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). 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, 35% or 25% for validation). They were compared by measuring area under the curve (AUC; range, 0–1) presented for each of the configurations. **Results:** From 1,166 records collected, only 665 records were enabled for analysis. Regarding statistical data: the average duration of surgery was 100 minutes (range, 31–180); patients were aged 41–49 years; the SSI rate was low (only 10 cases); the average length of stay was 2 days; and there were no deaths among the cases. Moreover, 29% of the operative sites were contaminated and 57% were potentially contaminated, revealing a high rate of potential contamination in the operative sites. The prediction process achieved 0.995. **Conclusions:** Despite the noise in the database, it was possible to obtain a relevant sampling to evaluate the profile of hospitals in Belo Horizonte. In addition, for the predictive process, although some settings achieved AUC results of 0.5, others achieved and AUC of 0.995, indicating the promise of the automated SSI monitoring framework for abdominal hysterectomy surgery (available in www.sacihweb.com). To optimize data collection and to enable other hospitals to use the SSI prediction tool, a mobile application was developed.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.958

Presentation Type:
Poster Presentation

Patterns and Predictors of UTI Treatment Practices in Nursing Homes

James H. Ford II, University of Wisconsin-Madison School of Pharmacy; Dee Heller, University of Wisconsin School of Medicine and Public Health; Kathi Selle, University of Wisconsin School of Medicine and Public Health; Susan Nordman-Oliveira, University of Wisconsin School of Medicine and Public Health; Jennifer Robinson, University of Wisconsin Madison School of Medicine and Public Health; Sally Jolles, University of Wisconsin Madison School of Medicine and Public Health; Daniela Uribe-cano, University of Wisconsin Madison School of Medicine and Public Health; Christopher Crnich, University of Wisconsin School of Medicine and Public Health

Background: Suspicion of urinary tract infection (UTI) is the most common justification for prescribing antibiotics in nursing homes. More than half of antibiotic prescriptions for treatment of UTI in nursing homes are either unnecessary or inappropriate. Achieving a better understanding of the factors that underlie UTI treatment decisions is necessary to improve the quality of antibiotic prescribing in nursing homes. An ongoing hybrid type 2 effectiveness-implementation cluster randomized trial of a recently developed nursing home UTI recognition and management tool kit provided us with an opportunity to explore the influence of organizational, clinical, and staff attributes on UTI antibiotic prescribing practices in nursing homes. **Methods:** Data on antibiotic starts for suspected UTIs were collected in 29 nursing homes over a 9-month period. Antibiotic practices evaluated included total antibiotic starts per 1,000 resident days, % antibiotic starts with treatment duration >7 days, % antibiotic starts in which the initial antibiotic choice was a fluoroquinolone, and % antibiotic starts meeting UTI toolkit criteria of appropriateness. Prior research and bivariate analyses were used to select clinical and organizational attributes as well as individual nursing staff-level retention rates for inclusion in a stepwise linear regression model for each antibiotic practice outcome. **Results:** In total, 602 UTI antibiotic events were evaluated. Four associations were identified for antibiotic starts including nursing home urine culture rate, ICP status, nonprofit and part-time LPN retention. Nursing homes with higher full-time LPN retention had a lower rate of antibiotic treatment duration >7 days. Full-time CNAs and part-time LPNs retention and for-profit status was associated with the proportion of fluoroquinolone antibiotic starts. No attributes influenced the proportion of antibiotic starts meeting appropriateness criteria (Fig. 1). Urine culture rates are driving overall nursing home antibiotic prescribing. **Conclusions:** Urine culture practices was strongly associated with UTI treatment rates in nursing homes. A variety of organizational characteristics were also associated with UTI treatment rates as well as other UTI antibiotic prescribing practices. Some of these associations appear paradoxical but may reflect increasing resident acuity and increased capacity to standardize practices through organizational centralization.

