procedure codes to verify identified cases and to search for other PECs. All PECs were notified by telephone and mail, and serologic testing for human immunodeficiency virus (HIV-1), hepatitis C virus (HCV), and hepatitis B virus (HBV) was offered. Results were compared to prior bloodborne pathogen (BBP) testing results extracted from the CDW. Facility microbiology laboratory records of positive cultures/microscopy for enteric pathogens also were compared to the list of PECs; no active testing was performed. **Results:** Of the 565 PECs, 552 (98%) were successfully contacted. 8 declined testing or preferred non-VA testing, and 22 died before testing could be initiated. Repeat testing at 6 months was requested for PECs who had initial testing performed <6 months after exposure; 32 refused additional tests or did not respond to additional requests. In total, 522 PECs (92%) had testing performed for 1 or more BBPs: (1) 521 were anti–HIV negative with 1 previously known positive; (2) 481 were anti–HCV negative—43 were previously known positive and 1 PEC with an undetectable HCV viral load was newly identified; (3) 461 were negative for both HBV core or surface antibodies and surface antigen—32 were previously known positive and 17 were newly positive for one or both antibody tests with negative HBV surface antigen. Of 17 newly identified positive PECs, 16 had undetectable HBV DNA; 1 died prior to HBV DNA testing. **Conclusions:** There was no evidence of transmission of BBPs in this cohort of PECs who had procedures with potentially improperly cleaned fiberoptic endoscopes. Although not all patients completed all retrospective BBP testing, <10% were missing all or some tests. Local passive surveillance did not indicate enteric pathogen transmission. Additional education regarding and monitoring of reprocessing procedures have been instituted.

Leptospirosis Outbreak in a Hill Due to Water From an Unprotected Well, Keerakadu Village, Kollihills, Namakkal, Tamilnadu, India

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Background: Annually, an estimated 1.03 million leptospirosis cases lead to 2.9 million disability adjusted life years. A cluster of fever cases was reported in Keerakadu village, Kollihills block in Namakkal district of Tamilnadu state, India, on April 28, 2017. We investigated to control the outbreak. **Methods:** We did a cross-sectional survey between April 29 and May 1. We defined a case of fever as any resident of Keerakadu village with fever for >2 days, with or without headache or myalgia, between April 15 and May 1, 2017. We conducted active surveillance. We reviewed medical records. We collected the line list from nearby health centers. We computed proportions to calculate the attack rate. We collected 11 serum samples and tested for dengue, scrub typhus, hepatitis A and leptospirosis by IgM ELISA method. We did a Widal slide agglutination test. We conducted an environmental survey to identify water sources. We performed a dengue larval survey. We collected 5 water samples: 1 from unprotected well, 1 from overhead tank and 3 from the houses of residents. We tested for fecal coliforms in the district

public health laboratory. **Results:** The population of Keeradu village was 540. We identified 11 cases, for an attack rate of 2% (11 of 540). The hospitalization rate of cases was 81% (9 of 11). Median age was 45 years (range, 23–65). Of 11 samples, 3 were positive for leptospirosis; all were negative for dengue, scrub typhus, hepatitis A, and typhoid. The single water source for the whole village was an open, unprotected well. This well supplied water every day to the community, both for drinking purpose and domestic use. No breeding of dengue larva was observed. All the 5 water samples tested positive for fecal coliforms. Water was not chlorinated regularly. All patients were isolated and treated in the primary health center. Prophylactic antibiotics were given to the whole community. **Conclusions:** There was a leptospirosis outbreak in Keerakadu village, probably due to contaminated water from unprotected well. There were no cases after May 1, 2017. We recommended that the community chlorinate the water regularly and protect the well. We also recommend continued surveillance and a rodent survey.

Lessons Learned From a Decade of Dental Lookback Investigations in the Department of Veterans' Affairs (VA): 2009–2019

Patricia Schirmer, Dept of Veterans' Affairs; Cynthia Lucero-Obusan, Department of Veterans' Affairs; Gina Oda, Department of Veterans' Affairs; Gavin West, Department of Veterans' Affairs; Mark Holodniy, Department of Veterans' Affairs

Background: The Department of Veterans' Affairs (VA) operates 146 hospitals providing healthcare to >6 million veterans annually, including dental care to qualified veterans. Although bloodborne pathogen transmission after dental procedures is rare, little is known of risk when there are breaches. A standardized approach to performing lookback investigations after dental infection control breaches could better quantify these risks. We reviewed dental lookback investigations from the past decade conducted by our VA office for lessons learned to improve processes. **Methods:** Three VA hospitals had dental infection control breaches during 1992–2016. Facility A had dental instruments that were not cleaned according to the manufacturer's recommendations, and dentists at facilities B and C failed to adhere to proper infection control standards. Exposed veterans who underwent dental procedures were notified of possible exposure and were offered testing for human immunodeficiency (HIV-1), hepatitis B virus (HBV), and hepatitis C virus (HCV). Prior clinical testing was also reviewed. Newly identified positive results were compared to known positives prior to exposure to determine strain relatedness when sufficient plasma viral load was present for viral sequence comparison. **Results:** There were 2,939 patients with potential exposures in these dental investigations: 2,667 were tested for HBV, 2,642 were tested for HCV and 2,599 were tested for HIV-1. No evidence of viral transmission was found based on genetic sequence comparison of positive cases, but relatively few samples were available for this testing. **Lessons Learned:** Each facility faced different challenges with their investigation; however, several key processes were identified. (1) Early engagement by our office with local facility leadership and lookback teams resulted in more efficient investigation and testing processes. (2) To improve

