Background: A high proportion of antibiotic use in long term care facilities (LTCFs) is inappropriate. An antimicrobial stewardship program consisting of prospective audit and feedback was implemented in 4 LTCFs. We hypothesized that the program would decrease the proportion of inappropriate antibiotic use over the period of 12 months.

Methods: Nursing personnel at the 4 LTCFs faxed daily report of all new antibiotic orders written in last 24 hours in their facility to the Infectious Diseases (ID) office. One ID fellow reviewed pertinent data in the electronic health records and interviewed the patient’s nurse on phone, if needed. Under the supervision of the ID attending, a decision was made regarding appropriateness of the antibiotic based on established evidence-based guidelines. If deemed inappropriate, the prescribing provider was called and recommendations were made to change or stop the antibiotic order, and a rationale was provided. Data regarding the diagnosis, appropriateness of orders, reason for inappropriateness, and acceptance or rejection of recommendations were recorded.

Results: 181 antibiotic orders were reviewed during the year, of which 74 (40.9%) were deemed inappropriate. Most of the orders were for urinary tract infections (53.6%), skin and soft tissue infections (17.7%) and upper or lower respiratory tract infections (15.5%). Antibiotics were not indicated in 28.4% cases of inappropriate use, and duration was incorrect in 40.5% of cases. A total of 56 recommendations were made; 87.7% of those were accepted. Overall, 27.6% of orders were inappropriate in 1st quarter followed by 44.6%, 64% and 40.4% in 2nd, 3rd and 4th quarters with monthly variation ranging from 11.1% to 83.3%. No significant change was noticed in the proportion of inappropriate antibiotic use per month over 12 months (p=0.5).

Conclusion: Prospective audit and feedback did not lead to a decrease in proportion of inappropriate antibiotic orders in the LTCFs over the period of one year. However, it has a potential of decreasing total number of inappropriate antibiotic days as the providers accepted most of the recommendations made by the ID team.

Study Challenges
- Difficult to obtain a daily list on regular basis via fax.
- Difficult to reach nursing staff (long wait time) on phone.
- Difficult to reach ordering physicians to convey recommendations
- Lack of cooperation from a few physicians who considered talking to ID as a waste of their time and unnecessary interruption.

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