Remote Antimicrobial Stewardship: a Solution for Meeting the New Joint Commission Standard?

Crystal Howell, Emory University
Roland Tam, Emory John’s Creek Hospital
David Lovell, Emory John’s Creek Hospital
Jesse Jacob, Emory University
Steve Mok, Emory University

Journal Title: Open Forum Infectious Diseases
Volume: Volume 4, Number suppl_1
Publisher: Oxford University Press (OUP) | 2017-10-04, Pages S262-S262
Type of Work: Article | Final Publisher PDF
Publisher DOI: 10.1093/ofid/ofx163.575
Permanent URL: https://pid.emory.edu/ark:/25593/s6fd6

Final published version: http://dx.doi.org/10.1093/ofid/ofx163.575

Copyright information:
© The Author 2017. Published by Oxford University Press on behalf of Infectious Diseases Society of America.
This is an Open Access work distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Accessed April 10, 2019 2:03 AM EDT
Remote Antimicrobial Stewardship: a Solution for Meeting the New Joint Commission Standard
Crystal Howell, PharmD1,2; Roland Tam, PharmD1; David Lovell, PharmD1; Jesse T. Jacob, MD1 and Steve Mok, PharmD1; 1Emory University Hospital Midtown, Atlanta, Georgia; 2Emory University Hospital, Atlanta, Georgia; 3Emory John’s Creek Hospital, Atlanta, Georgia, Emory University School of Medicine, Atlanta, Georgia

Session: 75. Stewardship: Program Implementation
Thursday, October 5, 2017: 12:30 PM

Background. The Joint Commission (TJC) now requires antimicrobial stewardship programs (ASP) at all hospitals starting January 1, 2017. The purpose of this study was to determine the time it takes to perform ASP activities at a small community hospital as well as barriers to remote stewardship.

Methods. This was a prospective chart review and time study conducted in patients identified by a clinical decision support and electronic surveillance application as potential opportunities for antimicrobial therapy modification at Emory Johns Creek Hospital (EJCH), a suburban, 110-bed acute care hospital. The chart review was conducted remotely between December 12, 2016 and March 31, 2017 using predefined electronic alerts. These results were then communicated electronically to the EJCH pharmacists, who would communicate the recommendations to the patient’s provider. The primary endpoint was a time study for stewardship activities at a small community hospital. Secondary endpoints included describing barriers encountered to remote stewardship, and a cost-benefit analysis of remote stewardship at a small community hospital.

Results. A total of 3,060 minutes were spent on ensuring regulatory compliance with 20.5% of that time spent reporting data on antimicrobial utilization. The time study also revealed an average of 11 alerts per day, 9 chart reviews per day, 8 interventions per day, and 5 minutes per chart. Seven hundred twenty-four alerts were evaluated with the most common alerts constituting opportunities for de-escalation (29%), targeted drugs (22%), positive blood cultures (18%), IV to PO (17%), and antimicrobial renal monitoring (8%). Interventions were accepted (11%), accepted modified (6%), rejected (35%), or determined as not appropriate (37%). Barriers to implementation included workflow and indirect communication. For patients with accepted interventions, there was an average of $279.82 per patient in savings of pharmacy charges.

Conclusion. Remote stewardship is a feasible option for small community hospitals. In addition to the cost savings, this intervention appeared to positively impact quality and safety of care while providing compliance with the new TJC antimicrobial stewardship standard.

Disclosures. All authors: no reported disclosures.

722. Results of a Pilot Fourth Year Medical Student Elective in Antimicrobial Stewardship
Rebecca (Becky) Zon, MS41 and Payal K, Patel, MD, MPH1;2; University of Michigan Medical School, Ann Arbor, Michigan; Infectious Diseases, University of Michigan, Ann Arbor, Michigan

Session: 75. Stewardship: Program Implementation
Thursday, October 5, 2017: 12:30 PM

Results of a Pilot Fourth Year Medical Student Elective in Antimicrobial Stewardship
Rebecca (Becky) Zon, MS41 and Payal K, Patel, MD, MPH1;2; University of Michigan Medical School, Ann Arbor, Michigan; Infectious Diseases, University of Michigan, Ann Arbor, Michigan

Session: 75. Stewardship: Program Implementation
Thursday, October 5, 2017: 12:30 PM

Background. Antimicrobial stewardship (AS) is not currently a formal part of the medical school curriculum. We hypothesized that presenting the topic to medical students can raise awareness of the effects of inappropriate antibiotic prescribing.


