were discharged to LTACs, we plan further investigation and intervention to target this population.

Conclusion. Patient outcomes among OPAT patients discharged from three New Orleans hospitals are poor, as evidenced by 58% failing to complete their pre-specified antibiotic course. The highest number of patients who failed were LTAC patients. We propose a further investigation into this population in order to improve the efficacy of the OPAT system.

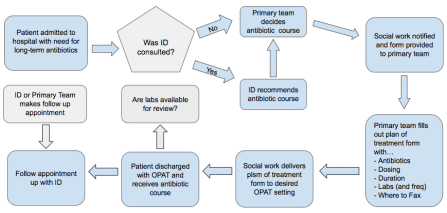
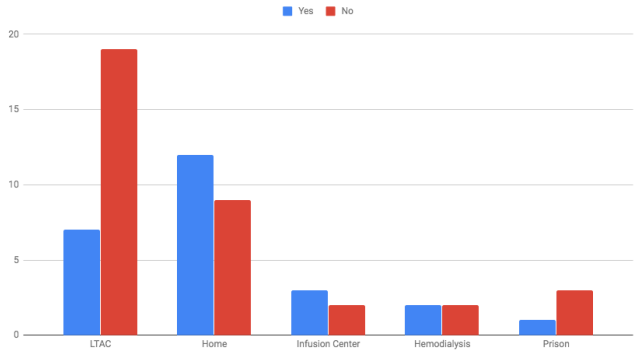


Figure 1: Process Map Representing the Current OPAT System

Figure 2: Number of Patients in Each OPAT Setting Whom Completed Antibiotic Course



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741. TravMil Surveillance of Travel-Related Illness in a Prospective Cohort of US Military Beneficiaries, 2010–2018

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Background. Increasing international travel places larger populations at risk for infections outside of their usual exposure. Deployed military personnel have unique risks for such infections. Our cohort's rates of travelers' diarrhea and influenza-like illness have been defined, but the rate of travelers with symptoms apart from a clinical syndrome has not. We present a survey of intra-travel symptoms of all travelers and confirmed diagnoses of ill-returned travelers in a cohort of military and civilian travelers.

Methods. TravMil is a prospective, multicenter observational study enrolling US military beneficiaries traveling outside the continental United States from 2010–2018; beneficiaries could also enroll after travel if they presented for a possible travel-related illness. Demographic information, intra-travel symptoms, and confirmed diagnoses were recorded.

Results. 2671 travelers embarked on 3050 trips: 63.1% male; median age 38 years (IQR 27, 57); median trip duration 20 days (IQR 13, 46). Common purposes of travel: military deployment (45.9%), vacation (23.7%), and visiting friends/relatives (10.9%). Ninety-seven travelers (3.2%) enrolled post-travel. Top regions of travel: Africa (31.5%), South and Central America/Caribbean (25.5%), and Southeast and North Asia/Oceania (19.4%). During travel, 56.6% experienced gastrointestinal (GI) symptoms, 11.9% respiratory symptoms, and 3.0% fever; of those, 10.3% sought medical care. Eighty returned travelers sought medical care (21 prospective enrollees vs. 59 post-travel enrollees): 5 vs. 17 malaria cases, 3 vs. 16 arbovirus infections, and 6 vs. 14 GI syndromes. All malaria cases in prospective enrollees were in military subjects. Post-travel enrollees accounted for 1 acute human immunodeficiency virus and 3 rickettsial infections.

Conclusion. A majority of our travelers experienced symptoms during travel. Post-travel diagnoses, although uncommon, emphasize needed improvements in the application of known risk mitigation strategies. Our findings can help clinicians optimize their pretravel counseling by focusing education on self-treatment of common travel-related symptoms, prevention of GI, arthropod-borne, and respiratory illness, and emphasizing symptoms that should prompt medical care.

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742. The Development, Implementation, and Feasibility of Multidisciplinary Treatment Planning Conference for Individuals with Unstable Substance Use Disorders and Active Infections Requiring Prolonged Antimicrobial Therapy: The OPTIONS-DC Model

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