rate of recurrent cellulitis in the prophylactic period was 0.31 episode/patient-year, significa-
tively lower than that of 0.77 episodes/patient-year in the non-prophylactic period (P = 0.004). The common underlying diseases of enrolled patients included diabetes mellitus (73, 35.4%), tinea pedis (69, 33.5%), impaired venous drainage (20, 9.7%), joint replacement of lower extremity (13, 6.3%) and edema status including congest-
tive heart failure (9, 9.2%), chronic renal failure (15, 7.3%), and cirrhosis (8, 3.9%). In multivariate analysis of Poisson regression model, penicillin prophylaxis was asso-
ciated with lower recurrence (relative risk (RR), 0.30; 95% confidence interval (CI), 0.13–0.69, P = 0.005), in contrast, impaired venous drainage (RR 2.78; CI, 1.20–6.48, P = 0.018) and tinea pedis (RR 3.04; CI, 1.17–7.90, P = 0.022) were associated with higher risk of recurrence.

Conclusion. The study was the largest cohort that demonstrated intramuscular injection of 2.4 million units benzathine penicillin with 4-week interval significantly reduced the incidence of recurrent cellulitis.

Disclosures. All authors: No reported disclosures.

Results. There were 627,292 ED visits among 288,349 patients during the study period. The incidence of LEC visits/1,000 EDV was significantly different across sites (9.36 in FL, 7.95 in AZ, and 7.39 in MN, P < 0.0001 for any difference). In the humid climate types (FL and MN), the peak incidences of LEC occurred in the warmest month; July in FL (11.77 LEC visits/1,000 EDV) and August in MN (9.69 LEC visits/1000 EDV). In AZ, the peak incidence occurred in November, the fourth coolest month (9.44 LEC visits/1000 EDV) (Figure 1). There was a significant positive correlation between the high daily temperature and the incidence of LEC cellulitis in all three sites (Figure 2). After controlling for total daily ED visits, gender, and age, the high temperature for the day was significantly associated with occurrence of LEC cellulitis at each site (P = 0.0001).

Conclusion. The incidence of LEC presenting to the ED is associated with environ-
mental temperature across different geographic locations and climate types, but light variations in seasonality of infection was observed. Investigation to determine whether other environmental factors, in particular, humidity, are associated with the incidence of LEC is ongoing.

Disclosures. All authors: No reported disclosures.

267. Identification of Pathogens Directly From Diabetic Foot Infections by Shotgun Metagenomic Sequencing

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Thursday, October 5, 2017: 12:30 PM

Background. Diabetic foot infections (DFIs) constitute the most common cause for diabetes-related hospitalization and lower extremity amputations. Current diag-
nostic methods are slow and in some cases do not detect all potential pathogens. Meta- genomics sequencing has the potential to merge rapidity and comprehensive information about causative pathogens in DFIs. The aim of this study was to evaluate the potential of metagenomics strategies for DFIs.

Methods. Thirty tissue specimens from patients with neuropathic plantar DFIs were analyzed. Specimens were processed using the Molzym Mofyse basic kit to deplete human cells. Microbial DNA was extracted using the Qiagen DNeasy PowerSoil kit. Microbial 16s rRNA was conducted on the Illumina MiSeq instrument. Shotgun metagenomics was conducted using nanopore sequencing for seven samples. Libraries were prepared using the rapid low input PCR library preparation kit (SQK-R1001) and sequenced on a MinION using R9.4 (FL0-MIN106) flow cells. Real-time identification of pathogens and antimicrobial resistance determinants (ARDs) were conducted using EPIDME’s WIMP and ARMA applications, respectively.

Results. Overall, the cohort characteristics included: 60% male, mean age 49 years, mean HgA1c 10.2%, and median PEDIS score 3. 16s sequencing identified reads belonging to bacteria isolated by culture, but also identified additional anaerobic pathogens in 70% of the specimens. Nanopore sequencing generated an average of 20 64 Mbp and an average read length of 1620-2700 bps. Shotgun metagenomics correctly and multivariate regression were performed for analysis.

