onset and weekly for 4 weeks of follow-up to assess viral shedding. Influenza, respira-
tory syncytial virus (RSV), rhinovirus (RV), coronavirus (229E, NL63, OC43, HKU1),
parainfluenzavirus (PIV 1–4), metapneumovirus (MPV), adenovirus (AdV), bocavi-
rus (BoV), enterovirus, parechovirus, and M. pneumoniae were tested by the Fast Track
Diagnostics Respiratory Pathogens 21 real-time RT-PCR panel.

Results. Subset with research specimen collection: Among 79 residents (aged
0–20 years, median = 8), 60 ARIs were reported in 37 (47%) residents. Swabs were
obtained at illness onset for 53/60 ARI episodes; among these, there were 25 single-vi-
drus detections and five co-detections. An additional 33 single- and five co-detections
occurred in 175 follow-up swabs (table). Molecular typing of 32 RV + specimens iden-
tified 13 RV types. All residents: During the 2016–2017 influenza season, 308/322 (96%) age-eligible
residents received influenza vaccine and 168/364 (46%) received prophylactic antivi-
rals for influenza exposures. Although influenza was not detected in research swabs, it
was detected in 3/200 tests conducted for clinical purposes.

Conclusion. ARIs were common among residents of three PCCFs, and a variety
of respiratory viruses were detected. The rarity of influenza may reflect strong infec-
tion control practices in these facilities, including vaccination and prophylactic use of
antivirals.

Table: Viral Detections by Timing of Collection (n = 53 ARI Episodes)

| Viral Detections | Onset | Follow-up |
|------------------|-------|----------|
| Single detections |   |          |
| RV               | 14    | 8        |
| 229E             | 1     | 1        |
| OC43             | 3     | 2        |
| MPV              | 1     | 1        |
| BoV              | 3     | 17       |
| RSV              | 2     | 2        |
| Co-detections*   | 5     | 5        |
| Total            | 30    | 38       |

Note: There were no detections for pathogens not shown.

Co-detections also included PI2V and AdV.

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1242. Quantitative Analysis of Microbial Burden on LTCF Environmental Surfaces

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Session: 138. Healthcare Epidemiology: Non-acute Care Settings

Friday, October 5, 2018: 12:30 PM

Background. There is a lack of data on environmental surface contamination in
long-term care facilities (LTCFs), despite multiple reports of outbreaks of multi-
drug-resistant organisms in these settings. Therefore, we conducted a quantitative
analysis of the microbial burden and prevalence of epidemiologically important path-
ogens (EIP) found on LTCF environmental surfaces.

Methods. Microbiological samples were collected using Rodac plates from resi-
dent rooms and common areas in five LTCFs. At each facility, five samples from up to
10 different available environmental surfaces were collected from a room of a resi-
dent reported to be colonized with EIP, as well as from a room of a resident reported to
be non-colonized. In addition, five samples from up to 10 different environmental
surfaces were collected from two common areas in the facility. EIPs were defined as
MRSA, VRE, C. difficile, and multi-drug resistant Gram negative bacilli. Data were ana-
lyzed for each environmental site sampled in a resident room or common area based
on total bacterial colony forming units (CFU), mean CFU per Rodac, total EIP by site,
and mean EIP counts per Rodac.

Results. The below table summarizes total EIP recovered from environmental
sites by reported EIP colonization status of the resident. Rooms of residents with
reported colonization had much greater EIP counts per Rodac (8.32, 95% CI 8.05,
8.60) than rooms of non-colonized residents (0.78, 95% CI 0.70, 0.86). MRSA was the
most common EIP recovered from Rodacs, followed by C. difficile. Very few EIPs were
recovered from the common areas sampled at these LTCFs.

Conclusion. We found varying levels of CFU and EIP on environmental sites at
LTCFs. Colonization status of a resident was a strong predictor of higher levels of EIP
being recovered from his/her room.

Table: Total EIP Recovered From Environmental Sites in Residential Rooms

| Site                        | Number of Rodac Samples | Mean EIP per Rodac | Number of Rodac Samples | Mean EIP per Rodac |
|-----------------------------|-------------------------|--------------------|-------------------------|--------------------|
| Non-Colonized Resident Rooms |                       |                    |                        |                    |
| Bathroom Floor              | 54                      | 35                 | 0.65                    | 55                 | 1820               | 33.09               |
| Bed                        | 48                      | 20                 | 0.62                    | 48                 | 45                 | 12.34               |
| Over Bed Table              | 48                      | 24                 | 0.50                    | 55                 | 123                | 2.24                |
| Nightstand                 | 55                      | 1                  | 0.82                    | 42                 | 223                | 4.55                |
| Sink                       | 55                      | 25                 | 4.56                    | 49                 | 371                | 7.57                |
| Chair                      | 35                      | 1                  | 0.03                    | 44                 | 361                | 8.20                |
| Overall Sites Sampled      | 433                     | 337                | 0.78                    | 428                | 3561               | 8.32                |

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1243. Comparative Analysis of Antimicrobial-related Adverse Events in the Outpatient Treatment of Staphylococcal Infections

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Session: 138. Healthcare Epidemiology: Non-acute Care Settings

Friday, October 5, 2018: 12:30 PM

Background. Limited data exist to evaluate safety-related outcomes in Outpatient
Parenteral Antimicrobial Therapy (OPAT) patients treated with antimicrobial agents for
Gram-positive infections.

