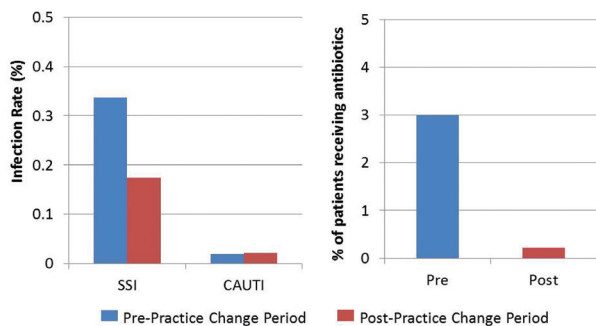


Figure 2: Impact of prescreening urinalysis practice change on antibiotic prescriptions, Surgical Site Infection (SSI) rate, and Catheter-Associated Urinary Tract Infection (CAUTI) rate.



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

#### 246. Antimicrobial Stewardship Program (ASP) Efforts to Reduce Antimicrobial Usage in Geriatric Patients without Affecting Outcomes

James Mauro, PharmD<sup>1</sup>; Saman Kannangara, MD<sup>2</sup>; Roman Tuma, MD<sup>2</sup> and David Livert, PhD<sup>3,4</sup>; <sup>1</sup>Pharmacy, Easton Hospital, Easton, Pennsylvania, <sup>2</sup>Infectious Diseases, Easton Hospital, Easton, Pennsylvania, <sup>3</sup>Internal Medicine, Easton Hospital, Easton, Pennsylvania, <sup>4</sup>Penn State University, Lehigh Valley, Center Valley, Pennsylvania

**Session:** 52. Antimicrobial Stewardship: Special Populations  
Thursday, October 4, 2018: 12:30 PM

**Background.** There is limited literature evaluating ASP outcomes in patients 65 years and older. The primary objective of this study was to show that ASP efforts to deescalate and/or discontinue antimicrobial therapy in older patients did not lead to an increased rate of 30-day hospital readmissions due to treatment failure. The secondary objective was to show a decrease in antimicrobial expenditure per adjusted patient day (APD).

**Methods.** A retrospective chart review was performed to compare the rates of 30-day readmissions of patients 65 years and older who received ASP interventions between January and June 2017 with a control sample who received antibiotics between January and June 2015 (pre-ASP). Patients were included if they received antibiotics for pneumonia (PNA), urinary tract infection (UTI), acute bacterial skin and skin structure infection (ABSSSI) and complicated intra-abdominal infection (cIAI). The ASP team met daily to review patients identified by the clinical pharmacist. ASP interventions consisted of de-escalation of empiric or definitive therapy, change in the duration of therapy or discontinuation of therapy. Treatment failure was defined as re-admission due to re-infection or a new infection (e.g., *Clostridium difficile*).

**Results.** Overall, 461 patients (150 control; 311 intervention) were included. The 30-day readmission rate for all infections decreased during the intervention period (10.7% vs. 3.9%,  $P = 0.004$ ). There was a statistically significant decrease in 30-day readmissions in the PNA subgroup (9.8% vs. 2.9%,  $P = 0.038$ ), a marginally significant decrease among UTI patients (12.5% vs. 4.7%,  $P = 0.097$ ), and no statistically significant change in the ABSSSI (5.6% vs. 8.6%,  $P = 0.694$ ) and cIAI (20.8% vs. 6.7%,  $P = 0.233$ , CI) subgroups. The total APD was 16,267 (control) and 15,487 (intervention). Total antimicrobial expenditure during the control period was \$379,643 (\$23.33/APD) vs. \$67,721 (\$4.37/APD) during the intervention period.

**Conclusion.** ASP efforts did not lead to an increase rate of 30-day readmissions due to treatment failure. Furthermore, there was a statistically significant decrease in readmission rates in the intervention group as well as a large decrease in antimicrobial expenditure per APD.

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

#### 247. Sustaining Excellence of Care During a Fluid Shortage: Snapshot of Antibiotic Mitigation Strategies Following Hurricane Maria

Rachel V. Marini, PharmD<sup>1</sup>; Brian A. Potoski, PharmD<sup>2</sup>; William R. Wilson, PharmD<sup>3</sup>; Bonnie Falcione, PharmD, BCPS AQ-ID<sup>4</sup>; Lloyd Clarke, B Sc (Hons)<sup>4</sup>; Alfred I Altrelle, PharmD<sup>1</sup>; Tina Khadem, PharmD<sup>5</sup>; Ryan K. Shields, PharmD<sup>6</sup>; Cornelius J. Clancy, MD<sup>6</sup>; M. Hong Nguyen, MD<sup>7</sup>; Paige Gross, PharmD<sup>8</sup>; J. Alexander Viehman, MD<sup>3</sup> and Janine Then, PharmD<sup>8</sup>; <sup>1</sup>Pharmacy, UPMC Presbyterian Hospital, Pittsburgh, Pennsylvania, <sup>2</sup>University of Pittsburgh, Pittsburgh, Pennsylvania, <sup>3</sup>Antibiotic Management Program, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, <sup>4</sup>Pharmacy/Infectious Diseases, UPMC, Pittsburgh, Pennsylvania, <sup>5</sup>Outreach Antimicrobial Stewardship, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, <sup>6</sup>University of Pittsburgh, School of Medicine, Pittsburgh, Pennsylvania, <sup>7</sup>Infectious Disease, University of Pittsburgh, Pittsburgh, Pennsylvania, <sup>8</sup>UPMC Presbyterian Hospital, Pittsburgh, Pennsylvania

**Session:** 52. Antimicrobial Stewardship: Special Populations  
Thursday, October 4, 2018: 12:30 PM

**Background.** Intravenous (IV) antibiotics (ABX) are standard for treatment of many inpatient infections. A devastating Puerto Rico hurricane in September 2017 resulted in critical shortages of IV ABX and fluids. In response, a comprehensive

review of viable mitigation strategies related to antimicrobials was coordinated at our center to ensure continued excellence in care was provided to all patients.

