associated with repeat CLABSIs than single CLABSIs ($P < .0001$). **Conclusions:** This analysis highlights differences in the aggregate pathogen distributions comparing single versus repeat CLABSIs. Assessing the pathogens associated with repeat CLABSIs may offer another way to assess the success of CLABSI prevention efforts (eg, clean insertion practices). Pathogens such as *Enterococcus* spp and *Klebsiella* spp demonstrate a greater association with repeat CLABSIs. Thus, instituting prevention efforts focused on these organisms may warrant greater attention and could impact the likelihood of repeat CLABSIs. Additional analysis of patient-specific pathogens identified in the repeat CLABSI group may yield further clarification.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.956

Presentation Type:
Poster Presentation

Patients with Positive Glutamine Dehydrogenase (GDH) Antigen/Toxin and Toxin Negative/PCR Positive Patients: A Comparison

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Background: A multistep algorithm using GDH antigen plus toxin with a reflex PCR is an acceptable method for detecting CDI. The use of the PCR in discordant cases can identify those patients who are colonized from those patients who have nontoxogenic strains of *C. difficile*. Identification of discordant patients has infection prevention implications. Treatment is not recommended for patients colonized with *C. difficile*. **Methods:** A line listing of patients with positive hospital-onset antigen/toxin positive and discordant PCR positive was created. Demographic information was extracted from medical records and the 2 cohorts were compared. **Results:** There were 59 discordant and 44 positive cases HO CDI cases from October 2017 through September 2019: (1) There was no difference in age and sex between the 2 groups. (2) Positive patients tended to have 3 loose stools before and after testing (57% vs 27%; $P = .026$). (3) Overall, 82% of positive patients had 1 of 3 signs or symptoms (leukocytosis, abdominal pain, and temperature >38°C) consistent with CDI compared to 66% of discordant patients ($P = .038$), and 55% of positive patients were more likely to have 2 of 3 signs or symptoms of CDI compared to 17% of discordant patients ($P = .00003$). (4) Also, 46% of discordant patients were either on the oncology ward or ICU compared to 32% of positive patients ($P = .764$). (5) There was no difference between in discordant compared to positive patients in non-CDI antimicrobial therapy within 7 days of CDI test submission (81% vs 84%, respectively). **Conclusions:** (1) Screening for CDI testing should include 3 loose stools and at least 2 of 3 signs or symptoms of CDI. (2) Discordant cases most likely represents colonization because only 17% of discordant patients had 2 of 3 CDI signs or symptoms at presentation. (3) Discordant cases without clinical features of CDI should not receive treatment to minimize antibiotic exposure. (4) Identification of discordant patients have infection prevention ramifications because CD can be indirectly transmitted by colonized patients; therefore, using PCR in addition to toxin testing is favored. (5) Antimicrobial therapy highly associated with CDI should be avoided, should antimicrobial therapy be necessary in PCR-positive discordant patients.

Funding: None
Disclosures: None

Doi:10.1017/ice.2020.957

	Num	Dem	PCR + %		Num	Dem	AgTx %
Laxative/Bowel stimulant?	14	59	24%		14	44	32%
Co-morbidity present?	55	59	93%		39	44	89%
Male	30	59	51%		24	44	55%
Female	29	59	49%		20	44	45%
Age (65 and up)	29	59	49%		22	44	50%
Age (under 65)	30	59	51%		22	44	50%
At least 3 stools 24 hours before or after collection	45	59	76%		40	44	91%
3 loose stools before AND after collection	16	59	27%		25	44	57%
At least 1 S/S (elevated WBC, elevated temp, abd pain)	39	59	66%		36	44	82%
At least 2 S/S (elevated WBC, elevated temp, abd pain)	10	59	17%		24	44	55%
All 3 S/S (elevated WBC, elevated temp, abd pain)	1	59	2%		3	44	7%
Discharged within 5 days of positive test result	6	59	10%		17	44	39%
Treated with PO Vanco or Dificid	33	59	56%		40	44	91%
Treated with PO Vanco, dificid, OR PO flagyl	42	59	71%		44	44	100%
On Oncology or ICU on the day of specimen collection	27	59	46%		14	44	32%
Any antibiotics within 7 days of loose stool	48	59	81%		37	44	84%

Fig. 1.

Presentation Type:
Poster Presentation

Pattern Recognition Algorithms for Predicting Surgical Site Infection in Abdominal Hysterectomy

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Background: This research represents an experiment based in surgical site infection (SSI) to patients undergoing abdominal hysterectomy surgery procedures in hospitals in Belo Horizonte, (population, 3 million). We statistically evaluated such incidences and studied the SSI prediction power of pattern recognition algorithms, the artificial neural networks based in multilayer perceptron (MLP). **Methods:** Between July 2016 and June 2018, data on SSI were collected by the hospital infection control committees (CCIH) of the 3 hospitals involved in the research. They collected all data used in the analysis during their routine SSI surveillance procedures. The information was forwarded to the NOIS (Nosocomial Infection Study) Project, which used SACIH (ie, automated hospital infection control system software) to collect data from a sample of hospitals participating voluntarily in the project. After data collection, 3 procedures were performed for SSI prediction: (1) a treatment of the database collected for the