Table 1. Inclusion/Exclusion criteria

Inclusion Criteria	ICD-9	ICD-10
1) Diagnosis of ABSSSI		
Surgical site infection	998.5x	T81.4%
Posttraumatic wound infection not elsewhere classified	958.3x	-
Cellulitis and abscess	681.xx, 682.xx	L03.%
Erysipelas	035.xx	A46.%
Other local infections of skin and subcutaneous tissue	686.x	L08.%
Exclusion Criteria*	ICD-9	ICD-10
1) Diagnosis of Diabetic Foot Infection	680.7, 681.1, 681.10, 682.7, 917.1, 917.3, 917.7, 917.9, 707.1, 707.14-707.19	L02.6%, S90.41%, S90.42%, S90.45%, S90.81%, S90.82%, S90.85%, I70.234, I70.235, I70.244, I70.245, I70.334, I70.335, I70.344, I70.345, I70.434, I70.435, I70.444, I70.445, I70.534, I70.535, I70.544, I70.545, I70.634, I70.635, I70.644, I70.645, I70.734, I70.735, I70.744, I70.745, L97.4%, L97.5%, E10.621, E11.621
2) Diagnosis of Necrotizing Fasciitis	728.86	M72.6
3) Diagnosis of Gangrene and Associated Complications	040.0, 785.4, 440.24	A48.0, E10.52, E11.52, I70.26%, I70.36%, I70.46%, I70.56%, I70.66%, I70.76%
4) Diagnosis of Metastatic Cancer	196.x, 197.x, 198.x, 198.8x	C77.%, C78.%, C79.%
5) Hospice**	--	--
6) Aetna Compassionate Care Program***	--	--

* Exclusions identified from claims with service dates any time in the study period and diagnoses in any diagnostic position
** Healthcare financing administration place of service code 34
*** Identified using Aetna's Care Management database

Table 2. Cost and LOS for inpatients who received LAA and inpatients who were potential outpatient LAA pathway candidates

	Inpatient encounters with LAA use (N=7)	Inpatients encounters without LAA use* (N=6,998)
Mean allowed cost (SD), $	$14,295 ($10,209)	$23,194 ($55,893)
Cost savings versus without LAA use, $	$8,899	-
Mean LOS (SD), days	4.1 (2.5)	9.0 (14.1)
Cost savings versus without LAA use, days	4.9	-

*Inpatient encounters without LAA use who were considered potential candidates for outpatient IV LAA pathways as described in methods
LAA, long acting antibiotic SD, standard deviation LOS, length of stay

Disclosures. **K. R. Keyloun**, Allergan: Employee, Salary **N. Bonine**, Allergan: Employee, Salary

1112. Peripherally Inserted Central Catheter Complications in Rural vs. Uban Children Receiving Long-Term Parenteral Antimicrobial Therapy

Natasha Beachum, BS[1] and Walter Dehority, MD, MSc[2]; [1]The University of New Mexico Health Sciences Center, Albuquerque, New Mexico, [2]Pediatrics, University of New Mexico, Albuquerque, New Mexico

Session: 141. Clinical Practice Issues
Friday, October 6, 2017: 12:30 PM

Background. Peripherally inserted central catheters (PICC) are used for treating infections requiring prolonged intravenous antibiotic therapy (IVAT) in children. Given the lack of data on rural PICC use as well as the rural nature of our state, we studied the safety of home PICC use for treating infections in children living in rural settings.

Methods. We identified children <18 years admitted from January 1, 2005 to March 1, 2014 to the University of New Mexico Hospital (UNMH) through analysis of 43 different ICD-9 and CPT codes indicative of PICC placement, with analysis of the medical record to identify patients discharged on IVAT. All data were entered into REDCap and analyzed on Stata. We recorded demographic data, the antibiotic used, the duration/indication for the PICC, and the type/timing of complications. To classify rural vs. urban residence, we used the rural-urban continuum code (RUCC) from U.S. Census data, and the driving time in hours (h) to the nearest level 1,2 or 3 trauma center and UNMH using MapQuest. All patients had either weekly home health or clinic visits, but none utilized an outpatient parenteral antimicrobial therapy (OPAT) clinic. Linear regression models assessed for differences between outcome and response variables.

Results. Of 866 subjects with a PICC, 221 were discharged on IVAT. 134 (60.6%) were boys and 87 (39.4%) were girls (mean age 9.8 years). The mean driving time to the nearest level 1, 2, or 3 trauma center was 0.6 hours (range 0.1–3.0 hours), while the mean driving time to UNMH was 1.3 hours (range, 0.1–5.0 hours). PICCs were utilized for a mean of 26.1 days at home. The most common antibiotics used were tobramycin (n = 41) and nafcillin (n = 40). Osteoarticular infections and cystic fibrosis exacerbations were the most common indications for PICC use (68.8%). 47 children (21.3%) experienced complications associated with their PICC at a mean of 24.7 days from insertion, most commonly occlusion (n = 13, 27.7%) or accidental removal (n = 13, 27.7%). 40 PICC's (18.1%) were removed prematurely due to a complication. No association was found between RUCC's or driving times to UNMH or the nearest level 1, 2 or 3 trauma center with any of these complications nor with complications overall (P = 0.11 to 0.96).

