Table 1.

Raw PG scores by receipt of antibiotics, P Values assessed by t-tests (Table).

	Dissatisfied (Score <= 25th percentile)			Satisfied (Score > 25th percentile)		
Raw PG Score	No Antibiotics	Antibiotics	P	No Antibiotics	Antibiotics	P
Overall Visit Mean (SD)	64.3 (14.9)	66.7 (11.0)	0.346	95.9 (5.5)	96.5 (5.1)	0.254
Clinician, Mean (SD)	54.7 (24.4)	64.5 (16.9)	0.015	98.3 (4.8)	99.1 (3.3)	0.046

antibiotics were dissatisfied than for those patients who received antibiotics. Antibiotic stewardship strategies to communicate appropriate prescribing while preserving patient satisfaction are needed in pediatric urgent-care settings.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.647

Presentation Type:
Poster Presentation

Automated Prediction of Surgical Site Infection Coronary Artery Bypass (CABG) Grafting Surgery

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Background: In 5 hospitals located in Belo Horizonte city (>3,000,000 inhabitants) a focused survey on surgical site infection (SSI) was performed in patients undergoing CABG surgery. We statistically evaluated such incidences to enable study of the prediction power of SSI through pattern recognition algorithms, in this case the multilayer perceptron (MLP) artificial neural networks. **Methods:** Data were collected between July 2016 and June 2018 on SSI by the hospital infection control committees (CCIHs) of the hospitals involved in the research. We 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 uses the SACIH (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: (1) a treatment of the collected database for use of intact samples; (2) a statistical analysis on the profile of the hospitals collected; and (3) an assessment of the predictive power of 5 types of MLP (ie, backpropagation standard, momentum, resilient propagation, weight decay, and quick propagation) for SSI prediction. MLPs were tested with 3, 5, 7, and 10 hidden layer neurons and a database split for the resampling process (65% or 75% for testing and 35% or 25% for validation). They were compared by measuring the AUC (area under the curve; range, 0–1) presented for each of the configurations. **Results:** From 666 initial data, only 278 were able for analysis. We obtained the following statistics: 9.35% manifested SSIs; length of stay varied from 1 to 119 days, with ~40% staying between 10 and 19 days; 15.1% of the patients died. Regarding the prediction power of SSI, the experiments have a maximum value of 0.713. **Conclusions:** Despite the considerable loss rate of >50% of the database samples due to the presence of noise, it was possible to have a relevant sampling to evaluate the profile of hospitals in Belo Horizonte. In addition, for the predictive process, although some configurations had results equal to 0.5, others reached 0.713, which indicates that the automated SSI monitoring framework for patients undergoing coronary artery bypass grafting surgery is promising. To optimize data collection and to enable other hospitals to use the SSI prediction tool (available at www.sacihweb.com), a mobile application was developed.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.648

Presentation Type:
Poster Presentation

Automated Risk Analysis of Surgical Site Infection in Hip Arthroplasty Surgeries

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Background: In 7 hospitals in Belo Horizonte, a city with >3,000,000 inhabitants, a survey was conducted between July 2016 and June 2018, focused on surgical site infection (SSI) in patients undergoing arthroplasty surgery procedures. The main objective is to statistically evaluate such incidences and enable a study of the prediction power of SSI through pattern recognition algorithms, the MLPs (multilayer perceptron). **Methods:** Data were collected on SSI by the hospital infection control committees (CCIHs) of the hospitals involved in the research. All data used in the analysis during their routine SSI surveillance procedures were collected. The information was forwarded to the NOIS (Nosocomial Infection Study) Project, which used SACIH 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: (1) a treatment of the database collected for the use of intact samples; (2) a statistical analysis on the