Methods. This retrospective, single-center study enrolled Mayo Clinic OPAT patients
between 2013 and 2017. The primary objective of the study compared rates of
therapy modification due to drug-related toxicity for staphylococcal infections treated
with ceftriaxone, ceftazidime, vancomycin, daptomycin, ceftriaxone, linezolid, or erapenem. Secondary objectives included determination of the frequency and
type of adverse drug events (ADEs) attributed to OPAT and rate of readmission due
to ADEs attributed to OPAT.

Results. One hundred seventy-two patients were identified (ceftaxone n = 54, cef-
trizone n = 49, vancomycin n = 30, daptomycin n = 16, erapenem n = 6, linezolid n = 4, oxacillin n = 3, oxacillin n = 3, erapenem n = 1). The overall treatment com-
pletion rates were high (153/172, 89.0%). Patients completed an average of 35.3 days
(7 to 95) of therapy with their original antibiotic. Fourteen patients required change
to a different antibiotic due to antimicrobial toxicity (ceftaziione=5; vancomycin=2;
ceftazidime = 2; daptomycin = 2; ceftaxone = 1; vancomycin = 1; erapenem = 1) and five
patients experienced treatment failure required an additional agent (ceftaxone = 2;
vancomycin = 2; linezolid = 1). Adverse drug events (ADEs) were the most common rea-
sion for antimicrobial adjustment (14/19, 73.7%). The most common ADEs were hypo-
kalemia (28/172, 16.3%) and diarrhea (25/172, 14.5%). There were only two cases of
Clostridium difficile. Thirty-day readmissions due to antimicrobial therapy were low
with 11 patients.

Conclusion. OPAT with Gram-positive agents used for staphylococcal infections
is effective, but antimicrobial modifications still occur. Clinicians should be aware of
the risk of ADEs and readmissions in OPAT patients. A multidisciplinary approach
may enhance management of ADEs and possibly preventing readmissions.

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1244. Evaluation of Antibiotic Prescribing Practices for Geriatric Patients in the Outpatient Setting in a Veterans Affairs Hospital: Identification of Stewardship Targets

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Session: 138. Healthcare Epidemiology: Non-acute Care Settings

Friday, October 5, 2018: 12:30 PM

Background. Antibiotics are frequently overused in the outpatient setting, how-
ever it is unknown how antibiotic use differs with age. Infections are a leading cause
of hospitalization in elderly patients. Prescribing appropriateness for patients less than
65 years old was compared with patients at or above 65 years old in order to identify
targets for antimicrobial stewardship in this population.

Methods. A retrospective review of all outpatient antibiotic prescriptions between
June and September of 2017. Prescriptions were reviewed based on alerts in
the electronic medical record when orders for antibiotics were signed by the pro-
vider. Appropriateness of antibiotics was assessed based on clinical practice guide-
lines. Retreatment and hospital admissions were documented. Those aged ≤65 were
compared with those ≥65 years of age using Student’s t-test and chi-squared tests. A
multivariate logistic regression model was constructed to identify risk factors for
inappropriate use of antibiotics between the two age groups.
**Results.** The study period yielded 1,700 prescriptions after exclusions, 1,063 were included in the analysis. Patients aged ≥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 (50%), or correct duration (75%) between the two age groups. Patients in the ≥65 cohort were statistically significantly more likely to receive an inappropriate dose (66% 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 overprescribed 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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**Session.** 138. Healthcare Epidemiology: Non-acute Care Settings  
Friday, October 5, 2018: 12:30 PM

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

**Methods.** We surveyed a subset of the 744 facilities that were surveyed in the 2014 CDC survey to assess IP&C in pediatric LTFCs. The internet-based survey was distributed to the 41 pLTCFs in the Pediatric Complex Care Network. The survey included questions about facilities' written policies, training, and IP&C regulations. Responses were compared with those from similar studies.

**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 (48%), and cleaning/deselection procedures (44%). Few had written policies on antibiotic prescribing (48%) or provided providers with feedback about their prescribing practices (40%). Sites with 85% compliance with the CMS rule were more likely to report providing providers 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 last 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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**Session.** 138. Healthcare Epidemiology: Non-acute Care Settings  
Friday, October 5, 2018: 12:30 PM

**Background.** Acinetobacter baumannii is an important agent of healthcare-acquired infections. This family has 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 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 and, from multiple patient body sites and high-touch surfaces at admission, 14 days, and monthly up to 6 months. Ciprofloxacin susceptibility andcefalexin 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 591,620 (3.64%) of visits, and environmental contamination in 267,620 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 Cefazidime, Imipenem, Ciprofloxacin  
| Patient Isolates | Environmental Isolates | HCP Hands Isolates | Total |
|------------------|------------------------|-------------------|-------|
| Isolates         | Isolates               | Isolates          |       |
| Total Isolates   | 85                     | 454               | 36    |
| Resistant to Imipenem (%) | 31 (36%) | 118 (28%) | 3 (8%) | 152 (28%) |
| P = 0.002**      |                       | 3 (8%)            |       |
| Ciprofloxacin (%) | 32 (38%)               | 128 (28%) | 5 (14%) | 165 (29%) |
| P = 0.009**      |                       | 5 (14%)           |       |
| Cefazidime (%) | 30 (35%)               | 137 (30%) | 6 (17%) | 173 (30%) |
| P = 0.040**      |                       | 6 (17%)           |       |

**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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**Session.** 138. Healthcare Epidemiology: Non-acute Care Settings  
Friday, October 5, 2018: 12:30 PM

**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. Heron use before entering the jail (OR 3.67, P = 0.04) and sharing personal items during incarceration (OR = 4.92, P = 0.01) 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). While 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 isolate 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 = 0.02).

**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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