Conclusion. Our study demonstrates that home IVAT with a PICC is safe in children in rural locales.

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

1113. Injection Drug Use and Infectious Disease Practice: A National Provider Survey

Alison B. Rapoport, MD[1,2]; Susan E. Beekmann, RN, MPH[3,4]; Philip M. Polgreen, MD[3,4] and Christopher F. Rowley, MD/MPH[1,2,5]; [1]Beth Israel Deaconess Medical Center, Boston, Massachusetts, [2]Harvard Medical School, Boston, Massachusetts, [3]University of Iowa Carver College of Medicine, Iowa City, Iowa, [4]Emerging Infections Network, Iowa City, Iowa, [5]Harvard School of Public Health, Boston, Massachusetts

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Friday, October 6, 2017: 12:30 PM

Background. The opioid epidemic has swept across the U.S. at a staggering rate, with an estimated half million to one million persons injecting drugs annually. Rates of hospitalization for injection drug use (IDU)-related infection have risen precipitously, comprising an escalating proportion of infectious diseases provider volume in highly impacted regions.

Methods. In March 2017, the Emerging Infections Network surveyed their national network of infectious diseases (ID) physicians to evaluate perspectives relating to the care of persons who inject drugs (PWID), including the frequency of, and management strategies for, IDU-related infection, the availability of addiction services, and the evolving role of ID physicians in the management of addiction.

Results. Over half (53%; N = 672) of 1,276 members with an adult ID practice participated; 78% (n = 526) reported treating PWID. Of 526 respondents, 464 (88%) reported seeing ≥1 patient per month with an IDU-related infection; 228 (43%) reported ≥6 per month. In the past year, 79% of respondents reported the majority of IDU-related infections seen required ≥2 weeks of parenteral therapy and reported frequently encountering skin and soft-tissue infections (61%), bacteremia/fungemia (53%), and endocarditis (50%). Strategies most commonly employed for management of prolonged parenteral antibiotic therapy included: completion of entire course on inpatient unit (by 41%) and transfer to supervised facility for completion (35%). Only 35% of respondents agree/strongly agree their health system offers comprehensive treatment of substance use disorders (N = 181). Though nearly half of respondents felt that ID providers should actively manage substance use disorders (46%; N = 241), only 3% reported being waivered to prescribe buprenorphine for treatment of opioid use disorder.

Conclusion. The majority of infectious diseases physicians frequently care for PWID with serious infections. There is significant diversity amongst providers with regards to the availability of comprehensive addiction services as well as perceptions regarding the role providers should play in the management of addiction. Guidelines for the management of serious infections and concurrent addiction in the midst of the escalating national opioid crisis should be considered.

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

1114. Implementation of a Standardized Protocol for Hospitalized Patients Who Inject Drugs and Require Long-Term Antibiotics Reduces Length of Stay Without Increasing 30-Day Readmissions

Robert J. Rolfe Jr., MD[1]; Ronnie E. Mathews, MD[2]; J Martin Rodriguez, MD[2]; Cayce S. Paddock, MD[2]; Peter S. Lane, DO[2]; Benjamin B. Taylor, MD[2] and Rachael A. Lee, MD[3]; [1]Internal Medicine, University of Alabama at Birmingham, Birmingham, Alabama, [2]University of Alabama at Birmingham, Birmingham, Alabama, [3]Infectious Diseases, University of Alabama at Birmingham, Birmingham, Alabama

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Friday, October 6, 2017: 12:30 PM

Background. Injection drug use (IDU) is a growing epidemic, and persons who inject drugs (PWID) are at high risk for infection. IDU is a barrier to outpatient parenteral antimicrobial therapy (OPAT) and provider experience and knowledge may lead to variation in patient care. Recognizing this problem, a multi-disciplinary team implemented a protocol for management of PWID requiring IV antibiotics. The main goals were to standardize the evaluation and risk assessment of PWID with infections and to provide substance abuse counseling and treatment in order to decrease length of stay (LOS).