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standardization, a lookback manual detailing of investigation procedures was created in 2009 and was updated subsequently. The contents of this manual include identifying and notifying patients; providing services to veterans responding to notifications; laboratory testing algorithms; disclosure and documentation of test results and clinical follow-up; and epidemiologic investigation of patients with newly identified infection. (3) Prompt patient notification and obtaining adequate samples for initial and follow-up pathogen genetic testing is critical. Determination of genetic linkages was greatly limited because specimens were unavailable for supplemental testing. (4) Ethics and legal counsel staff are key partners in providing guidance on appropriate disclosure procedures and documentation. (5) Designating a single mechanism for reporting results ensures consistent communication among stakeholders. (6) Education of dental staff on importance of following the manufacturers' cleaning recommendations, not using outside equipment and reporting instances of concern promptly can help prevent future infection control breaches.

Presentation Type:
Poster Presentation

Leveraging Electronic Health Record Clinical Decision Support to Identify *Clostridium difficile* Infection in Clinically Appropriate Patient Populations

Amy Cook, WellSpan Health; Sharon Fruehan, WellSpan Health; Pamela Goodling, WellSpan Health

Background: In 2017, the IDSA and the SHEA released updated *Clostridium difficile* practice guidelines. Implementing institutionally accepted criteria for identifying clinically appropriate patients for testing was endorsed. When utilizing NAAT as the sole laboratory testing methodology, testing clinically symptomatic patients is important to reduce inappropriate treatment of *C. difficile* colonization. *C. difficile* rates at a regional community health system were higher than expected, and patient case reviews identified inappropriate patient testing as an issue. Therefore, the infection prevention team sought to optimize and standardize protocols surrounding appropriate patient selection for *C. difficile* testing. **Methods:** Current recommendations were evaluated, and processes formulated to implement an innovative process to support our clinicians in identifying clinically appropriate patients to test for *C. difficile* infection. The electronic decision support is summarized as a bundled approach with 4 best practice alerts that incorporate algorithms that warn providers of potentially inappropriate testing scenarios. These alerts include the following criteria: (1) a laxative having been administered within 48 hours of attempted order, (2) a negative test resulted within 7 days, (3) a positive test resulted within 14 days, and (4) identification of patients at high risk for *C. difficile* infection (based on recent long-term care facility exposure, recent inpatient hospital visits, recent antimicrobial therapy).

Outcomes of our acute-care hospitals were monitored by real-time evaluation of each hospital's quarterly *C. difficile* LabID standardized infection ratio (SIR) as defined by the NHSN. For statistical analyses, the cumulative second and third quarters of 2018 (before the intervention) were compared to the cumulative second and third quarters of 2019 to account for seasonality of *C. difficile* infections. **Results:** Utilizing the NHSN statistical calculator to compare 2 SIRs, there was a statistically significant decrease ($P = .0026$) in the largest hospital's *C. difficile* LabID SIR when comparing representative preintervention cumulative quarters to the postintervention cumulative quarters. Although the other hospitals did not see a statistically significant decrease in their *C. difficile* LabID SIR, a clinically significant decrease was appreciated for 2 of our hospitals. **Conclusions:** Electronic health record–based decision support helps clinicians identify clinically appropriate patients to test by NAAT alone for *C. difficile* infection. By limiting the number of patients tested without clinical signs or symptoms of infection and/or after receiving laxatives, hospitals more accurately capture their true *C. difficile* rates and maximize reimbursement based on this measure within the CMS Safety of Care Measure.

Presentation Type:
Poster Presentation

Leveraging Local Expertise in Stewardship, Hospital Epidemiology and Public Health to Enrich Postgraduate Training in NYC

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Background: New York City is a gateway for emerging pathogens and global threats. In 2013, faculty from Montefiore Medical Center and Memorial Sloan Kettering developed a free half-day workshop for postgraduate trainees in antimicrobial stewardship (AS), infection prevention (IP), hospital epidemiology, and public health. This annual workshop, sponsored by the Infectious Diseases Society of New York (IDSNY), incorporates case studies and expert panel discussions on timely topics such as Ebola, *Candida auris*, *Clostridioides difficile*, measles, nosocomial influenza, drug shortages, and AS/IP "big data." **Methods:** From 2013 through 2017, the workshop involved 10–15 interactive AS/IP cases with audience response questions and panel discussions. In 2018–2019, based on feedback, the format was revised to emphasize breakout sessions in which participants actively practiced AS/IP tools, (eg, medication utilization evaluations, epidemiologic curves, and performance improvement devices). Examples of 2018–2019 cases

NHSN CLDI LABID SIR								
Facility		2018 Quarter 2 & Q3			2019 Quarter 2 & Q3			
	Beds	Observed	Expected	NHSN SIR	Observed	Expected	NHSN SIR	Two-tailed P value
York Hospital	585	59	55.883	1.056	30	55.03	0.545	0.0026
Ephrata Hospital	159	4	6.22	0.643	2	6.137	0.326	0.4626
Gettysburg Hospital	76	3	3.997	0.751	3	5.071	0.592	0.7800

Table. 1.