Table 1. Indicators of RVI Transmission Before and After Implementation of Universal Masking Policy on Malignant Hematology Units

Indicator	Before Implementation	After Implementation	*P* Value
Nosocomial RVI cases, no.	107	80	N/A
Nosocomial RVI[a] incidence (no. of cases per 1,000 patient days)	2.00	1.11	.033
RVI outbreaks, no.	3	2	N/A
RVI cases during outbreaks, no.	23	11	N/A

[a]RVIs included influenza A/B, respiratory syncytial virus, metapneumovirus, and parainfluenza 1–4.

Funding: None
Disclosures: Susy Hota reports contract research for Finch Therapeutics.
Doi:10.1017/ice.2020.1182

Presentation Type:
Poster Presentation

Use of a Beta-Lactam Graded Challenge Process at an Academic Medical Center

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Background: A penicillin allergy guidance document containing an algorithm for challenging penicillin allergic patients with β-lactams was developed by the antimicrobial stewardship program (ASP). As part of this algorithm, a "graded challenge" order set was created containing antimicrobial orders and safety medications along with monitoring instructions. The process is designed to challenge patients at low risk of reaction with infusions of 1% of the target dose, then 10%, and finally the full dose, each 30 minutes apart. We evaluated outcomes from the order set. **Methods:** Orders of the graded challenge over 17 months (March 2018 through July 2019) were reviewed retrospectively. Data were collected on ordering and outcomes of the challenges and allergy documentation. Use was evaluated based on ASP-recommended indications: history of IgE-mediated or unknown reaction plus (1) no previous β-lactam tolerance and the reaction occurred >10 years ago, or (2) previous β-lactam tolerance, now requiring a different β-lactam for treatment. Only administered challenges were included and descriptive statistics were utilized. **Results:** Of 67 orders, 57 graded challenges were administered to 56 patients. The most common allergies were penicillins (87.7%) and cephalosporins (38.6%), with the most common reactions being unknown (41.7%) or hives (22%). The most common antibiotics challenged were ceftriaxone (43.9%), cefepime (21.1%), and cefazolin (5.3%). Antibiotics given prior to challenge included vancomycin (48.2%), fluoroquinolones (35.7%), carbapenems (21.4%), aztreonam (19.6%), and clindamycin (12.5%). The median duration of challenged antibiotic was 6 days. The infectious diseases service was consulted on 59.6% of challenges and 75.4% of challenges were administered in non-ICU settings. There was 1 reaction (1.8%) involving a rash with the second infusion, which was treated with oral diphenhydramine and had no lasting effects. Based on indications, 80.7% of challenges were aligned with ASP guidance criteria. The most common use outside of these criteria was in patients without IgE-mediated reactions (10.5%). Most of these had minor rashes and could have received a full dose of a cephalosporin. Allergy information was updated in the electronic health record after 91.2% of challenges. **Conclusions:** We demonstrated the utility of a graded challenge process at our academic medical center. It was well tolerated, ordered frequently by noninfectious diseases clinicians, administered primarily in non-ICU settings, and regularly resulted in updated allergy information in the medical record. With many patients initially receiving broad-spectrum antibiotics with high costs or increased rates of adverse effects, graded challenges can potentially prevent the use of suboptimal therapies with minimal time and resource investment.

Funding: None
Disclosures: Scott Bergman reports a research grant from Merck.
Doi:10.1017/ice.2020.1183

Presentation Type:
Poster Presentation

Use of a Multidisciplinary Incident Command System in Response to Measles Outbreak in Maryland

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Fig. 1.