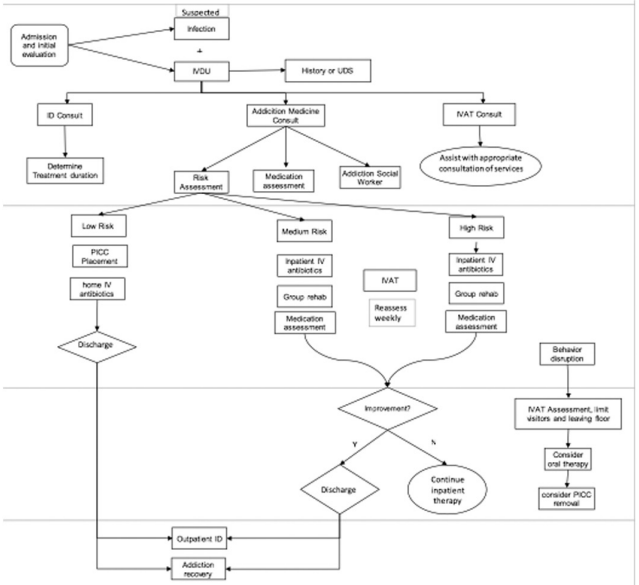
Methods. A protocol was developed outlining the evaluation, diagnosis, risk-assessment, treatment, maintenance, and follow up of PWID requiring prolonged IV antibiotics (Figure 1). Patients meeting inclusion criteria were identified and the multidisciplinary team assessed the patient. ID confirmed the diagnosis and outlined the treatment plan, and addiction medicine performed a 9-point risk assessment. Low-risk patients were discharged to complete OPAT. Medium risk and high-risk patients remained hospitalized and were offered group therapy, opioid replacement therapy if applicable, and were reassessed weekly for discharge. These patients were compared with previously identified PWID requiring antibiotics prior to the protocol implementation.

Results. 37 patients pre-protocol were compared with 34 patients following implementation. Demographics were similar except 56% of the post-implementation group were diagnosed with a concomitant psychiatric disorder vs. 27% in the pre-implementation group (P = 0.01). There was no statistical difference between the number of patients who left AMA in either group (13.5 % pre; 23.5% post; p 0.28) or the

number of readmissions (51.4% pre; 32.4% post; $P = 0.10$). However, the median LOS was significantly reduced in the post implementation group (18. days vs. 42 days; P <0.001). There have been 418 hospital days saved post implementation.

Conclusion. Implementation of a standardized protocol with a multidisciplinary team and risk stratification to determine appropriate patients for discharge has led to improvement in LOS as well as improved addiction care for hospitalized PWID requiring long-term antibiotics.

Figure 1: Flow Diagram For PWID Requiring IV Antibiotics



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

1115. Systematic Review of Professional Liability when Prescribing B-Lactams for Patients with a Known Penicillin Allergy

Meghan Jeffres, PharmD[1]; Elizabeth Hall-Lipsy, JD, MPH[2]; S. Travis King, PharmD, BCPS[3] and John Cleary, PharmD[4]; [1]Department of Clinical Pharmacy, University of Colorado Skaggs School of Pharmacy, Aurora, Colorado, [2]Department of Pharmacy Practice, University of Arizona, Tucson, Arizona, [3]University of Mississippi School of Pharmacy, Jackson, MS, [4]St. Dominic Hospital, Jackson, Mississippi

Session: 141. Clinical Practice Issues
Friday, October 6, 2017: 12:30 PM

Background. Patients labeled as penicillin allergic are more likely to receive second line non-β-lactam antibiotics, experience higher rates of treatment failure, and incur higher antibiotic costs. Fear of litigation has been identified as a reason clinicians avoid using β-lactams in a patient with a penicillin allergy. The systematic review objective is to describe medical negligence and malpractice cases in which known penicillin allergy patients received a β-lactam and experienced an adverse reaction.

Methods. Lexis-Nexus and Google Scholar were used to identify relevant legal cases. Variables collected from each case included date of publication, legal jurisdiction, date of injury, plaintiff and defendant demographics, health care setting, plaintiff clinical outcome, and legal outcome.

Results. Twenty-seven unique cases met inclusion criteria. The earliest case was published in 1959 and the most recent in 2013. The highest number of cases filed ($n = 7$) occurred in the most recent 10 year segment, from 2005 to 2015. Eighteen cases involved the receipt of a penicillin-based antibiotic; of these cases with a known legal outcome, the plaintiff (patient) prevailed or settled in 3 cases and defendants (providers) prevailed in 7 cases. Seven cases involved the receipt of a cephalosporin; of these cases with a known legal outcome, the plaintiff settled with physicians prior to trial in 1 case and defendants prevailed in 3 cases. Two cases involved the receipt of a carbapenem. Defendants prevailed in 1 case and the legal outcome of the other case is unknown. In cases where the defense successfully moved for summary judgment, judges cited a lack of scientific evidence demonstrating that a cephalosporin or carbapenem were contraindicated for a patient with a penicillin allergy.

