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Session: 237. Antibiotic Stewardship: Long-Term Care
Saturday, October 5, 2019: 12:15 PM

Background. Antimicrobial Stewardship Programs (ASPs) in long-term care facilities is a Centers for Medicare and Medicaid Services requirement as of 2017. The CDC recommends that ASPs in skilled nursing facilities (SNFs) fulfill 7 Core Elements: leadership commitment, accountability, drug expertise, action, tracking, reporting and education.

Methods. An electronic survey utilizing REDCap was sent to the 76 Chicago SNFs representatives (Administrator, Director of Nursing, and/or Assistant Director of Nursing). Survey questions were adopted from the CDC Core Elements of Antimicrobial Stewardship for Nursing Homes Checklist.

Results. Twenty-seven (36%) of Chicago SNFs responded. Bed size ranged from 36 – 307 (median 150). Although 93% of facilities had a written statement of leadership support for antimicrobial stewardship, only 22% cited any budgeted financial support for antimicrobial stewardship activities. While Pharmacist Consultants visited all SNFs (most visiting monthly), only 33% of SNFs had an Infectious Disease Provider that consulted on-site. Dedicated time for antimicrobial stewardship activities was less than 10 hours per week in 78% of facilities, with half of all respondents reporting less than 5 hours per week. Treatment guidelines were in place for 63% of SNFs, 56% had an antibiogram, and only 7% utilized the Loeb criteria to guide appropriate antibiotic prescribing. Many facilities tracked antimicrobial stewardship metrics (93%) and reported out to staff (70%). Annual nursing training on antimicrobial stewardship occurs more frequently (85%) than prescriber education (56%). The top 3 barriers identified in implementing ASPs were financial limitations (33%), lack of clinical expertise (33%), and provider opposition (30%). Facilities' compliance in all seven core elements varied from partially compliant (65%), majority compliant (19%), and majority non-compliant (16%).

Conclusion. Data from this baseline survey informed focused antimicrobial stewardship initiatives for the GAIN Collaborative. Targeted areas to incorporate into facility action plans include treatment guideline development, antibiograms, annual staff antimicrobial stewardship education, and adoption of the Loeb minimum criteria for antibiotic prescribing into clinical practice.

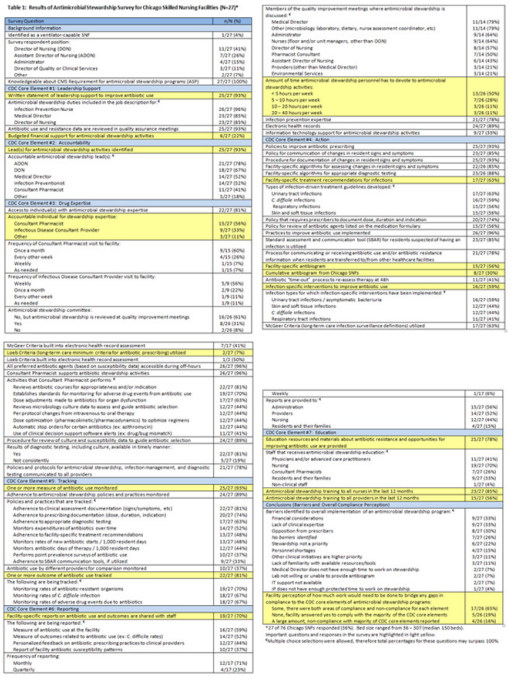


Figure 2: Chicago Skilled Nursing Facility Compliance with 7 CDC Core Elements of Antimicrobial Stewardship Programs (N=27)

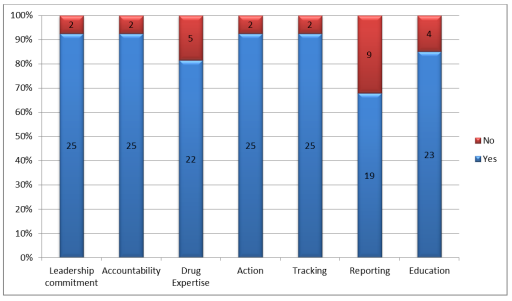


Figure 3: Compliance with Various Action Item Antimicrobial Stewardship Interventions at Chicago SNFs (N=27)

