

2016. A diagnosis of UTI was categorized as cystitis, urethritis or pyelonephritis and was defined using the following ICD-10 codes: N30.0, N30.00, N30.01, N30.9, N30.90, N30.91, N39.0, N34.1, N34.2, and N10. The following antibiotics were prescribed: aminoglycosides, sulfamethoxazole/trimethoprim (TMP-SMX), cephalosporins, fluoroquinolones, macrolides, penicillins, tetracyclines, or nitrofurantoin. Patients were categorized based on gender, age, location, insurance payer and UTI type. We used χ^2 and Cochran-Mantel-Haenszel testing. Analyses were performed in SAS version 9.4 software (SAS Institute, Cary, NC). **Results:** In total, 15,580 patients were included in this study. Prescriptions for antibiotics by drug class differed significantly by gender ($P < .0001$), age ($P < .0001$), geographic region ($P < .0001$), insurance payer ($P < .0001$), and UTI type ($P < .0001$). Cephalosporins were prescribed more often to women (32.48%, 4,173 of 12,846) than to men (26.26%, 718 of 2,734), and fluoroquinolones were prescribed more often to men (53.88%, 1,473 of 2,734) than to women (47.91%, 6,155 of 12,846). Although cephalosporins were prescribed most frequently (42.58%, 557 of 1,308) in northern Virginia, fluoroquinolones were prescribed the most in eastern Virginia (50.76%, 1,677 of 3,304). Patients with commercial health insurance, Medicaid, and Medicare were prescribed fluoroquinolones (39.31%, 1,149 of 2,923), cephalosporins (56.33%, 1,326 of 2,354), and fluoroquinolones (57.36%, 5,910 of 10,303) most frequently, respectively. **Conclusions:** Antibiotic prescribing trends for UTIs varied by gender, age, geographic region, payer status and UTI type in the state of Virginia. These data will inform future statewide antimicrobial stewardship efforts.

Funding: None

Disclosures: Michelle Doll reports a research grant from Molnlycke Healthcare.

Doi:10.1017/ice.2020.1125

Presentation Type:

Poster Presentation

A Growing Concern: The Emergence and Dissemination of Carbapenemase-producing Enterobacterales (CPE) in Canada

Robyn Mitchell, Public Health Agency of Canada; Laura Mataseje, National Microbiology Laboratory; David Boyd, National Microbiology Laboratory, Public Health Agency of Canada; Ghada Al-Rawahi, BC Childrens Hospital; Ian Davis, Queen Elizabeth II Health Sciences Centre; Chelsey Ellis, Horizon Health Network, Moncton, The Moncton Hospital, Moncton; Joanne Embree, Health Sciences Centre, Winnipeg, MB; Susy Hota, University Health Network; Pamela Kibsey, Royal Jubilee Hospital; Christian Lavallée, Hôpital Maisonneuve-Rosemont, Montreal, QC; Jerome Leis, University of Toronto; Allison McGeer, Mount Sinai Hospital; Jessica Minion, Regina Qu'Appelle Health Region, Regina, SK; Michael Mulvey, National Microbiology Laboratory; Sonja Musto, Health Sciences Centre, Winnipeg, MB; Linda Pelude, Public Health Agency of Canada; Jocelyn Srigley, BC Children's & Women's Hospitals; Stephanie Smith, University of Alberta; Kathryn N. Suh, The Ottawa Hospital, Ottawa, ON; Geoffrey Taylor, University of Alberta Hospital, Edmonton, AB; Nisha Thampi, Children's Hospital of Eastern Ontario; Titus Wong, Vancouver General Hospital, Vancouver, BC; Kevin Katz, North York General Hospital; CNISP PHAC, Public Health Agency of Canada

Background: Carbapenemase-producing Enterobacterales (CPE) have rapidly become a global health concern and are associated

with substantial morbidity and mortality due to limited treatment options. Travel to endemic areas, especially healthcare exposure in these areas, is an important risk factor for acquisition. We describe the evolving epidemiology, molecular features, and outcomes of CPE in Canada through surveillance by the Canadian Nosocomial Infection Surveillance Program (CNISP). **Methods:** CNISP has conducted surveillance for CPE among inpatients and outpatients of all ages since 2010. Participating acute-care facilities submit eligible specimens to the National Microbiology Laboratory for detection of carbapenemase production, and epidemiological data are collected. Incidence rates per 10,000 patient days are calculated based on inpatient data. **Results:** In total, 59 CNISP hospitals in 10 Canadian provinces representing 21,789 beds and 6,785,013 patient days participated in this surveillance. From 2010 to 2018, 118 (26%) CPE-infected and 547 (74%) CPE-colonized patients were identified. Few pediatric cases were identified ($n = 18$). Infection incidence rates remain low and stable (0.02 per 10,000 patient days in 2010 to 0.03 per 10,000 patient days in 2018), and colonization incidence rates have increased by 89% over the surveillance period. Overall, 92% of cases were acquired in a healthcare facility: 61% ($n = 278$) in a Canadian healthcare facility and 31% ($n = 142$) in a healthcare facility outside Canada. Of the 8% of cases not acquired in a healthcare facility, 50% (16 of 32) reported travel outside of Canada in the 12 months prior to positive culture. The distribution of carbapenemases varied by region; New Delhi metallo- β -lactamase (NDM) was dominant (59%) in western Canada and *Klebsiella pneumoniae* carbapenemase (KPC) (66%) in central Canada. NDM and class D carbapenemase OXA-48 were more commonly identified among those who traveled outside of Canada, whereas KPC was more commonly identified among patients without travel. In addition, 30-day all-cause mortality was 14% (25 of 181) among CPE infected patients and 32% (14 of 44) among those with bacteremia. **Conclusions:** CPE rates remain low in Canada; however, national surveillance data suggest that the increase in CPE in Canada is now being driven by local nosocomial transmission as well as travel and healthcare within endemic areas. Changes in screening practices may have contributed to the increase in colonizations; however, these data are currently lacking and will be collected moving forward. These data highlight the need to intensify surveillance and coordinate infection control measures to prevent further spread of CPE in Canadian acute-care hospitals.

Funding: None

Disclosures: Susy Hota reports contracted research for Finch Therapeutics. Allison McGeer reports funds to her institution for projects for which she is the principal investigator from Pfizer and Merck, as well as consulting fees from the following companies: Sanofi-Pasteur, Sunovion, GSK, Pfizer, and Cidara.

Doi:10.1017/ice.2020.1126

Presentation Type:

Poster Presentation

A Large-Scale Snapshot of Standard Precaution Adherence: "Do as I Say Not as I Do"

Amanda Hessels, Columbia University, School of Nursing; Jingwen Guo, Columbia University

Background: Nearly 1 in 25 patients has a hospital infection at any given time, and 1 in 25 nurses suffers and bloodborne exposure every year. Basic procedures, termed standard