

**Results:** Among invited ICP, 12 participants applied all evaluation tools. The average experience in infection prevention was 8 years (range 1.5 to 15 years). The average time to apply the evaluation tools were: IPCPE: 3h, OGIPCP: 1h, and IPCAF 1.5h. The majority of positive agreements regarding comprehensiveness were obtained by IPCPE (100% of positive agreement in 10 questions), followed by IPCAF (100% of positive agreement in 9 questions). Time spent applying the tools was only considered acceptable for OGIPCP and IPCAF. No tool achieved 100% agreement in 10 questions regarding comprehensiveness to assess the support of microbiology and other services to the IPCP, and links with public health. None of the tools achieved 100% agreement to recommend their use in extra-hospital settings such as primary care.

**Conclusion:** Both IPCPE and IPCAF were considered as more comprehensive, but still lacking potential to access all relevant issues for IPCP. IPCAF and OGIPCP were considered less time consuming. Next, we will perform a qualitative approach to better understand the improvement gaps.

**Disclosure of Interest:** None declared

## Poster session: Public reporting / benchmarking

### P465

#### TRENDS IN HEALTHCARE ASSOCIATED INFECTIONS AND ANTIMICROBIAL USE IN HOSPITALS, BASED ON POINT PREVALENCE STUDIES IN THE NETHERLANDS FROM 2007-2016.

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**Introduction:** Healthcare associated infections (HAI) contribute to morbidity and mortality.

**Objectives:** To measure prevalence of HAI and antimicrobial use in hospitals, voluntary national point prevalence surveys (PPS) have been performed in the Netherlands since 2007.

**Methods:** The annual data of PPSs from 2007 until 2016 were analysed for trends in patient characteristics, use of medical devices, use of antibiotics, and presence of HAI on the survey day. Data available concerned all hospitalized patients, except for patients in the day-care unit and psychiatric wards. Analyses were performed using linear and logistic regression.

**Results:** Data were reported for 171,116 patients. Crude annual prevalence of patients with HAI with onset during hospitalization decreased from 6.1% in 2007 to 3.6% in 2016. The Odds Ratio (OR) for trend was 0.92 (95%CI 0.91-0.93) per year. Most prominent trends were seen for surgical site infections (1.6% to 0.7%, OR: 0.31 (0.26-0.38)), urinary tract infections (2.1% to 0.6%, OR: 0.18 (0.15-0.22)) and combined other infections (0.7% to 0.4%, OR: 0.26 (0.19-0.35)). Over the years, the distribution of gender, age and McCabe-score remained stable. The mean length of stay (LOS) decreased from 10 to 7 days. The percentage of patients treated with antimicrobials increased from 31% to 36% (OR: 1.03, (1.02-1.03)).

**Conclusion:** PPS-data from 2007-2016 show a decreasing trend in the prevalence of HAI with onset during hospitalization, but also a decreasing LOS, while the percentage of patients using antibiotics increased during these years.

**Disclosure of Interest:** None declared

### P466

#### BENCHMARKS FOR HEALTHCARE ASSOCIATED INFECTIONS IN SURGICAL PROCEDURES FROM BRAZILIAN HOSPITALS AND INTENSIVE CARE UNITS

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**Introduction:** Benchmarking is utterly important for healthcare quality assessment. Thus, updated research is necessary in order to create representative data.

**Objectives:** This descriptive, multicentered study provides benchmarks to the southeast population of Brazil and also to similar populations from developing countries.

**Methods:** The NOIS Project uses SACIH, software for hospital infection control ([www.saciweb.com](http://www.saciweb.com)), which retrieves data provided by different Brazilian hospitals. All hospitals comply with prospective Healthcare Associated Infections (HAI) surveillance NHSN/CDC protocols. A variety of 42 types and a total of 189252 surgical procedures, from 11 hospitals and 13 intensive care units (ICU's), were analyzed from 2014 to 2018. Benchmarks were defined as 10<sup>th</sup>, 50<sup>th</sup>, and 90<sup>th</sup> percentiles (p10, p50, p90) of HAI rates from each type of surgical procedure. Only a small selection from all data was comprised in this abstract.

**Results:** Benchmarks were hereby defined as the pooled mean of the p10, p50, and p90 of HAI rates for each procedure: Cesarean section: 2.1%. Hysterectomy: 1.5%. Cholecystectomy: 1.1%. Herniorrhaphy: 1.3%. Peripheral vascular bypass surgery: 1.2%. Genitourinary surgery: 4.8%. Prostate surgery: 1.0%. Bariatric surgery: 0.9%. Colon surgery: 3.2%. Appendix surgery: 2.2%. Breast surgery: 0.9%. Kidney transplant: 4.0%. Craniotomy: 5.5%. Spinal fusion: 3.4%. Knee arthroplasty: 3.1%. Cardiac surgery: 3.7%. Bile duct, liver or pancreatic surgery: 10.6%. Otorhinolaryngology surgery: 0.6%. Limb amputation: 8.1%. Oral and maxillofacial surgery: 0.3%. Exploratory abdominal surgery: 4.8%.

**Conclusion:** Benchmarks for HAI's have been calculated, and can be used by infection control professionals in Brazil and other developing countries.

**Disclosure of Interest:** None declared

### P467

#### STATEWIDE SURVEILLANCE SYSTEM FOR SURGICAL SITE INFECTION: RESULTS FROM SIX YEARS AFTER IMPLEMENTATION OF SELECTED PROCEDURES MONITORING

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**Introduction:** The healthcare-associated infections (HAI) are recognized as public health problem. Health authorities should establish priorities for HAI surveillance.

**Objectives:** To describe the results of six years of surveillance of surgical site infections (SSI) in São Paulo state, Brazil.