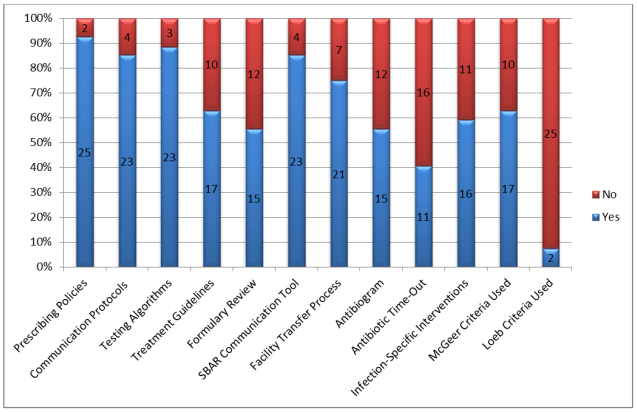
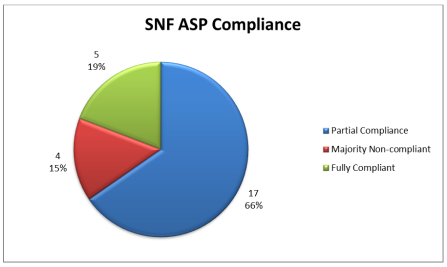


Figure 4: Survey Respondent Perceptions of Chicago Skilled Nursing Facility Antimicrobial Stewardship Program's Extent of Compliance with CDC Core Elements



Disclosures. **All authors:** No reported disclosures.

2046. A Qualitative Study on Perceived Barriers and Facilitators of Implementing an Antimicrobial Stewardship Intervention in the Management of Urinary Tract Infections in a Long-Term Care Setting

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Session: 237. Antibiotic Stewardship: Long-Term Care
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Background. 50% of antibiotic courses in long-term care facilities (LTCFs) are unnecessary, leading to increased risk of harm such as *Clostridiodes difficile* infection and antibiotic-resistant organisms. Antimicrobial stewardship (AS) interventions play an important role in optimizing antibiotic use. Most studies addressing strategies to improve antibiotic prescribing in LTCFs showed modest and unsustained results. We aimed to identify facilitators, barriers and strategies in implementing a urinary tract infection (UTI)-focused AS intervention at an LTCF in Toronto.

Methods. A qualitative approach using conventional content analysis was used. Through purposeful sampling, we recruited different LTCF healthcare providers and administrators at Kensington Gardens. Interviewees attended focus groups or one-on-one interviews. Data were collected using a semi-structured interview guide. Data were analyzed inductively using a codebook modified in an iterative analytic process. Barriers and facilitators with potential strategies were summarized and mapped using the COM-B (capability, opportunity, motivation and behavior) model (Mitchie et al.) and emerging themes identified.

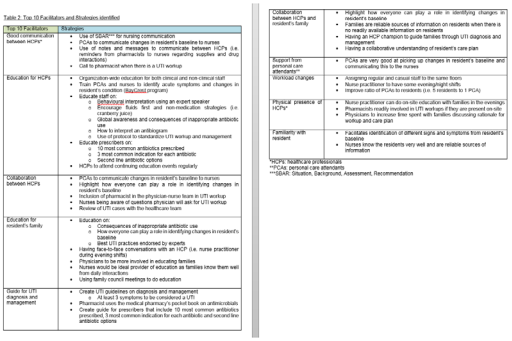
Results. Sixteen participants were interviewed. The most common barriers were family pressure, lack of access and test result delay while the barrier themes were lack of access, inadequate communication, lack of time and lack of knowledge of both HCPs and resident's families. These can be addressed by the most common facilitators and facilitator themes, which included good communication between healthcare professionals (HCPs), education for HCPs and families and collaboration between HCPs. Most barriers and facilitators were mapped to the opportunities domain of the COM-B model.

