

**Results.** The study period yielded 1,700 prescriptions after exclusions 1,063 were included in the analysis. Patients aged  $\geq 65$  comprised 51% of the population. Older patients had significantly more comorbidities than the younger population. No significant difference was observed for antibiotic indicated (60%), correct drug (50%), or correct duration (75%) between the two age groups. Patients in the  $\geq 65$  cohort were statistically significantly more likely to receive an inappropriate dose (86% vs. 76%,  $P < 0.002$ ). In the multivariable analysis, patients with COPD were more likely to be appropriately with antibiotics OR 1.4 (95% CI: 1.03–1.9) compared with those without COPD. Older patients were not more likely to be retreated or admitted for the same indication within 30 days.

**Conclusion.** Antibiotics were frequently overused in the outpatient setting; however, they were not more frequently used in elderly patients. However, older adults were more likely to be prescribed an antibiotic at an inappropriate dose highlighting the need for increased caution with dosage selection in this population. Stewardship teams caring for elderly patients should be cognizant of dosing in this population.

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#### 1245. Infection Prevention and Control (IP&C) and Antibiotic Stewardship (AS) Practices in Pediatric Long-Term Care Facilities

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**Background.** In November 2017, the Centers for Medicare and Medicaid (CMS) implemented a requirement for long-term care facilities (LTCFs) to incorporate AS into their IP&C programs. The purpose of this study was to describe baseline IP&C and AS practices in pediatric LTCFs.

**Methods.** We modified a survey from the CDC to assess IP&C in pediatric LTCFs. The internet-based survey was distributed to the 41 pLTCFs in the Pediatric Complex Care Association from May to June 2017. The 67-question survey included questions to assess IP&C domains and infrastructure such as written policies, hand and respiratory hygiene (HH), personal protective equipment (PPE) use, environmental cleaning, and AS practices. Responses to questions were summarized using frequencies and analyzed using  $\chi^2$  or Fisher's exact tests, as appropriate. The characteristics of sites with  $\geq 90\%$  compliance with the CMS rule, as assessed by 14 relevant survey questions, were compared with those of sites with  $< 90\%$  compliance.

**Results.** Overall, 25 (61%) facilities nationwide completed the survey. All sites reported having written IP&C policies and most had a person responsible for IP&C (96%); fewer reported reviewing/updating these policies annually (72%). Few sites provided feedback to staff on HH adherence (44%), PPE use (40%), and cleaning/disinfection procedures (44%). Few had written policies on antibiotic prescribing (48%) or provided prescribers with feedback about their prescribing practices (40%). Sites with  $\geq 90\%$  compliance with the CMS rule were more likely to report providing prescribers with feedback (70% vs. 20%,  $P = 0.03$ ), to have provided AS training to clinical (60% vs. 0%,  $P < 0.01$ ) and nursing staff (70% vs. 7%,  $P < 0.01$ ) in the past 12 months, and to provide feedback regarding HH (70% vs. 27%,  $P = 0.05$ ).

**Conclusion.** While most facilities had implemented some IP&C and AS strategies pertaining to the CMS rule before its enforcement, this survey identified several gaps, especially pertaining to staff feedback for IP&C practices and antibiotic prescribing. Facilities should develop feedback strategies and regularly reinforce the importance of IP&C at employment and during regular trainings.

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#### 1246. *Acinetobacter baumannii* in the Post-Acute Care Setting: Prevalence and Resistance Rates in Patients, Health Care Personnel and the Environment

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**Background.** *Acinetobacter baumannii* is an important agent of healthcare-acquired infections, sporting high resistance to major antibiotics in acute care. Since *A. baumannii* is an opportunistic pathogen commonly found in the environment, we aimed to investigate: (1) its prevalence as colonizer on patients, environment, and healthcare personnel (HCP) in Nursing Facilities (NFs) with intermediate intensity of care but high antibiotic pressure and (2) whether resistance rates in colonizing strains vary between patient, environmental, and HCP isolates.

**Methods.** We analyzed *A. baumannii* patient and HCP colonization and environmental contamination in six NFs in Michigan. Samples were collected from HCPs hands, and from multiple patient body sites and high-touch surfaces at admission, 14 days, and monthly up to 6 months. Ciprofloxacin, imipenem, and ceftazidime resistance was tested according to CLSI guidelines.

