Physicians are constantly asked to evaluate inpatients for potentially complicated urinary tract infections (cUTI). This study describes the epidemiology of cUTI in the US, the cost of cUTI, and the relationship between comorbidities and UTI-related health resource utilization (HRU). The study aimed to evaluate the contemporary burden of cUTI in the US in terms of ED visits and costs.

**Results.** Among 3,010,997 ED visits with cUTI, 43.3% were female, and 59.0% were age 65 years or older. Commensurately, Medicare was the primary payor in 62.8% of the visits. The majority of the patients (59.1%) presented to metropolitan teaching hospitals, and plurality were in the Southern US (39.6%). There was a narrow range in the visits’ seasonal variation, from 6.4% occurring in February to 7.9% in October. cUTI was the principal diagnosis in 48.5% of all cUTI visits. In the remaining 51.5%, sepsis was the most common principal diagnosis (33.9%), but severe sepsis and septic shock codes each appeared in 4.9%. All cUTI ED visits, 21.4% had catheter-associated UTI. While only 19.8% had a code for pyelonephritis, 2,050,548 (68.1%) were associated with UTI.

**Conclusion.** During the seven-year span, there were over 3 million ED visits for cUTI. Although fewer than 1 in 10 patients met criteria for severe sepsis/septic shock, approximately 2/3s of cUTI patients presenting to the ED were subsequently hospitalized.

**Disclosures.** Marya Zilberberg, MD, MPH, Cleveland Clinic (Consultant) [Shareholder]; Langpace (Consultant, Grant/Research Support); Merck (Grant/Research Support); IpsPharma (Consultant); Sedana (Consultant, Grant/Research Support); Spero (Grant/Research Support); Brian Nathanson, PhD, Lungace (Grant/Research Support); Merck (Grant/Research Support); Spero (Grant/Research Support); Kate Sulham, MPH, Spero Therapeutics (Consultant); Andrew F. Shorr, MD, MPH, MBA, Merck (Consultant).

1431. Evaluating Physician Decision Making in Inpatient Antibiotic Prescription for Suspected Urinary Tract Infection

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**Session.** P-81. UTIs

**Background.** Physicians are constantly asked to evaluate inpatients for possible antibiotic treatment. As part of antibiotic stewardship it is imperative to understand the decision-making process behind a physician’s choice to prescribe antibiotics appropriately in an inpatient setting. Fuzzy Trace Theory (FTT) suggests that physicians use one of two methods in medical decision making: verbatim, employing a comprehensive risk benefit analysis, and gist, considering a bottom line analysis.

**Methods.** Seventy-six hospitalists at Weill Cornell Medicine in Manhattan, New York received a survey with two reminders to evaluate their decision-making process. Five basic demographic questions regarding participant gender, race, background, age, and years in practice were asked. A clinical vignette describing an inpatient with a possible urinary tract infection (UTI) was followed with statement frames hypothetically asking for antibiotic prescription. A series with response choices from Strongly Disagree scored as one to Strongly Agree scored as seven was used to assess degree of participant agreement with each statement. Questions were presented in a random order to eliminate possible effects of questions clusters or question order.

**Results.** Twenty-six hospitalists completed the survey. Consistent with previous literature, the hospitalists surveyed displayed a gut interpretation of the risks and benefits of antibiotics, with a mean Likert scale score of 5.64 agreeing that there are benefits to antibiotic prescription, and a mean Likert scale score of 6.04 agreeing that there are risks to antibiotic prescription. However, the clinicians surveyed ultimately found antibiotics to be a necessary risk given the possible benefit of improving patient health. The hospitalists surveyed also did not view antibiotic prescription to be a product of pressure from patient families, agreeing by a mean Likert scale score of 5.08 that the patient’s family will trust their physician to prescribe antibiotics if needed.

**Conclusion.** These findings suggest that physician education to reduce overprescribing of antibiotics should underscore possible antibiotic risk, despite potential benefit.

**Disclosures.** Marshall J. Glebsy, MD, Enzychem (Consultant); Gilead (Grant/Research Support); ReAlta Life Sciences (Consultant); Regeneron (Consultant, Grant/Research Support); Sohib (Consultant); Springer (Other Financial or Material Support, Royalties); J&J UpToDate (Other Financial or Material Support); Royal Society, J&J (Other); Allergan (Consultant, Grant/Research Support); Roche (Consultant, Grant/Research Support).

1432. Patient-Reported Urinary Tract Infection Symptoms Among Veterans with Neurogenic Bladder

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Session: P-81. UTIs

Background. Urinary tract infections (UTIs) and asymptomatic bacteria (AB) are common in patients with neurogenic bladder (NB) but differentiating between the two is challenging because laboratory tests cannot distinguish AB from UTI. This diagnostic uncertainty can lead to antibiotic overuse. Characterization of patient-reported symptoms from large cohorts of patients with NB can inform interventions to improve appropriate UTI diagnosis and management.

