readmissions. The Infectious Diseases team was consulted in 48% of cases, and the Antimicrobial Stewardship Team intervened in 26%, prompting de-escalation in a total of 28% of cases. *C. difficile* infections and adverse events occurred in 7% and 12% of readmissions respectively. The median drug acquisition cost of inpatient "EOA regimens" was $121 per readmission.

Conclusion. At our institution, OPAT "EOA regimens" were continued in 27% of hospital readmissions indicating a role for improved indication documentation and antimicrobial stewardship involvement.

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1924. Most Patients Tolerate Penicillin Administration Despite History of Nonanaphylactic Penicillin Allergy: A Systematic Review and Meta-Analysis

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Background. True allergy to penicillin is rare, despite the high frequency with which it is reported. Misrepresented allergy drives unnecessary use of alternative antibiotics which may be less effective, more toxic, and more expensive than the penicillins. While most patients reporting penicillin allergy are not prone to anaphylaxis, it is not currently known what percentage of these patients go on to fully tolerate systemic doses of penicillin-based antibiotics. This review aims to determine the tolerance rate in patients with non-anaphylactic penicillin allergy when challenged with systemic doses of penicillin-based antibiotics.

Methods. We searched MedLine, Embase, and Cochrane Library for publications with English language translations between the years 2000 and 2017. We included controlled trials, quasi-experimental, and observational studies of reportedly penicillin-allergic subjects who received at least one systemic dose of a penicillin in the form of a challenge. At least two independent reviewers extracted data from included studies, and assessed the quality of each included study. To generate primary outcome data, we calculated a summary estimate rate of penicillin tolerance from a pooled fraction of subjects receiving a penicillin with no adverse effects, among all subjects receiving a penicillin challenge.

Results. Initial literature search yielded 5,554 studies, of which 22 studies were ultimately included in our review. A total of 4,572 study participants, each with a history of penicillin allergy low risk for anaphylaxis, were challenged with systemic dosing of a penicillin. After weighting for sample size, an average of 94.8% [95% CI 93.3%, 96.3%] of these patients tolerated penicillin challenge without any adverse reaction.

Conclusion. In addressing the problem of penicillin allergy over-diagnosis, evaluation should go beyond risk for type 1 hypersensitivity. Our data suggest that 94.8% of 4,572 subjects with reported penicillin allergy determined to be low risk for anaphylaxis tolerated repeat administration of penicillin-based antibiotics without any adverse reactions. This review generates meaningful information useful to clinical predictive analytics, in evaluating and managing patients with a reported history of penicillin allergy.

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

1925. Vancomycin Treatment and Time to Adverse Drug Reactions During Outpatient Parenteral Antimicrobial Therapy (OPAT)

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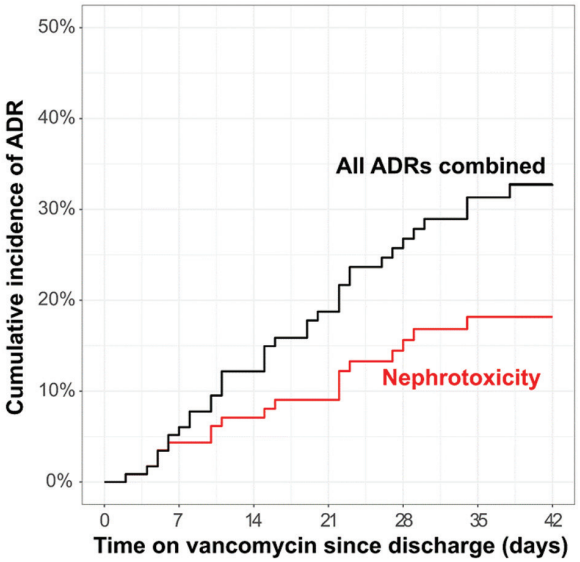
Background. The UNC Medical Center Outpatient Parenteral Antimicrobial Therapy (OPAT) program was started in 2015 to provide multidisciplinary monitoring and management of patients discharged on parenteral antimicrobials. Laboratory abnormalities are a frequent complication of antimicrobial therapy, as are drug reactions such as rash and diarrhea. We examined characteristics of incident adverse drug reactions (ADRs) observed among patients receiving parenteral vancomycin therapy over a two year period.

