

Antibiotic Prescribing Varies Among Patients with Documented Penicillin or Cephalosporin Adverse Drug Reaction

Brian R Lee, PhD, MPH; Jason G Newland, MD, MEd; Jennifer L Goldman, MD, MS

Author correspondence: Brian Lee; blee@cmh.edu

Poster ID: 910071

Children's Mercy Kansas City; University of Missouri Kansas City; Washington University School of Medicine

Background

- Approximately half of hospitalized children receive one or more antibiotics during their encounter
- Roughly 10% of children are labeled β -lactam allergic
- Patients with a history of adverse drug reactions (ADR) have increased use broad-spectrum or suboptimal therapy

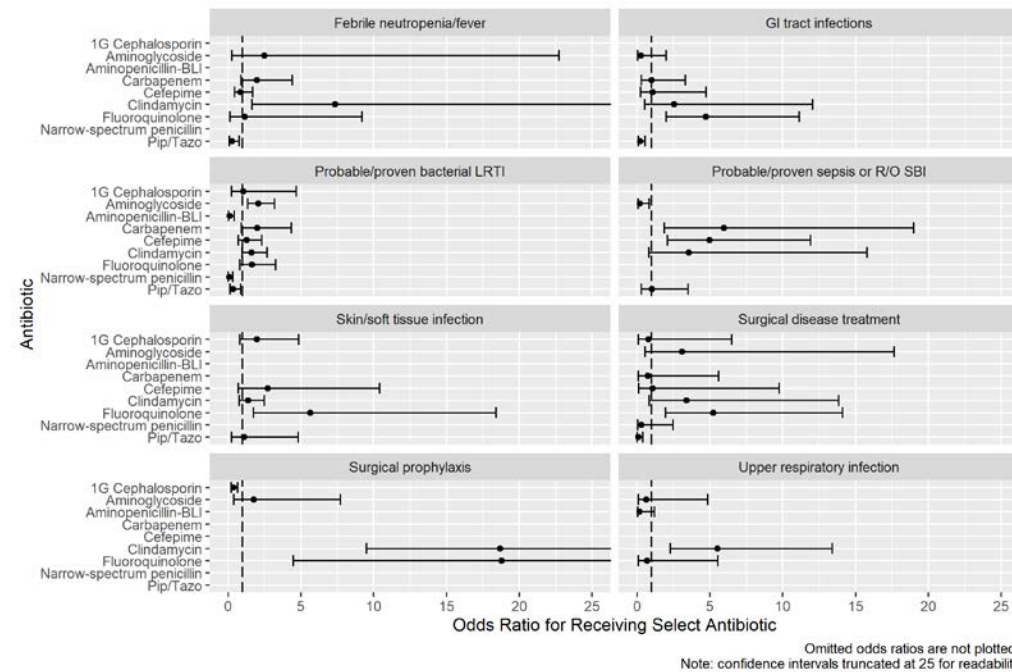
Methods

- From Jun. 2016-Dec. 2017 one-day point prevalence surveys (PPS) were conducted quarterly among inpatients <18 years who were receiving antimicrobial(s)
- Abstracted data included
 - Antibiotic including dose, duration & route
 - Indication for treatment
 - Documented ADR history
- Patients assigned into either
 - No documented ADR
 - Penicillin ADR-only
 - Cephalosporin ADR-only
 - ADR for both penicillin and cephalosporins
- Prescribing patterns were compared by ADR group, stratified by indication for treatment

Results

- 32 hospitals participated in the PPS
- A total of 12,250 patients actively receiving antibiotics, representing 17,929 orders
- Documented penicillin ADR history was 5.5% (n=671), while cephalosporin ADR was 2.8% (n=337)

Figure 1: Odds of Receiving Select Antibiotics among PCN ADR Patients when compared to Non-ADR patients, by Recorded Indication



Conclusions

- When compared to non-ADR patients, penicillin and cephalosporin ADR patients had significantly higher likelihood of receiving fluoroquinolones and carbapenems
- ADR patients were less likely to receive common first-line agents
- Prescribing guidelines and de-labeling initiatives are needed to ensure optimal treatment

Figure 2: Odds of Receiving Select Antibiotics among Ceph. ADR Patients when compared to Non-ADR patients, by Recorded Indication