**Methods.** A multidisciplinary mitigation task force (MTF) was established to begin immediate fluid conservation efforts from an antimicrobial perspective.

**Results.** First, ABX regimens were converted to oral equivalents where clinically appropriate. Second, the ABX stewardship team (ASP) offered alternatives to IV ABX that required a large volume of fluid for reconstitution (e.g., ampicillin-sulbactam (A/S, 400 mL fluid/day), meropenem (MER, 300 mL fluid/day)). Third, through prospective audit and feedback (PAF), we transitioned patients from A/S ( $n = 37$ ), cefazolin ( $n = 21$ ), and IV doxycycline ( $n = 4$ ) to either oral or alternative IV therapies. We completed additional PAF transitions of IV metronidazole ( $n = 15$ ) and MER ( $n = 7$ ). Lastly, 24 ABX products were transitioned to alternative routes of delivery or to diluent fluids. Products were transitioned from mini bags to IV push ( $n = 10$ ) and IV syringe pump ( $n = 10$ ). Each product transition required coordinated efforts from over 10 teams including electronic ordering. Education consisted of 20 newsletters created for nursing and 10 order verification packets created for pharmacists. Metrics were established to ensure sustained impact through bi-weekly ABX scorecards. After 6 days of IV metronidazole ASP restriction, use decreased 52% from baseline. With the transitions in place, an average of approximately 100 liters of fluid was conserved per week.

**Conclusion.** The immediate and collective response of the MTF allowed for the continued capability to provide IV ABX for patient care as supplies fluctuated. Continued education supported safe transitions. Further data will determine the impact of the fluid shortage on patient outcomes once critical supply levels have resolved. These efforts establish a foundation for ongoing initiatives after shortages are resolved.

**Disclosures.** M. H. Nguyen, Merck: Grant Investigator, Research grant  
Astellas: Grant Investigator, Research grant

#### 248. Antimicrobial Therapy for Suspected Urinary Tract Infection in Advanced Cancer Patients Transitioning to Comfort Measures

Tianyun Wang, BS<sup>1</sup>; Rupak Datta, MD PhD<sup>2</sup>; Mojun Zhu, MD<sup>2</sup>; Vincent Quagliarello, MD, FIDSA<sup>2</sup>; Louise Marie Demby, MD, MS, MBA, FSHEA<sup>2</sup> and Manisha Juthani-Mehta, MD, FIDSA, FSHEA<sup>2</sup>; <sup>1</sup>Epidemiology of Microbial Diseases, Yale School of Public Health, New Haven, Connecticut, <sup>2</sup>Department of Internal Medicine, Section of Infectious Diseases, Yale School of Medicine, New Haven, Connecticut

**Session:** 52. Antimicrobial Stewardship: Special Populations  
Thursday, October 4, 2018: 12:30 PM

**Background.** Antimicrobials for suspected urinary tract infection (UTI) in advanced cancer patients transitioning to comfort measures (CM) may benefit from stewardship intervention.

**Methods.** We identified adults  $\geq 65$  years with advanced cancer who had  $\geq 1$  urine culture obtained during admission to Yale New Haven Hospital from July 2014 to October 2016 that involved transition to CM. We evaluated whether patients met 2017 National Healthcare Safety Network criteria for symptomatic urinary tract infection (UTI). Antimicrobials for suspected UTI and total calendar days of therapy including postdischarge days were evaluated. Factors associated with antimicrobial use were assessed using  $\chi^2$  or Fisher's exact testing and fitted in a modified multivariable Poisson regression model.

**Results.** We identified 327 adults with advanced cancer and  $\geq 1$  urine culture obtained during admission involving transition to CM. Median age was 74 years (range, 65-99), 48% ( $N = 157$ ) were male, and 73% ( $N = 239$ ) had solid tumors, 21% ( $N = 70$ ) had liquid tumors, and 6% ( $N = 18$ ) had unknown primary tumors. Overall, 306 (94%) patients with suspected UTI did not meet criteria for symptomatic UTI. Of these, 14% ( $N = 43/306$ ) received antimicrobials for suspected UTI resulting in 273 total calendar-days of therapy. Antimicrobial use for suspected UTI was associated with asymptomatic or symptomatic bacteriuria or candiduria (Table 1). In a multivariable model adjusted for gender, length of stay, liquid tumor, and UTI signs or symptoms, antimicrobial use remained associated with bacteriuria or candiduria (RR = 29.0, 95% CI 11.6, 72.6).

**Conclusion.** In advanced cancer patients transitioning to CM, inappropriate antimicrobial use for suspected UTI is independently associated with bacteriuria or candiduria but not with UTI signs or symptoms. These findings highlight a potential target for diagnostic (i.e., restricting urine culture orders) and antimicrobial stewardship in this population to promote comfort at the end of life.

**Table 1:** Antimicrobial Use for Suspected UTI According to Urine Culture and Associated Signs or Symptoms

Urine culture	Antimicrobial Use		P value
	Yes (N = 43)	No (N = 263)	
Growth <sup>a</sup>	38	30	<.001
No growth	5	233	
UTI signs or symptoms			0.60
Present	6	28	
Absent	37	235	

<sup>a</sup>Bacterial or fungal growth.

**Disclosures.** M. Juthani-Mehta, Iterum Therapeutics: Scientific Advisor, Consulting fee