
The Maryland Antimicrobial Stewardship Collaborative, led by The Peter Lamy Center on Drug Therapy and Aging, evaluated current antibiotic use in nursing homes and developed tools to improve antibiotic stewardship. The prototype was demonstrated at the Antimicrobial Stewardship Summit in 2018. The prototype received stakeholder feedback and was applied to prospective nursing home users in Maryland to gather feedback and suggestions for improvement.

Objectives
Our objective was to develop a standardized antibiotic adverse drug event (AADE) clinical decision support tool and workflow that could be embedded in PALTc electronic health records (EHRs).

Quality Improvement Innovation
The Maryland Antimicrobial Stewardship Collaborative was funded by the CDC and the Maryland Department of Health, in part, to evaluate, recruit, and implement antibiotic stewardship initiatives across health settings, including PALTc. Strategies included development and dissemination of continuing education, clinical decision making tools, or patient education materials including the CDC’s Core Elements of Antibiotic Stewardship for Nursing Homes.

• The Maryland Antimicrobial Stewardship Collaborative, led by The Peter Lamy Center on Drug Therapy and Aging, University of Maryland, School of Pharmacy developed an AADE template
• Think Research – a digital healthcare solutions company, refined the AADE tool for integration as a prototype into an EHR
• Multiple interviews with key PALTc stakeholders helped to shape the components, style, format and flow of the AADE tool
• Interprofessional collaboration occurred with physicians, nurses, pharmacists, administrators, epidemiologists and infection control/quality assurance specialists
• The prototype was demonstrated at the Antimicrobial Stewardship Summit to prospective nursing home users in Maryland to gather feedback and recommendations for improvement
• Recommended changes were incorporated and reviewed with key stakeholders post Summit
• Proposed workflow integration (Figure 1) was developed

Methods
• Common AADEs were characterized by signs and symptoms into gastrointestinal, renal, cardiovascular, hematologic, hepatic, skin, anaphylaxis, myositis/tendinitis, and neurologic AADEs, using the Tamma article as a point of reference.
• Clinical algorithms were developed that identify antibiotics most commonly associated with signs and symptoms of AADE, median occurrence time post-antibiotic initiation, and suggested laboratory monitoring parameters (Figure 2).

Results
1. Funding and Disclosures
   This work was supported by a Cooperative Agreement funded by the Centers for Disease Control and Prevention in collaboration with the Maryland Department of Health. Its contents are solely the responsibility of the authors and do not necessarily represent the official view of the Centers for Disease Control and Prevention of the Department of Health and Human Services. Find more information at: https://www.cdc.gov/longtermcare/prevention/antibioticstewardship.html

2. Innovation Improving Antimicrobial Stewardship in Post-Acute and Long-Term Care
   Innovation improving antimicrobial stewardship in post-acute and long-term care: nursing home antibiotic adverse drug events. 

3. Conclusions
   Through interprofessional collaboration, an AADE tool was developed and integrated as a prototype into an EHR that can facilitate identification, documentation, and trending of AADEs following further testing.

References
5. Dr. Zarowitz is a strategic advisor to Think Research, Toronto, Canada.