**Methods:** Eleven surgical procedures were selected to be monitored in the SSI surveillance system of the state. Healthcare Facilities (HF) reported data using standardized criteria and through a spreadsheet sent monthly. A descriptive analysis was performed including data from January 2012 to December 2017. The data were aggregate for

each year and the percentiles distribution were calculated for each procedure.

**Results:** The number of participating HF increased over the years: 555 in 2012 to 569 in 2017, representing respectively 83% and 89% of eligible HF. The most frequent procedure in the period was cesarean section (n=1,961,504) and the less frequent was colectomy by laparoscopic (LP) (n=16,434). The rates of laparoscopic appendectomy, colectomy, hysterectomy and of mastectomy were zero up to percentile 75; their percentile 90 rates varied along the years ranging, respectively, from 1.1 to 3.6%; 0 to 7.8%; 1.0 to 2.0% and 3 to 5.5%. Craniotomy had 0% SSI rate up to the p50 and varied along the years ranging from 5 to 6.8% at the p75 and from 10 to 14.3% at the p90. The p50 ranged within the years from 0.2 to 0.23% for cesarean section and from 2.5 to 5.2% for coronary artery bypass graft. The p90 for laparoscopic cholecystectomy varied along the years ranging from 0.8 to 1.2%.

**Conclusion:** The results showed high adherence of HF to the statewide surveillance system. The high number of hospitals with rate of zero pointed out flaws in the surveillance performed by the HF. The high rates demand strategies by both the health authorities and HF aiming to reduce the SSI.

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**Disclosure of Interest:** None declared

#### P468

#### BENCHMARKING DEVICE-ASSOCIATED INFECTIONS FOR PREVENTION IN DEVELOPING COUNTRIES: A QUANTITATIVE MULTICENTERED STUDY IN BRAZILIAN HOSPITALS AND INTENSIVE CARE UNITS

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**Introduction:** Benchmarking is an effective tool for monitoring device-associated infections (DAI). Thus, updated research is necessary in order to create representative data.

**Objectives:** This descriptive, multicentered study provides benchmarks to the southeast population of Brazil and similar populations from developing countries.

**Methods:** The NOIS Project uses SACIH, software for hospital infection control ([www.sacihweb.com](http://www.sacihweb.com)), which retrieves data provided by different Brazilian hospitals. All hospitals comply with prospective Healthcare Associated Infections (HAI) surveillance NHSN/CDC protocols. A total of 189252 surgical and intensive care unit (ICU) procedures, from 11 hospitals and 13 ICU's, were analyzed from 2014 to 2018. Benchmarks were defined as 10<sup>th</sup>, 50<sup>th</sup>, and 90<sup>th</sup> percentiles (p10, p50, p90) of DAI rates from each type of surgical procedure. Only a small selection from all data was comprised in this abstract.

**Results:** Benchmarks for DAI were here by defined as the pooled mean of the 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup>, 90<sup>th</sup> percentiles of the infection rate of each procedure. Utilization ratio was defined by the number

of device days divided by the number of patient days: Central line-associated primary bloodstream infections (CLABSI) per 1,000 central line-days: 6.5%. Ventilator-associated pneumonias (VAP) per 1,000 ventilator-days: 8.8%. Urinary catheter-associated urinary tract infections (CAUTI) per 1,000 urinary catheter-days: 3.6%. Central line utilization ratio: 47%. Ventilator utilization ratio: 39%. Urinary catheter utilization ratio: 55%.

**Conclusion:** VAP presented higher rates of DAI in Brazilian hospitals. This study also calculated benchmarks, which can be used for healthcare quality assessment in developing countries.

**Disclosure of Interest:** None declared

#### P469

#### STATEWIDE SURVEILLANCE SYSTEM FOR ENDOPHTHALMITIS AFTER INVASIVE INTRAOCULAR PROCEDURES: PRELIMINARY DATA OF AN IMPLEMENTATION STUDY CASE

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**Introduction:** Endophthalmitis is one of the most severe complications after invasive intraocular procedures (IIP), whose magnitude is unknown in Brazil due to the lack of a surveillance system.

**Objectives:** To assess the implementation process of a surveillance system for endophthalmitis after invasive intraocular procedures

**Methods:** *Study design:* implementation research, prospective case study, using the Consolidated Framework for Implementation Research (CFIR). *Context:* São Paulo State, Brazil. The implementation strategy was developed in partnership with the State Health Department (SHD). The study was carried out in five phases: 1) Design of the surveillance system (SIVEN); 2) Context assessment; 3) Recruitment & training of pilot phase participants; 4) Data analysis: adherence and endophthalmitis rates; 5) Evaluation & scaling up. Eligible settings were Healthcare Facilities (HF) which undertook IIP in the State. SIVEN includes a monthly report of number of cataract surgeries, intravitreal injections, and endophthalmitis cases. After the pilot phase (16 months), implementation strategy adjustments were carried out and scaling up proceeded.

**Results:** The adherence rate in pilot phase was 7.0% (31/443); with the number of HF participants rising steadily, from 10 to 31. The number of IIP performed was 62,445; endophthalmitis incidence rate: 0.05% (n=30). The context assessment showed failures in infection prevention standards among HF. Barriers identified during the pilot phase were: lack of reliable data in National Registry of HF to detect eligible settings, poor regularity in data sending by participants, and low adherence rate. This is an ongoing project: During the current scaling up phase, another 18 HF began to participate.

**Conclusion:** The implementation process of SIVEN has been shown to be complex. Detecting barriers and enablers provided useful information for the scaling up phase, including the development of strategies to raise infection prevention awareness and enhancing adherence to the system.

**Key words:** Implementation Science, Surveillance, Endophthalmitis, Nursing

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