Conclusion. The cases with published legal outcomes found limited professional liability and identify clear precedence for clinicians who prescribed cephalosporins or carbapenems to a patient with a known penicillin allergy. These results should decrease litigation fears of providers and risk managers within healthcare systems.

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

1116. Adverse Drug Reactions Among Patients Enrolled in an Outpatient Parenteral Antimicrobial Therapy (OPAT) Program 2015–2016 at UNC Medical Center

Vahini Chundi, MD[1]; Anh Eichholz, PA-C[2]; Onyeka Nwankwo, MD[3]; Alan Kinlaw, PhD[4]; Wesley Kufel, PharmD[2]; Tenesha Medlin, RN[2]; Lisa Fletcher, PharmD[5]; Ashley Marx, PharmD[6] and Claire Farel, MD, MPH[7]; [1]University of North Carolina, Chapel Hill, North Carolina, [2]UNC Medical Center, Chapel Hill, North Carolina, [3]University of North Carolina School of Medicine, Chapel Hill, North Carolina, [4]Sheps Center for Health Services Research, Chapel Hill, North Carolina, [5]UNC Medical Center, chapel Hill, North Carolina, [6]Practice Advancement and Clinical Education, UNC Eshelman School of Pharmacy, Chapel Hill, North Carolina, [7]130 Mason Farm Rd CB 7030, University of North Carolina at Chapel Hill Division of Infectious Diseases, Chapel Hill, North Carolina

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Background. The UNC Medical Center OPAT program was started in 2015 to provide multidisciplinary monitoring and management of patients discharged on parenteral antimicrobials. We examined characteristics of incident adverse drug reactions (ADRs) observed in our initial cohort of OPAT patients.

Methods. We abstracted electronic health records for the first 250 patients enrolled in the OPAT program. 223 patients with sufficient recorded data for entire OPAT course were included in the analysis. ADRs meeting criteria as detailed in Table 1 were collected and further stratified by antimicrobial regimen.

Results. 57 patients (26%) experienced at least one ADR during OPAT therapy. The frequency of specific ADRs associated with OPAT therapies are provided in Figure 1. B-lactam regimens were most frequently associated with liver dysfunction, while combinations of β-lactams and vancomycin were associated with kidney dysfunction. Median days on OPAT regimen was 19 days (IQR: 10–29) for patients who experienced an ADR compared with 39 (IQR: 30–44) for patients who did not experience an ADR.

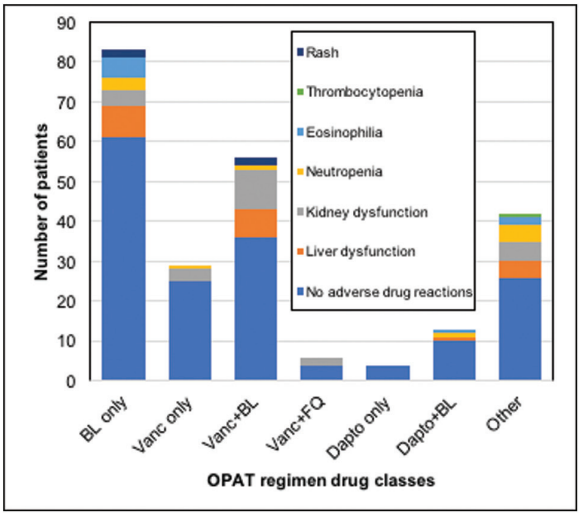
Conclusion. ADRs were most commonly observed within the first three weeks of therapy, particularly for patients receiving vancomycin and a β-lactam antimicrobial in combination. These results underscore the critical role of a multidisciplinary team in providing laboratory monitoring and response to abnormal results for OPAT patients. In addition, closer monitoring within the first three weeks of therapy may provide opportunities for regimen changes or dose adjustment to avoid toxicities.

Table 1. Type of ADR experienced by OPAT patients[a] at UNCMC, 2015–16

Type of ADR	No. of Patients ($n = 57$)	% of ADRs
Liver dysfunction (ALT>100)	20	30
Kidney dysfunction (SCr increase >50%)	24	36
Neutropenia (<1000 cells/mm^3)	10	15
Eosinophilia (>500 cells/mm^3)	8	12
Thrombocytopenia (<100 x 10^{3}and decrease >50%)	1	1
Rash	4	6

[a]166/223 (74%) OPAT patients did not experience an ADR
Of 57 patients with at least 1 ADR during OPAT, 8 had 2 types, and 1 had 3 types; ADR patient counts therefore sum to 67.

Figure 1. Type of ADR experienced by OPAT drug class 2015–16.



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1117. Variation in Reporting of Penicillin Allergy and its Consequences: an Evaluation of 13 Hospitals

Florian Daragjati, PharmD, BCPS[1] David Silver, PharmD, BCPS[2]; Roy Guharoy,