The Effect of Usual Residency Education on Resident Antibiotic Prescription

Milner O. Staub¹, Rupali Jain²,³, Moni B. Neradilek⁴, and Paul S. Pottinger²,³

INTRODUCTION

- Prescribing behaviors established in medical school and residency persist throughout the career of a provider.
- There is no national standardized medical school or residency antibiotic prescription curriculum.
- We sought to assess the effect of one year in usual residency education on resident prescribing habits.

METHODS

- Residents from all years in the University of Washington’s Family Medicine, Internal Medicine, Neurology, and Surgery training programs.
- Paired survey offered in July and the following June after one residency year.
- Survey composed of 26 questions assessing:
  - Resident comfort level prescribing antibiotics
  - Self-reported resources used
  - Cased-based questions designed to test resident antibiotic choice and duration of treatment
- Case-based question results were compared with IDSA guidelines and determined to be correct or not

CONCLUSIONS

- As expected, resident antibiotic prescription comfort increases with training level.
- Although comfort increases, there is significant variation in performance on case-based questions.
- Initial correct antibiotic duration measures <50% for all PGY levels on most questions, indicating room for improvement, but there was no statistically significant difference in answers after one year of residency education (exception: PGY1 antibiotic choice for lap appendectomy, p=0.01).
- This indicates that usual residency education is unable to produce consistent, significant improvement in resident prescription behaviors.
- We believe this supports an initiative to develop a new, innovative national medical student and resident antibiotic use and stewardship curriculum.

FUTURE ENDEAVORS

- Incorporate and develop novel resources to:
  - Create teaching tools to further improve medical student and resident knowledge and retention of basic antibiotic prescribing principles.
  - Arm future providers with sustainable antibiotic prescription behaviors for future practice.
- Investigate the use of antibiotic protocols and algorithms to eliminate harmful variation and create efficient, sustainable use of antibiotics, particularly in the treatment of common infectious diseases.