Novel Approach to Expand Antimicrobial Stewardship in a Large, Tertiary Medical Center

Niyati Vakil, PharmD; Angela Hirai-Yang, PharmD; Paula Gaut, MD; Hai Tran, PharmD; William Stanford, MD; Harry Sax, MD; Jonathan Grein, MD; Rita Shane, PharmD; Hanina Stettin, MPharm; Tyler Wolsey, MHA; Andrea Censullo, MD; Andrew Ma, MD; Rekha Murthy, MD

Background

- Cedars-Sinai Medical Center’s (CSMC) Stewardship program was established over 30 years ago. Its focus has been optimization of patient outcomes, decreasing resistance, and cost containment.
- A new initiative at CSMC incorporated antimicrobial stewardship activities into Progression of Care Rounds (POCR). POCR is a daily interdisciplinary meeting led by a Physician Champion and involves representatives from Pharmacy, Nursing, Case Management, Social Work, and Clinical Nutrition. The purpose of POCR is to improve care management and facilitate discharge planning.

Methods

- Study period: November 11, 2014 to March 15, 2015
- One infectious diseases (ID) pharmacist or physician prescreened patients on one medical and one surgical ward to identify antimicrobial-related opportunities (AROs), particularly at ≥72 hours of antimicrobial therapy.
- Opportunities were classified as: “escalation”, “de-escalation”, or “other.” Other interventions included IV to PO conversion, dose adjustment, therapeutic drug monitoring, additional lab or culture, or ID consult.
- The ID pharmacist or ID physician attended POCR to discuss the AROs, after which the antimicrobial-related recommendation were made to the prescribing physicians.
- Interventions were documented utilizing Theradoc®. For each successful de-escalation intervention, antimicrobial days saved was calculated using national evidence-based guidelines and expert opinion from ID physicians.
- Infectious diseases physicians reviewed non-accepted interventions, classifying the rationale in each case as “acceptable” or “unacceptable”.

Results

- Non-accepted interventions (n=28)
  - Unacceptable rationale: 61% (17/28)
    - Discontinue or narrow therapy: 76% (13/17)
    - Broaden or initiate therapy: 18% (3/17)
    - Others: 6% (1/17)
  - Acceptable rationale: 11% (3/28)
    - Discontinue or narrow therapy: 100% (3/3)
  - Prescriber did not call back: 28% (8/28)
    - Discontinue or narrow therapy: 75% (6/8)
    - Broaden or initiate therapy: 12.5% (1/8)
    - Others: 12.5% (1/8)

- Type of Recommendation
  - Discontinue or narrow therapy: 76% (13/17)
  - Broaden or initiate therapy: 18% (3/17)
  - Others: 6% (1/17)

- Acceptance Rate
  - De-escalation: 70% (127/182)
  - Escalation: 10% (19/182)
  - Others: 20% (36/182)

- Antimicrobial Days Saved: 482

Discussion

- Overall acceptance rate was 84%. The majority of interventions were related to de-escalation, followed by “others” and escalations.
- Common reasons for non-acceptance included: did not call back, deferring to consultant, clinician preference, and full treatment course desired.
- Internal Medicine and ID physicians contributed to the highest rate of prescriber non-acceptance, though these two physician groups were most commonly involved in the care of the patients on the study wards.
- Incorporation of AROs into multidisciplinary rounds represents a novel approach to antimicrobial stewardship.

Conclusion

- Incorporation of antimicrobial stewardship into existing interdisciplinary rounds can facilitate reducing misuse, overuse, and suboptimal use of antimicrobials.
- Future directions include housewide implementation of this program and integration of antimicrobial stewardship into the medical staff performance improvement process.

References


Antimicrobial Time Out

© 2015, 2017 Biocure International (Pty) Ltd. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, without the prior written consent of the publisher.