Conclusion. Strategies for improved UTI-focused antimicrobial stewardship intervention in LTC setting should focus on increasing opportunities and innovative formats for education, communication and collaboration among HCPs and with families although barriers and facilitators in all aspects of the COM-B model were identified.

Table 1: Top 10 Barriers and Strategies identified

Top 10 Barriers	Strategies
Family pressure	• Education for resident's family • Educational handouts • Physical presence of HCPs • Availability of HCPs for discussions • Discussing expectations and care plans
Lack of access to information for HCPs	• Resident's symptoms listed online • Lab to call back for all types of urine culture results (positive, negative, contaminated) • Create LTC-specific antibiogram • Access to resident's information for on-call physician
Test result delay	• Shorter turnaround time for urine culture results • Streamline process of urine culture results communicated to nurses • Online access to lab results
Heavy workload	• Address staff shortage • Reduce resident's family's expectations for non-clinical care • Assign casual staff to the same floor/residents • Hire more PCAs**
Lack of communication	• Hospitals to share information for transferred residents • Lab to call back for all types of urine culture results (positive, negative, contaminated) • Avoid using the nurse as the middle person in conveying messages to/from physician, pharmacist and resident's family
Patient factors hindering appropriate UTI diagnosis	• Establish resident's baseline (cognition, functional ability, urine culture colonization) • Reassess resident's baseline regularly • Clarify resident's antibiotic allergies on admission
Bias of HCPs*	• Education on UTI symptoms and diagnosis • Create a checklist of UTI signs and symptoms • Create a standard list of questions for UTI workup • Physician to explain rationale for no further workup • HCPs to have an open mind to listen to different perspectives
Inadequate time	• Address staff shortage • Increase trust of resident's family in interprofessional team to save time for physicians in joining discussions
Knowledge of HCPs*	• Regular education for regular and casual staff on UTI diagnosis and management
Physical presence of HCPs*	• Physicians to increase time spent discussing options and care plan with resident's family • Pharmacist to be present at time of prescribing

*HCPs: healthcare professionals
**PCAs: personal care attendants



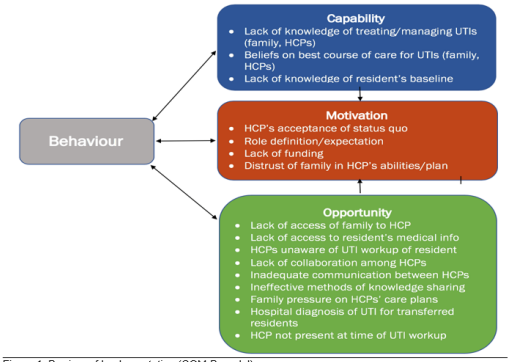


Figure 1: Barriers of Implementation (COM-B model)

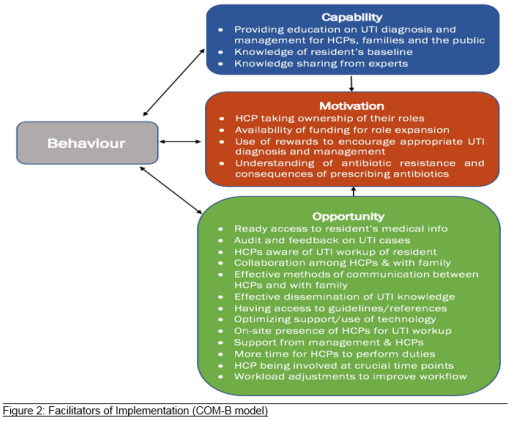


Figure 2: Facilitators of Implementation (COM-B model)

Disclosures. **All authors:** No reported disclosures.