	UTI Prescribing Practices			
Predictors	Total AS per 1,000 resident days	% AS with treatment duration > 7 days	% AS where initial antibiotic was a fluoroquinolone	% AS meeting appropriateness criteria
Facility Urine Culture Rate	OR = 2.20 (p < 0.001)	---	---	---
ICP Full Time Equivalent	OR = 1.21 (p = 0.015)	---	---	---
Non Profit Status	OR = 0.82 (p = 0.019)	---	---	---
For Profit NHs	---	---	OR = 0.82 (p = 0.009)	---
Full-time LPN retention rate[1]	---	OR = 0.76 (p = 0.002)	---	---
Part-time LPN retention rate[1]	OR = 0.84 (p = 0.032)	---	OR = 1.13 (p = 0.045)	---
Full time CNA retention rate[1]	---	---	OR = 0.81 (p = 0.001)	---

[1] Staff retention rates for full and part-time staff is above the average for all reporting nursing homes (1=Yes, 0 = No)

Fig. 1.

Funding: Support for the project provided by the Wisconsin Partnership Program.
Disclosures: None
Doi:10.1017/ice.2020.959

Presentation Type:
Poster Presentation

Peer Comparison Intervention to Improve Antibiotic Prescribing in Dentistry

Monina Klevens, Massachusetts Department of Public Health; Rebecca Roberts, Centers for Disease Control and Prevention; Melissa Cumming, Massachusetts Dept. of Public Health

Background: Dentists prescribe an estimated 13% of outpatient antibiotic courses, many of which may be unnecessary. Health departments are in a unique position to support implementation of antibiotic stewardship across healthcare facilities, including in dental offices. A customized peer comparison message with feedback regarding prescribing frequencies was effective in reducing inappropriate prescribing among primary care physicians in Massachusetts and California. We tested the effect of a peer comparison message for antibiotic prescribing on dentists in the Massachusetts Medicaid program. **Methods:** We analyzed data from September 2018 to July 2019 for prescriptions of antibiotic courses by dentists to identify the highest prescribing dentists. We used their national provider identifier (NPI) to deduplicate

providers and we searched for addresses using the CMS online database. On March 25, 2019, the high prescribers were sent a hard copy letter from the Massachusetts Department of Public Health stating that they were "among the 1% of frequent prescribers." In addition, the letter provided citations to professional guidelines and prescribing best practices and invited participation in health department–sponsored training for continuing education credits. We tracked the monthly number of antibiotics prescribed by provider before and after the mailing and compared those who received the letter (intervention) to those whose address was either out of state or undeliverable (comparison). **Results:** Prescribing records for 3,008 dentists were available from September 2018 through July 2019. Most (67%) prescribed <10 antibiotic courses in the 11-month period; the mean monthly antibiotic courses prescribed ranged from 1.2 to 1.6, and the median monthly prescriptions was 0. However, 33% prescribed 10–199 antibiotics, and 1% prescribed >200. Of these 28 comprising the highest 1% , 15 received the intervention letter. The others were either out of state (N = 3) or the letter was returned undelivered (N = 10). The average monthly number of antibiotic courses prescribed before the intervention was similar in the intervention and comparison groups (25.0 and 24.2, respectively). In the 4 months after the intervention, the average did not change in the intervention group but increased slightly in the comparison group (25.2 and 26.2, respectively). The intervention had no significant effect ($P = .80$). **Conclusions:** We observed no effect of this peer comparison message among a small sample of dentists in the Massachusetts Medicaid program. This finding may be due to multiple factors, including the small number of the targeted prescribers, the use of a relatively friendly message for communicating with the high prescribers, and the possibility that other forms of communication would be more effective.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.960

Presentation Type:
Poster Presentation

Healthcare Professionals Perception of Mobile Phone Usage and Hand Hygiene Adhesion in Intensive Care Units

Evelyn Sanchez, University of São Paulo; Lauro Perdigão-Neto, Hospital das Clínicas, University of São Paulo, São Paulo, Brazil; Sânia Alves dos Santos, Laboratory of Medical Microbiology, University of São Paulo; Camila Rizek, São Paulo University; Maria Renata Gomez , Hospital das Clinicas of the University of São Paulo, São Paulo Brazil; Roberta Martins, University of Sao Paulo; Gaspar de Oliveira, University of Sao Paulo; Thais Guimaraes, Hospital das Clínicas – FMUSP; Icaro Boszczowski, Hospital das Clínicas University of Sao Paulo; Flavia Rossi, University of São Paulo; Maristela Freire, University of Sao Paulo; Anna Levin, Hospital das Clínicas, University of São Paulo, São Paulo, Brazil; Silvia Figueiredo Costa, São Paulo University; Marina Farrel, Universidade de Sao Paulo