Methods. Retrospective cohort study of 1,797 adults with NB due to spinal cord injury/disorder (SCI/D), multiple sclerosis (MS), and/or Parkinson’s Disease (PD) accounted for 568 patients with UTI encounters (via ICD10) at 4 Veterans Affairs (VA) medical centers between 2017-2018. Demographic and clinical data were collected from national VA datasets. Medical record review was performed on a random sample of 198 encounters. Chi-square/Fisher’s exact test were used to compare symptoms by patient and encounter characteristics.

Results. Among the 198 encounters (mean age=65 years), 33% of patients had SCI/D, 29% PD, 20% MS, and 17% had more than one diagnosis. Most encounters were for men (88%) in inpatient or long-term care settings (62%). 76% of patients used bladder catheters; most indwelling (n=92). Fever was the most frequent symptom (30%), followed by change in urine odor, color, and/or consistency (26%) and lethargy/malaise (21%). Only 38% of encounters had a urinary tract-specific symptom recorded (e.g., dysuria); 81% had non-specific symptoms (e.g., fever, lethargy). 64% of encounters were deemed an appropriate UTI diagnosis. Characteristics in red in Figure 1 were significantly associated with non-specific symptoms (p < 0.05).

Figure 1. Significant patient and encounter characteristics associated with non-specific symptoms

Patient and encounter characteristics found to be significantly associated with non-specific symptoms, p < 0.05.

Conclusion. Symptoms not specific to the urinary tract are the most frequently reported symptoms in patients with NB and encounters with a UTI diagnosis. Change in urine odor/color were reported often; however, guidelines recommend against using these for UTI diagnosis. Providers should ensure that alternate sources of non-specific symptoms are evaluated prior to attributing them to UTI. Antibiotic stewardship interventions targeted to physical medicine and rehabilitation (PM&R) and primary care providers in inpatient settings may improve UTI diagnosis in patients with NB.

Disclosures. Charlesnika T. Evans, PhD, MPH, BioK+ (Consultant)

1433. Impact of 2019 US Food and Drug Administration (FDA) Guidance on Developing Drugs for Urinary Tract Infection (UTI) on the Perceived Efficacy of Antibiotics for the Treatment of Uncomplicated UTI (uUTI)

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Background. Antibiotics for the Treatment of Uncomplicated UTI (uUTI) were developed on the perceived efficacy of newer antibiotics. Characterization of patient-reported symptoms from national VA datasets. Medical record review was performed on a random sample of 198 encounters. Chi-square/Fisher’s exact test were used to compare symptoms by patient and encounter characteristics.

Methods. Retrospective cohort study of 1,797 adults with NB due to spinal cord injury/disorder (SCI/D), multiple sclerosis (MS), and/or Parkinson’s Disease (PD) accounted for 568 patients with UTI encounters (via ICD10) at 4 Veterans Affairs (VA) medical centers between 2017-2018. Demographic and clinical data were collected from national VA datasets. Medical record review was performed on a random sample of 198 encounters. Chi-square/Fisher’s exact test were used to compare symptoms by patient and encounter characteristics.

Results. Among the 198 encounters (mean age=65 years), 33% of patients had SCI/D, 29% PD, 20% MS, and 17% had more than one diagnosis. Most encounters were for men (88%) in inpatient or long-term care settings (62%). 76% of patients used bladder catheters; most indwelling (n=92). Fever was the most frequent symptom (30%), followed by change in urine odor, color, and/or consistency (26%) and lethargy/malaise (21%). Only 38% of encounters had a urinary tract-specific symptom recorded (e.g., dysuria); 81% had non-specific symptoms (e.g., fever, lethargy). 64% of encounters were deemed an appropriate UTI diagnosis. Characteristics in red in Figure 1 were significantly associated with non-specific symptoms (p < 0.05).

Figure 1. Significant patient and encounter characteristics associated with non-specific symptoms

Patient and encounter characteristics found to be significantly associated with non-specific symptoms, p < 0.05.

Conclusion. Symptoms not specific to the urinary tract are the most frequently reported symptoms in patients with NB and encounters with a UTI diagnosis. Change in urine odor/color were reported often; however, guidelines recommend against using these for UTI diagnosis. Providers should ensure that alternate sources of non-specific symptoms are evaluated prior to attributing them to UTI. Antibiotic stewardship interventions targeted to physical medicine and rehabilitation (PM&R) and primary care providers in inpatient settings may improve UTI diagnosis in patients with NB.

Disclosures. Charlesnika T. Evans, PhD, MPH, BioK+ (Consultant)