Methods. This was a retrospective cohort study of patients enrolled in the UNC OPAT program who received vancomycin July 2015–August 2017. Patients with end-stage renal disease receiving hemodialysis were excluded. The primary outcome was time-to-first ADR during the first 42 days of vancomycin therapy, estimated using Kaplan–Meier methods. Secondary outcomes included type of ADR and time-to-first nephrotoxicity ADR (>50% increase in serum creatinine). We also assessed indication for OPAT, comorbidities, and concomitant medications among patients with an ADR.

Results. One hundred sixteen patients were followed on vancomycin therapy for 3,367 person-days (~111 person-months). Risk of any ADR within the first 42 days of vancomycin therapy was 33% (95% CI 24%–42%) (Figure 1); risk increased steadily by 6%–8% during the first 4 weeks on vancomycin therapy. The 42-day risk of nephrotoxicity was 18% (95% CI 10%–26%) (Figure 1), and followed a similar trajectory to overall ADR risks over time on OPAT. Other ADR risks (%) were: neutropenia (<1,000 cells/mm^3), 5%; rash, 4%; thrombocytopenia (<100 × 10^3 cells/mm^3 and decrease >50%), 2%; and other, 7%. The most common indications for OPAT vancomycin were osteomyelitis (53%), joint infection (16%), and bacteremia (10%). The most common comorbidities were hypertension (54%) and diabetes (40%). Among patients who experienced an ADR, the most frequent concomitant medications included: NSAID, 62%; ertapenem, 27%; ACE-I, 24%; loop diuretic, 17%; and ARB, 12%.

Conclusion. Risk of ADR increases with duration of parenteral vancomycin therapy during OPAT. Nephrotoxicity was the most common type of ADR during vancomycin therapy. Use of concomitant nephrotoxins during OPAT vancomycin therapy should be evaluated.

Figure 1. Cumulative risk of all ADRs combined (black) and nephrotoxicity (red) during OPAT vancomycin therapy.



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

1926. Evaluation of Safety and Effectiveness of Continuous Infusion Ceftolozane/Tazobactam as Outpatient Parenteral Antimicrobial Therapy

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Background. Ceftolozane/tazobactam (C/T) is indicated for complicated intra-abdominal infections and complicated urinary tract infections (cUTI). Its spectrum of activity extends to most Gram-negative bacteria including multidrug-resistant (MDR) *Pseudomonas aeruginosa* and extended-spectrum β-lactamase-producing enterobacteriaceae. Current dosing requires 8-hour intervals in order to meet appropriate concentrations above the MIC, making outpatient delivery logistically difficult. C/T is stable up to 24 hours at room temperature, allowing for potential continuous infusion. This study evaluated patients who received this novel dosing regimen at an outpatient infusion center.

Methods. This study was a nonrandomized, retrospective chart review of adult patients who received C/T August 2016–January 2018 for any indication, including off-label, in the outpatient setting as a continuous infusion. Primary outcome evaluated was symptom resolution at the end of therapy documented in outpatient records. Secondary outcomes were microbiologic resolution at the end of therapy, if available, and patient satisfaction via a modified patient satisfaction survey assessed from follow-up phone call to patient.

Results. Seven patients received C/T in the outpatient setting and were included in the study. Infections treated varied and included pneumonia (three), cUTI (two), skin and soft tissue (one), and bacteremia (one). Most patients received 4.5 g (with one receiving 9 g) C/T over 24 hours mixed with normal saline via an ambulatory infusion

pump refilled each day at an outpatient infusion center. All seven patients were infected with *P. aeruginosa* (four being MDR) with one patient co-infected with *E. coli.* Susceptibility testing was performed on three *P. aeruginosa* isolates (two susceptible and one intermediate). Six of seven patients reported symptom resolution at the end of therapy. Three patients were microbiologically evaluable at the end of therapy and all three demonstrated microbiologic resolution. Three of seven patients completed the satisfaction survey with all three reporting overall satisfaction. No adverse events were documented from any patients.