Background: The introduction of new technologies into the medical field has the duality of improvement and concerns about correct usage and cleaning. Mobile phones are used by healthcare professionals (HCPs) in the work place, and there is not an official policy about their use in health environment. **Methods:** We asked 60 intensive care unit (ICU) HCPs from 2 units (the burn unit and the internal medicine unit) to participate in an electronic survey about mobile phone usage and hand hygiene compliance; we also cultured the hands and mobile phones of the participants. Unfortunately, 13 HCPs did not participate. Susceptibility testing of the strains was conducted, as well as molecular testing. **Results:** Overall, 47 HCPs responded to the inquiry: 19% were nurses (9 of 47), 19% were resident physicians (9 of 47), 17% were nursery technicians (8 of 47), 17% were physiotherapists (8 of 47), 13% were cleaning staff (6 of 47), 11% were consultants (5 of 47), and 4% were technicians (2 of 47). Moreover, 26 of 47 participants (55%) were woman and 21 (45%) were men. From all HCP categories, 39 of 47 respondents (83%) reported that they had optimal hand hygiene compliance. However, 92% of respondents had a colonized hand and 90% had a colonized mobile phone. Also, 44 of 47 HCPs (94%) reported that the took their personal mobile phone into the workplace; 40 (85%) reported that they used it during the work day and 35 (74%) reported that they cleaned it. However, 8 HCPs (26%) reported that they had never cleaned the device. All of the HCPs understood that mobile phones can harbor bacteria, and 27 of 47 HCPs (57.45%) indicated that they use 70% alcohol to clean their mobile phones. In contrast, the first choice for hand hygiene was water and soap in 51% of HCPs (24 of 47). Also, 3 HCPs did not have any colonization in the hand culture but had healthcare-associated infection (HAI) pathogens in the mobile phone culture. **Conclusions:** A policy regarding mobile phone usage in the healthcare setting should be in place, and cleaning of electronic devices in hospitals should be standardized.

Table1.- Microorganisms isolated accordingly with the Health-care Professional category and Heath Associated Infections (HAI)

Health-care Professional Category	Hand HAIs Agents	Mobile Phone HAIs Agents	*A.baumanni* Hand Culture	*E.faecalis* Hand culture	*S.aureus* Hand Culture	*S.aureus* Mobile Phone
Nurse	55,56% (5/9)	22,22% (2/9)	33,33% (3/9)	33,33% (3/9)	0% (0/9)	22,22% (2/9)
Cleaning staff	66,67% (4/6)	0% (0/6)	50% (3/6)	16,67% (1/6)	0%(0/6)	0% (0/6)
Physioterapist	25% (2/8)	37,50% (3/8)	0% (0/8)	12,50% (1/8)	0%(0/8)	25% (2/8)
Consultant	60% (3/5)	0% (0/5)	20% (1/20)	0% (0/8)	20%(1/5)	0% (0/5)
Resident	22,22% (2/9)	22,22%(2/9)	11,11% (1/9)	0% (0/9)	11,11%(1/9)	22,2% (2/9)
Nursery technician	37,50% (3/8)	25% (2/8)	0% (0/8)	12,50% (1/8)	12,50% (1/9)	0% (0/8)
Radiologist technician	100% (2/2)	50% (1/2)	50% (1/2)	100% (2/2)	50% (1/2)	50% (1/2)

Funding: None
Disclosures: None
Funding: None
Disclosures: None
Doi:10.1017/ice.2020.961

Presentation Type:
Poster Presentation

Perceptions of Antimicrobial Stewardship among Infectious Disease Physicians at Two Affiliated Teaching Hospitals

Katharina Rynkiewich, Washington University in St Louis; David Schwartz, John H. Stroger Jr Hospital of Cook County; Sarah Won, Rush University Medical Center; Brad Stoner, Washington University in St Louis

Background: Two affiliated teaching hospitals in Chicago, Illinois, participated in an ethnographic study of hospital-based inpatient antimicrobial stewardship programs and interventions between 2017 and 2018. Although antimicrobial stewardship is now a requirement in medical practice, it is not clear how infectious disease physicians perceive and understand antimicrobial stewardship. Over a period of 18 months, we directly observed infectious disease practice to better understand how antimicrobial stewardship is conducted among physicians within the same specialty. **Methods:** A doctoral candidate medical anthropologist conducted semistructured interviews with infectious disease attending