Conclusion. Metagenomics-based sequencing has the potential to offer a rapid (<6 hours sample to result time) and accurate strategy for detecting and identifying pathogens and ARDs involved in DFIs.

Disclosures. All authors: No reported disclosures.

268. Seasonal and Environmental Variation of Lower Extremity Cellulitis Incidence Among Emergency Department Patients in Three Geographic Locations

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Background. Recent investigation has suggested a higher incidence of lower extremity cellulitis (LEC) during the summer, but it is not clear if this phenomenon is limited only to certain climates or locations. We sought to investigate this phenomenon and further elucidate the relationship with environmental climate factors in three different geographic locations.

Methods. This was a retrospective study of all patients with at least 1 ICD-9 code recorded during an emergency department (ED) visit at Mayo Clinic in Scottsdale, AZ; Jacksonville, FL; and Rochester, MN; between January 1, 2009 and December 12, 2014. Demographics were defined using ICD-9 data. Temperature data was obtained from the National Climatic Data Center website. The climates of each location were classified according to the Köppen Climate Classification System as hot desert (AZ), humid subtropical (FL) or humid continental (MN) climate types. The primary outcome was LEC (ICD-9 code 682.7) expressed as a proportion of 1000 ED visits (LEC visits/1000 EDV), to account for seasonal variation in ED usage. Univariate and multivariate regression were performed for analysis.

Results. There were 627,292 ED visits among 288,349 patients during the study period. The incidence of LEC visits/1,000 EDV was significantly different across sites (9.36 in FL, 7.95 in AZ, and 7.39 in MN, P < 0.0001 for any difference). In the humid climate types (FL and MN), the peak incidences of LEC occurred in the warmest month; July in FL (11.77 LEC visits/1,000 EDV) and August in MN (9.69 LEC visits/1000 EDV). In AZ, the peak incidence occurred in November, the fourth coolest month (9.44 LEC visits/1000 EDV) (Figure 1). There was a significant positive correlation between the high daily temperature and the incidence of LEC cellulitis in all three sites (Figure 2). After controlling for total daily ED visits, gender, and age, the high temperature for the day was significantly associated with occurrence of LEC cellulitis at each site (P < 0.0001).

Conclusion. The incidence of LEC presenting to the ED is associated with environ-
mental temperature across different geographic locations and climate types, but light variations in seasonality of infection was observed. Investigation to determine whether other environmental factors, in particular, humidity, are associated with the incidence of LEC is ongoing.

Disclosures. All authors: No reported disclosures.

269. Diabetic Foot Wounds: Which Patients are More Prone to Tetanus?

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sor3; Mehtap Evran, Assistant Professor3; Seza Inal, Assistant Professor3; Suheyla Komur, Assistant Professor3; Salih Cetiner, Associated Professor3; Yeşim Tason, Professor3 and Hasan Salih Zeki Akus, Professor3; 1Cukurova University, Infectious Diseases, Turkey, 2Cukurova University, Adana, Turkey, 3Cukurova University, Adana, Turkey

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Background. Patients who have diabetes and chronic wounds are more prone to tetanus than the other populations. The prevalence of diabetes among patients diag-
nosed with tetanus was 15%, nearly three times the average expected prevalence of dia-
betes in the United States. In this study, we aimed to evaluate the tetanus immunization status of the patients with diabetic foot wounds (DFW) and to determine the factors, which may predict to immunity against tetanus.

Methods. Patients who admitted to outpatient clinics with DFW were included between 1 January and 31 December 2016. Tetanus antibody levels were measured by a commercial Clostridium tetani 5S IgG ELISA kit. Antibody levels below 0.1 IU/ml were defined as “No reliable protection” and levels above 0.1 IU/ml were defined as “Reliable protection.” A questionnaire applied to all patients for detailed diabetes and vaccinating history about tetanus.

Results. Ninety-one patients were enrolled to the study, 66 (72.5%) of them were male and 25 (27.5%) of them were female. Mean age was 62 ± 11 years. Sixty-five (71.4%) of the patients had no reliable protection while 26 (28.6%) of them had reliable protection. Tetanus IgG titers were decreasing by the age (Figure). Univariate analysis