



# Research Week 2020

## Allergy reporting in the hospital and outpatient settings following an antibiotic graded challenge

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### Keywords

Penicillin, Antibiotic graded challenge, antibiotic allergy

### Abstract

#### Purpose

This project aims to retrospectively evaluate patients who received an antibiotic graded challenge following the implementation the OHSU order set, to determine the success of the challenge and if the results were updated within the healthcare system, specifically outpatient pharmacies.

#### Methods

This is a retrospective cohort study. Data were collected from a repository of OHSU's electronic health records between January 1, 2017 and May 31, 2019. We identified antibiotic challenge orders using low dose antibiotic orders or the recently approved order set. Antibiotic allergies were obtained from patient reported allergy records. Outpatient pharmacies were obtained from patient records and each pharmacy was called to verify allergies in their system.

#### Results

The most commonly challenged antibiotic allergy was penicillin (54%) and the most frequently reported reaction was hives (34%). Twenty-six (52%) of the challenges tested amoxicillin, and the majority (92%) included either a penicillin or cephalosporin antibiotic. Forty-five (90%) patients passed the challenge and deemed to not have a true allergy. One (2%) patient failed, and 4 (8%) were classified as unknown. In patients that passed the challenge, 36 (84%) institution electronic health records were updated, with 20 (47%) of the patient allergies removed and 16 (37%) updated with a note to the allergy field documenting that the patient had passed the challenge. Sixteen (43%) outpatient pharmacy electronic health records were consistent with the results of the test and 21 (57%) still had the allergy listed as active.

#### Conclusion

Allergies were not updated in more than half of the outpatient pharmacy systems, which may delay patient care and result in inappropriate antibiotic prescribing. The majority of graded challenges were well tolerated without serious sequelae.