2043. The "Resistance Calculator": Refining Empiric Practices of Antimicrobials
Prescription in the Era of Widespread Resistance
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Session: 237. Antibiotic Stewardship: Long-Term Care
Saturday, October 5, 2019: 12:15 PM

Background. Long-term care facilities (LTCF) often struggle with implementation of antimicrobial stewardship programs (ASP) that meet all CDC core elements (CE). The CDC recommends partnership with infectious diseases (ID)/ASP experts to guide ASP implementation. The Nebraska Antimicrobial Stewardship Assessment and Promotion Program (ASAP) is an initiative funded by NE DHHS via a CDC grant to assist healthcare facilities with ASP implementation.

Methods. ASAP performed on-site baseline evaluation of ASP in 5 LTCF (42–293 beds) in the spring of 2017 using a 64-item questionnaire based on CDC CE. After interviewing ASP members, ASAP provided prioritized facility-specific recommendations for ASP implementation. LTCF were periodically contacted in the next 12 months to provide implementation support and evaluate progress. The number of CE met, recommendations implemented, microbiotic starts (AS) and days of therapy (DOT)/1000 resident-days (RD), and incidence of facility-onset Clostridioides difficile infections (FO-CDI) were compared 6 to 12 months before and after on-site visits. Paired t-test and Wilcoxon signed rank test were used for statistical analyses.

Results. Multidisciplinary ASP existed in all 5 facilities at baseline with medical directors (n = 2) or directors of nursing (n = 3) designated as team leads. Median CE implemented increased from 3 at baseline to 6 at the end of follow-up (P = 0.06). No LTCF had all 7 CE at baseline. By the end of one year, 2 facilities implemented all 7 CE with remaining implementing 6 CE. LTCF not meeting all CE were only deficient in reporting ASP metrics to providers and staff. Among the 38 recommendations provided by ASAP, 82% were partially or fully implemented. Mean AS/1000 RD reduced by 19% from 10.1 at baseline to 8.2 post-intervention (P = 0.37) and DOT/1000 RD decreased by 21% from 91.7 to 72.5 (P = 0.20). The average incidence of FO-CDI decreased by 75% from 0.53 to 0.13 cases/10,000 RD (P = 0.25).

Conclusion. Assessment of LTCF ASP along with feedback for improvement by ID/ASP experts resulted in more programs meeting all 7 CE. Favorable reductions in antimicrobial use and CDI rates were also observed. Moving forward, the availability of these services should be expanded to all LTCFs struggling with ASP implementation.

Disclosures. All authors: No reported disclosures.
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 SNF 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 initiatives. 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 (83%) 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.