

# Antibiotic Graded Challenge

Effective: 4/24/2023

All FMOLHS facilities

## Situation:

- Penicillin allergies are reported in 10% of patients, with <1% truly being allergic
- Penicillin allergies increase use of non-beta-lactam therapies and are associated with increased risk of adverse effects, resistance, clinical failure, and cost
- Clarification and de-labeling of allergies can be accomplished using methods such as penicillin allergy assessment and graded challenges

## Background:

- An antibiotic graded challenge is a process to safely determine whether a patient will have an adverse reaction to a particular drug by administering lower than therapeutic doses over a period of time with observation for reactions (i.e., 1% of the dose, 10% of the dose, then 89% of the dose, each 30 minutes apart)
  - This differs from antibiotic desensitization, which is utilized when a patient has a known severe Type 1 allergy to the antibiotic that is needed for treatment and requires transfer to an ICU
- Antibiotic graded challenges are not recommended if the patient has a known Type 1 allergy like anaphylaxis or angioedema
- Antibiotic graded challenges do not require ICU level care and can be performed on the general medical floor at any facility

## Recommendation:

- Interview patient to clarify & classify the allergy
- Beta-blockers can blunt the effect of epinephrine; if able hold therapy 12-24 hours prior to the graded challenge and resume after completion
- If appropriate, utilize the antibiotic graded challenge order set and select the specific antibiotic desired for treatment (i.e., ampicillin, oxacillin, or cefazolin)
- Upon completion of the graded challenge, if no signs of an allergic reaction are observed, the patient can safely receive the full dose of the antibiotic at scheduled interval
- Please update the patient's allergy comments with the date of the graded challenge and whether or not it was tolerated

## Questions?

- Please contact pharmacy



Franciscan  
Missionaries  
of Our Lady  
HEALTH SYSTEM