**Results.** 651 patients were screened (average follow-up time was 29 days). Patient colonization with *A. baumannii* was found in 59/1,620 (3.64%) of visits, and environmental contamination in 267/1,620 visits (16.48%) ( $P < 0.001$ ). Interestingly, HCP showed at least as high or possibly higher colonization rates than patients (32/574) (5.25%) ( $P = 0.06$ ). Resistance rates differed significantly between HCP, environmental, and patient isolates, ranging from 35 to 38% for patient isolates, 26 to 30% for environmental isolates, and only 8 to 17% for HCP isolates (table).

**Table:** Resistance Rates of *Acinetobacter baumannii* to Ceftazidime, Imipenem, Ciprofloxacin Vary Based on the Source of Isolation (Patient, Environment, HCP Hands)

	Patient Isolates	Environmental Isolates	HCP Hands Isolates	Total
Total Isolates	85	454	36	575
Resistant to Imipenem (%)	31 (36%)	118 (26%), $P = 0.047^*$	3 (8%), $P = 0.002^{**}$	152 (26%)
Ciprofloxacin (%)	32 (38%)	128 (28%), $P = 0.08^*$	5 (14%), $P = 0.009^{**}$	165 (29%)
Ceftazidime (%)	30 (35%)	137 (30%), $P = 0.34^*$	6 (17%), $P = 0.040^{**}$	173 (30%)

\*Patient isolates vs. environmental isolates.

\*\*Patient isolates vs. HCP hands isolates.

**Conclusion.** In our NFs, *A. baumannii* is more likely to be found on HCPs than on patients. However, HCP isolates have much lower resistance rates. Environmental contamination is alarmingly common, with worrisome resistance rates even in post-acute care settings.

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#### 1247. Genomic Epidemiology of MRSA DURING Incarceration at a Large Inner-City Jail

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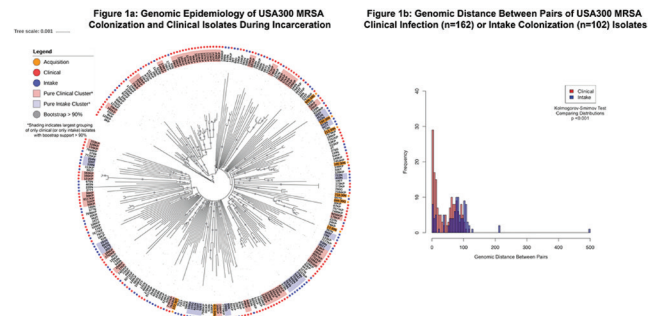
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**Background.** Congregate settings may facilitate spread of USA300. Jails may be a location where individuals already colonized with MRSA (from preceding exposures) intermingle with others, potentially augmenting spread. We examined the rate of MRSA acquisition during incarceration and characterized the genomic epidemiology of MRSA strains entering the jail, MRSA acquisition isolates, and archived (2015–2017) clinical MRSA isolates from male detainees.

**Methods.** Males incarcerated at the Cook County Jail were enrolled within 72 hours of intake and surveillance cultures for MRSA carriage (nares, throat, groin) collected. Detainees in jail at Day 30 had cultures repeated to determine MRSA acquisition. A survey was administered and chart review performed to identify predictors of acquisition. Whole-genome sequencing and phylogenetic analysis of isolates were performed with integration of epidemiologic data.

**Results.** 800 males were enrolled, with 19% colonized with MRSA at jail intake. 143 reached the Day30 visit (82% AA, 7% Hispanic), by which there were 12 MRSA acquisitions detected. Heroin use before entering the jail (OR 3.67,  $P = 0.04$ ) and sharing personal items during incarceration (OR = 4.92,  $P = .01$ ) were significant predictors of acquisition. Sequenced clinical isolates ( $n = 175$ ) (largely skin infections) were more likely to resemble each other genetically than the diverse intake strains ( $P < 0.001$ ) (figure), suggesting clinical isolates may originate from transmission within the jail or be due to more virulent strains. 7/12 (58%) acquisition isolates were within 40 SNVs from another isolate; five were genomically similar to intake isolates and two were similar to clinical isolates. Acquisition strains from those sharing personal items (vs. not) tended to have closer relatedness (19 SNVs vs. 56 SNVs,  $P = 0.22$ ).

**Conclusion.** There is a high burden of MRSA entering jail. Genomic analysis of acquisition and clinical isolates suggests potential spread of incoming strains and possible networks spread of prevalent strains during incarceration. Sharing of personal items during incarceration is associated with MRSA acquisition and could be a focus of an intervention. Future study of epidemiologic and location data may inform targeting of interventions within the jail.



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