Conclusion. Ceftolozane/tazobactam administered as a continuous infusion in the outpatient setting is a safe, effective, and convenient way to treat complicated *P. aeruginosa* infections.

Disclosures. **B. M. Jones**, Merck: Grant Investigator, Grant recipient. **C. Bland**, Merck: Grant Investigator and Speaker's Bureau, Grant recipient and Speaker honorarium.

1927. Preference for Intravenous vs. Oral Antibiotics at Hospital Discharge

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Background. This pilot study analyzes decisions of infectious diseases faculty: hospital discharge with oral vs. intravenous antibiotics in the context of an academic OPAT (outpatient parenteral antibiotic therapy) system.

Methods. We created a survey of eight patient scenarios culled from the OPAT records of Tufts Medical Center. Six case scenarios had clinical equipoise, while two control scenarios had a clear indication for discharge with intravenous antibiotics. Infectious diseases attendings affiliated with Tufts Medical Center were surveyed. Respondents were asked preferences for oral vs. intravenous antibiotics for each scenario, their confidence in each decision, and demographics. Providers' antibiotic scores equaled the sum of responses to the six case scenarios (1 point for intravenous, 0 points for oral). Self-assessments of confidence in each decision were on a scale of 0 to 100% (100% indicating complete confidence).

Results. Nine of thirty responded to the survey. All reported US-based training/experience. All indicated preference for intravenous antibiotics in the two control scenarios. The average antibiotic score for all providers was 2.9. Factors trended with choosing oral antibiotics: ≤5 years of experience and >12 weeks of inpatient service per year.

	All	OPAT Providers, *N* = 6	Non-OPAT Providers, *N* = 3	≤5 Years' Experience *N* = 3	>5 Years' Experience, *N* = 6	≤12 Weeks Inpatient, *N* = 6	>12 Weeks Inpatient, N = 3
Average antibiotic score	2.9	2.8	3	2	3.3	3.3	2
Average confidence level %	72	72	73	64	76	71	74

"OPAT providers" = MDs who see OPAT patients as outpatients.

Conclusion. Although in reality all six case scenario patients had been discharged on intravenous antibiotics, respondents chose oral antibiotics almost 50% of the time. This pilot study demonstrates potential for antibiotic stewardship regarding intravenous recommendations.

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

1928. Comparisons of 30-Day Admission and 30-Day Total Healthcare Costs Between Patients Who Were Treated With Oritavancin (ORI) or Vancomycin (VAN) for a Skin Infection in the Outpatient Setting

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Background. Hospital admission is a key cost driver in ABSSSI patients. Data suggest many ABSSSI patients are unnecessarily hospitalized and can be effectively and safely managed as outpatient (OP) at substantially lower cost. ORI a single-dose treatment has the potential to shift care from the inpatient (IP) to the OP setting in selected patients. In phase III trials, a single dose of ORI had comparable efficacy and safety to twice daily VAN for 7–10 days in ABSSSI patients who were treated in OP. Real-world comparative data on outcomes in ABSSSI patients using ORI in OP are limited. This study sought to compare the 30 day hospital admission rates and mean (standard deviation (SD)) healthcare costs among ABSSSI patients who received ORI or VAN as an OP.

Methods. Retrospective cohort analysis of ORI and VAN patients in the Truven Health MarketScan® Databases in 2016. Inclusion criteria: age ≥18 years; OP claim for ORI or VAN (index day (d)); a diagnosis of skin infection ≤7 d prior and 3 d after the index day; no IP discharge in 3 d prior to index day; ≥180 d of continuous enrollment prior to index day; ≥60 d of continuous enrollment post index day. Outcomes: 30 d hospital admissions and 30 d total healthcare costs.