2047. GAIN (Generating Antimicrobial Stewardship Initiatives in Chicago Skilled Nursing Facilities) Collaborative: Cumulative Results of Point Prevalence Surveys Assessing Antibiotic Appropriateness in Four Chicago Skilled Nursing Facilities

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Session: 237. Antibiotic Stewardship: Long-Term Care
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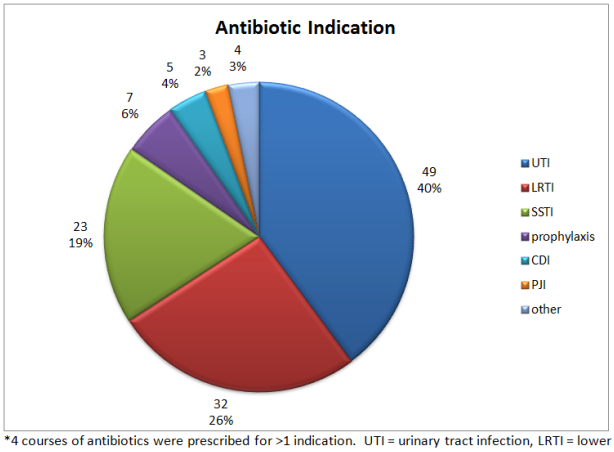
Background. Antimicrobial Stewardship Programs (ASPs) in long-term care facilities are a Center for Medicare and Medicaid Services requirement as of 2017. The CDC estimates 40–75% of antibiotic prescribing in skilled nursing facilities (SNFs) is inappropriate. Overuse of antibiotics can cause harm by increasing the risk of adverse drug events (including *C. difficile* infections) and antimicrobial resistance.

Methods. The GAIN Collaborative was launched to assist SNFs in improving antibiotic prescribing. A list of antibiotics prescribed was generated from the electronic health records, and a chart review was performed.

Results. Antibiotic orders from September 2018 to March 2019 were randomly selected at 4 SNFs, and 120 antibiotic courses were reviewed (23, 40, 25, and 32 at SNFs A-D). Bed size ranged from 72 to 156 (median 88). Inappropriate antibiotic prescribing ranged from 60 to 78% (median 71%) among facilities. Urinary tract infections (UTIs) were the most frequent indication (40%), followed by lower respiratory tract infections (LRTIs), and skin and soft-tissue infections (SSTIs), accounting for 26% and 19% of indications, respectively. Inappropriate prescribing rates by indication were 90% for UTIs, 78% for SSTIs, and 47% for LRTIs. The most common reasons for inappropriate antibiotic prescribing were: insufficient signs and symptoms based on the Loeb minimum criteria for starting antibiotics (43%), inappropriate agent selection (30%), and lengthy treatment durations (29%). The majority of antibiotics prescribed were β-lactams (42%) or fluoroquinolones (29%). The median antibiotic prescription duration for non-catheter-associated UTIs was 5 days, LRTIs was 7 days, catheter-associated UTIs was 10 days, prophylaxis was 10 days, and SSTIs was 13 days.

Conclusion. Inappropriate antibiotic use was common in the four Chicago SNFs assessed. Results were presented at each facility's Quality Assurance meeting to deliver provider-focused feedback. Additionally, provider and nursing education has been conducted at the four SNFs aimed at reducing unnecessary treatment of asymptomatic bacteriuria. Any improvements in antibiotic use will be captured through repeat point prevalence surveys post-implementation of a UTI SBAR communication tool and common infection treatment guidelines.

Figure 1: Indication for Antibiotics Prescribed (N=124)*



*4 courses of antibiotics were prescribed for >1 indication. UTI = urinary tract infection, LRTI = lower respiratory tract infection, SSTI = skin and soft tissue infection, prophylaxis = of any kind (UTI, dental extract, other procedural, surgical, etc), CDI = *C. difficile* infection, PJI = prosthetic joint infection, other = 2 bacteremias, 1 complicated intra-abdominal infection, 1 tooth infection, and 1 osteomyelitis.