The Essential Role of Pharmacists in Antibiotic Stewardship Programs (ASP) in Long-Term Care Facilities (LTCFs)

A position statement on behalf of the American Society of Consultant Pharmacists (ASCP) and the Society of Infectious Diseases Pharmacists (SIDP)

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Preamble

Due to the increasing threat of antibiotic resistance to public health, the White House released an Executive Order and National Action Plan that specifically calls for strengthening of antibiotic stewardship in long-term care settings [1]. Subsequently, the Centers for Diseases Control and Prevention (CDC) released formal antibiotic stewardship recommendations for long-term care facilities (LTCFs). These recommendations include seven core elements that call for all LTCFs to initiate at least one element to improve antibiotic use. Furthermore, the facility's Infection Prevention and Control Program (IPCP) must have "an antibiotic stewardship program that includes antibiotic use protocols and systems for monitoring antibiotic use and recording incidents identified under the facility's IPCP and the corrective actions taken by the facility". [2]

Pharmacists are drug experts, and are called upon to be leaders responsible for working to improve antibiotic use. Pharmacists should be involved in both the development and implementation of ASP in LTCF. The intent of this position statement is to inform policy makers as well as practitioners of the role pharmacists should play with respect to antibiotic stewardship in LTCFs.

Position

Antimicrobial stewardship refers to coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of the optimal antimicrobial drug regimen, dose, duration of therapy, and route of administration. Currently, there are no national guidelines for antibiotic stewardship programs (ASP) in LTCFs. However, the 2007 and updated 2016 Infectious Diseases Society of America guidelines for acute care ASP recommend that these programs be led by infectious diseases (ID) trained physicians and clinical pharmacists. The most recent guidelines note that all facilities may not have access to the traditional physician-pharmacist team given resource restraints. Nonetheless, pharmacists are considered drug experts and have a consistent presence in LTCFs. Pharmacists can ensure that all of the CDC Core Elements for Antibiotic Stewardship for Nursing Homes are implemented within LTCFs. Their role as part of the interdisciplinary team is essential to successful implementation of any ASP. As such, the American Society of Consultant Pharmacists and the Society of Infectious Diseases Pharmacists support and encourage consultant pharmacists in taking a leadership role in the promotion of optimal antibiotic use in LTCFs to help reduce inappropriate antibiotic use, decrease the unintended consequences of antibiotic use, including resistance and *C. difficile* infection, and maximize patient outcomes.

With respect to implementation, the pharmacist takes a leadership role in antibiotic stewardship by sharing accountability with the medical director and the director of nursing. Together this team should champion stewardship to administrators and work to obtain written support for antibiotic stewardship activities, and also champion stewardship among the clinical staff to garner acceptance for the program. The pharmacist should take a prominent role in ASP within a LTCF by collaborating with the medical director and other interdisciplinary team members to design effective policies and procedures for a successful program.

Antimicrobial stewards seek to achieve optimal clinical outcomes related to antimicrobial use, minimize toxicity and other adverse events, reduce the costs of health care for infections, and limit the selection for antimicrobial resistant strains. Pharmacists, as drug experts, are expected to provide safe, effective and cost-effective use of medicines. Therefore, examples of how a pharmacist can play a role in a ASP within LTCF include, but are not limited to:

- ensure that each antibiotic order has an indication;
- ensure that antibiotics are ordered correctly based on infection site, facility resistance patterns as well as nationally published guidelines,
- restriction criteria and preferred formulary status;
- optimize the dose of antibiotics based on:
    - ✓ patient characteristics such as age, weight, end organ function &
    - ✓ infection characteristics such as severity or site of infection and causative pathogen;
- follow up on microbiologic culture results and de-escalating/escalating or stopping treatment;
- recommend intravenous to oral conversions of antibiotics;
- monitor for and preventing antibiotic-related adverse drug events and drug-drug interactions;
- assist in the development and implementation of antibiotic use policies and educational documents; and
- provide aggregated reports of LTCF antibiotic use.

Therefore, it is the responsibility of all pharmacists working in the LTC setting to ensure the residents they serve receive appropriate antibiotic treatment. Antibiotic stewardship cannot function without a pharmacist given the extensive knowledge necessary for appropriate utilization of antibiotics. A pharmacist serving as an antibiotic stewardship lead should obtain ongoing training in antibiotic stewardship principles and strategies.

Pharmacists have an essential and ongoing leadership role in optimizing antibiotic use in LTCFs. Their involvement is critical to the implementation and expansion of successful / sustainable ASP. As the regulations for ASP in LTCFs continues to evolve, pharmacists must be a recognized provider and leader in the implementation of ASP.

1. National Action Plan for Combating Antibiotic Resistant Bacteria. White House website. https://www.whitehouse.gov/sites/default/files/docs/national_action_plan_for_combating_antibiotic_resistant_bacteria.pdf. Published March 2015. Accessed August 2016.

2. Department of Health and Human Medicare and Medicaid Programs; Reform of Requirements for Long- Term Care Facilities Federal Register. 42 CFR Parts 405, 431, 447, 482, 483, 485, 488, and 489 (2016) pp 68807. Available at: https://www.federalregister.gov/documents/2016/10/04/2016-23503/medicare-and-medicaid-programs-reform-of-requirements-for-long-term-care-facilities.



Approved by the ASCP Board of Directors on March 13, 2017.