

the state licensing authorities receive a specific complaint. Many states, including Pennsylvania, do not have continuing IPC education requirements for dental providers. In 2018–2019, the Philadelphia Department of Public Health (PDPH) received and responded to multiple complaints and concerns related to IPC practices at dental clinics. Complaints were investigated in collaboration with the Pennsylvania Department of State (PADOS). **Methods:** Unannounced site visits were conducted at 7 Philadelphia dental clinics from December 2018 through September 2019 as part of the public health responses. Clinic evaluations and observations by PDPH certified infection preventionists focused on (1) IPC policies and procedures, (2) staff IPC training, (3) hand hygiene, (4) personal protective equipment, (5) instrument reprocessing and sterilization, (6) injection safety, and (7) environmental cleaning and disinfection. The CDC and the Organization of Safety, Antisepsis and Prevention (OSAP) checklists were adapted for this purpose. **Results:** Most dental practices we visited were small, unaffiliated, owner-operated clinics. The most common gaps we identified were associated with instrument reprocessing and sterilization practices, including inadequate separation between clean and dirty work areas, limited space and availability of sinks, inappropriate use of glutaraldehyde products for instrument cleaning (n = 3, 43%), extended reuse of cleaning brushes (n = 5, 71%), sterilization or storage of sterilized instruments without appropriate packaging (n = 2, 29%), lack of spore testing or reviewing results (n = 2, 29%), and lack of documentation of sterilizer run cycles and maintenance (n = 7, 100%). Additionally, most clinics did not have well-developed IPC policies and procedures, and staff IPC trainings were neither documented nor conducted annually. Alcohol-based hand sanitizer was often not available at the point of use. **Conclusions:** In Philadelphia, dental clinics often lacked IPC support and oversight. Lapses across multiple key IPC domains were common. These findings suggest that public health may have a role in providing IPC support to unaffiliated dental clinics. Licensing entities can also serve a role in improving IPC practices by more widely mandating continuing IPC education as part of the dental license renewal process.

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#### **Presentation Type:**

Poster Presentation

#### **Standardized Antimicrobial Administration Ratio (SAAR) Clinical Outcomes Assessment in a Large Community Healthcare System**

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**Background:** Research on the association between the standardized antimicrobial administration ratio (SAAR) and clinical outcomes is lacking. **Objective:** We compared SAAR and patient outcomes in 97 acute-care facilities affiliated with a large health-care system. **Methods:** Facilities were classified using the broad-spectrum hospital-onset (BSHO) SAAR for medical, surgical, and medical-surgical wards as low, moderate, or high antimicrobial use: low use SAAR, <0.8; moderate use SAAR, 0.95–1.05; and high-use SAAR, >1.2. Data were included from patients aged ≥18 years who were discharged between the first quarter of 2018 and the second quarter of 2019, had nonmissing matching criteria,

BMI between 10 and 90, and at least 1 BSHO medication administered in a medical, surgical, or medical-surgical ward. Patients were matched for gender, age group, BMI category, year and quarter of discharge, ICU stay, and diagnosis-related group (DRG). Eligible drugs included all routes for cefepime, ceftazidime, doripenem, imipenem/cilastatin, meropenem, and piperacillin/tazobactam and IV only for amikacin, aztreonam, gentamicin, and tobramycin. Outcomes were evaluated in a pairwise manner using *t* tests or  $\chi^2$  tests. **Results:** Each of the 3 study groups consisted of 6,327 patients, 51% of whom were men; average age, 63 years; 70% of whom were obese or overweight, and 19% of whom had an ICU stay. The most common DRG code was infectious and parasitic diseases (57%) followed by digestive system (9%), respiratory system (7%), and kidney and urinary tract (6%). High antibiotic use was associated with longer length of stay and a higher estimated cost per visit. Low antibiotic use was associated with higher rate of mortality and a lower rate of readmissions compared to moderate use. The low-usage group did not exhibit a statistically significant difference in mortality, readmissions, or rate of *C. difficile* compared to the high-usage group. **Conclusions:** The optimal antibiotic utilization group varied among outcomes. Further evaluation of outcomes is needed for the SAAR to understand the ranges and the relationship between the measure and clinical outcomes.

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#### **Staphylococcus spp Resistance to Chlorhexidine: Is There Any Impact Related to the Routine Use for Hand Hygiene?**

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**Background:** Although guidelines recommend the use of chlorhexidine gluconate (CHG) for hand hygiene (HH), the impact of its routine use on antimicrobial resistance is not clear. **Objective:** To analyze the impact on the CHG susceptibility among isolates obtained from hands of HCW during its routine use for HH. **Methods:** We conducted a crossover study at 4 medical-surgical wards of a tertiary-care hospital in São Paulo, Brazil. In 2 units (intervention group), we established routine use of CHG for HH. For the other 2 units (control group), regular soap was provided. The availability of alcohol formulation for HH was not changed during the study. Every 4 months we swapped the units, ie, those using CHG changed for regular soap and vice versa. At baseline, we cultured the hands of HCWs. Only nursing staff hands were investigated. For hand culturing, HCWs placed their hands inside a sterile bag containing a solution of phosphate-buffered saline, Tween 80, and sodium thiosulfate. After the solution incubated overnight,