Results. In 2016, 120 and 6,695 patients who received ORI and VAN, respectively, met inclusion criteria. Groups were well balanced at baseline (table). ORI patients had a significantly lower 30 d admission rate vs. VAN patients (5.8% vs. 16.2%, respectively, $P = 0.002$). Mean (SD) cost 30 d post index were comparable between ORI and VAN patients ($10,096 (8,865) vs. 12,779 (28,773), respectively, $P = 0.3$).

Conclusion. Results suggest ORI provides a single-dose alternative to multi-dose VAN for treatment of ABSSSI in OP and may result in lower 30 d hospital admission rates.

	ORI	VAN
Baseline characteristics		
Mean (SD) age, years	54.9 (16.8)	52.8 (16.5)
Mean (SD) Deyo Charlson comorbidity index	1.3 (1.8)	1.5 (2.2)
Skin infection		
Cellulitis/abscess	90.0%	86.6%
Wound infection	10.0%	14.4%
Other skin infections	17.5%	14.0%
Life-threatening condition	13.3%	12.%
Non-life-threatening systemic symptoms	14.2%	19.1%
Hospitalization during baseline	43.3%	36.1%
Prior mean (SD) total healthcare costs	$47,354 ($33,567)	$35,183 ($74,109)

Disclosures. **T. Lodise**, Melinta Therapeutics, Inc.: Consultant, Consulting fee. **E. Packnett**, Melinta Therapeutics, Inc.: Research Contractor, Research grant. **S. Armstrong**, The Medicine's Company: Employee, Salary. **M. Redell**, Melinta Therapeutics, Inc.: Employee and Shareholder, Salary.

1929. Risk of Acute Kidney Injury in Combat-Injured Patients Associated With Concomitant Vancomycin and Extended-Spectrum β-Lactam Antibiotic Use

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Background. Studies of vancomycin (VANC) and piperacillin–tazobactam (VPT) induced acute kidney injury (AKI) have included diverse populations obscuring clinical generalizations. To our knowledge, previous studies have omitted combat-related trauma patients despite frequent exposure to broad-spectrum antimicrobials. Our objective was to analyze whether combination therapy with VPT was associated with an increased risk of AKI compared with VANC and other broad-spectrum β-lactam antibiotics (VBL).

Methods. Patients within the Trauma Infectious Disease Outcomes Study (TIDOS) who received ≥48 hours concomitant VPT or VBL started within 24 hours of each other were assessed. Exclusion criteria were receipt of renal replacement therapy and baseline creatinine >1.5 mg/dL or missing. Based on prior studies, AKI was defined by meeting any of the RIFLE, AKIN or Vanc Consensus Guidelines criteria 3–7 days after therapy initiation. Glomerular Filtration Rate (GFR) was calculated using Modification of Diet in Renal Disease (MDRD) equation.

Results. Of 2692 patients, 39 patients who received VPT and 197 who received VBL (172 meropenem, 17 imipenem-cilastatin, and 8 cefepime) were included with median ages of 25 and 24 years old, respectively. Initial median GFRs were 138mL/minute in both groups. Gender distribution was equal with 97% males receiving VPT and 99% VBL. Thirty-five (90%) patients in VPT and 186 (94%) in VBL had an Injury Severity Score>15 ($P = 0.28$). Median duration of VANC therapy was 6 and 8 days for VPT and VBL ($P = 0.36$). Injuries were sustained in Afghanistan in 82% treated with VPT and 92% with VBL ($P = 0.06$). The groups differed by US-based hospital ($P = 0.06$), and presence of blast injury which was more common in VBL ($P < 0.001$). In the VBL group, incidence of AKI was 9.1% compared with 12.8% in the VPT group ($P = 0.55$). Median time to AKI was 6 days (IQR 5–6) for those receiving VPT and 4 days (IQR 3–6) for VBL.