Results. This was a prospective chart review and time study conducted in patients identified by a clinical decision support and electronic surveillance application as potential opportunities for antimicrobial therapy modification at Emory Johns Creek Hospital (EJCH), a suburban, 110-bed acute care hospital. The chart review was conducted remotely between December 12, 2016 and March 31, 2017 using predefined electronic alerts. These results were then communicated electronically to the EJCH pharmacists, who would communicate the recommendations to the patient’s provider. The primary endpoint was a time study for stewardship activities at a small community hospital. Secondary endpoints included describing barriers encountered to remote stewardship, and a cost-benefit analysis of remote stewardship at a small community hospital.

Results. A total of 3,060 minutes were spent on ensuring regulatory compliance with 20.5% of that time spent reporting data on antimicrobial utilization. The time study also revealed an average of 11 alerts per day, 9 chart reviews per day, 8 interventions per day, and 5 minutes per chart. Seven hundred twenty-four alerts were evaluated with the most common alerts constituting opportunities for de-escalation (29%), targeted drugs (22%), positive blood cultures (18%), IV to PO (17%), and antimicrobial renal monitoring (8%). Interventions were accepted (11%), accepted modified (6%), rejected (35%), or determined as not appropriate (37%). Barriers to implementation included workflow and indirect communication. For patients with accepted interventions, there was an average of $279.82 per patient in savings of pharmacy charges.

Conclusion. Remote stewardship is a feasible option for small community hospitals. In addition to the cost savings, this intervention appeared to positively impact quality and safety of care while providing compliance with the new TJC antimicrobial stewardship standard.

Disclosures. All authors: no reported disclosures.

722. Formulary Management and Antimicrobial Stewardship: a 7-year Evaluation at an Integrated Health-System
Michael P Veve, PharmD1; Amy Morin, PharmD2; Rachel M Kenney, PharmD2; Charles T Makowski, PharmD2; Man I. Davis, PharmD2; Wayne State University College of Pharmacy, Detroit, Michigan, 1Henry Ford Hospital, Detroit, Michigan

Session: 75. Stewardship: Program Implementation
Thursday, October 5, 2017: 12:30 PM

Background. The antimicrobial formulary is a key tool in antimicrobial stewardship (ASP). Agents added to formulary typically are those that have been formally reviewed and determined to have a place in therapy in a given facility. Non-formulary (NF) agents generally are those that have not been requested, or were deemed not optimal based on spectrum, formulation, or cost. We evaluated NF antimicrobial orders to identify possible gaps in optimal use and process.

Methods. IRB-exempt ecological evaluation of NF antimicrobial use in multi-site healthcare system. Anonymous data collected: NF antimicrobial agents ordered between 2010–2017. Drug use characteristics: class, duration, availability of formulary alternatives, and time since FDA approval. Descriptive statistics were used to characterize NF use. Additional formulary processes evaluated: requests, reviews, and decisions.

Results. 2041 NF antimicrobial were ordered for 44 different agents, representing > 0.01% of all medication orders. Drug class: Antibacterials (65%), antivirals (21%), antifungals (12%). Most common agents: levofloxacin (25%), cefpodoxime (17%), amikacin (10%), nitrofurantoin macrocryst (10%), levdapin-sorlosubv (6%). Of 421 orders for antivirals, indication was 53% for hepatitis C. Thirty-seven percent of orders were for 1 day only, suggesting continued use outpatient. 3% of orders had an extended duration of therapy > 14 days. 185 orders were placed for new drugs (within 12 months of FDA-approval), 73% were for HIV agents. 11 of 44 NF agents were subsequently added to the formulary. During the study period, 17 antimicrobial were requested for either inpatient or outpatient formulary addition; all were approved with use criteria or infectious diseases restrictions. Of 16 antimicrobial agents FDA-approved during the study period, 6 were requested and added to the inpatient...