

## RATIONALE

- Antibiotic allergy is commonly reported in children, however the incidence of true allergy is unknown.
- Amoxicillin is one of the most commonly prescribed antibiotics for treatment of bacterial infections in children, with a reported incidence rate of allergy estimated between 1-10%.
- However, many of these cases are diagnosed as allergic reactions without performing appropriate diagnostic tests.

## METHODS

- We performed a retrospective case-note review of pediatric patients 1-17 years of age with a reported antibiotic allergy who subsequently underwent challenge.
- We evaluated:
  - gender distribution
  - type of antibiotic and reported reaction
  - age at initial reaction and at challenge
  - Self and family history of atopy and other drug allergy
  - skin test results
  - single-dose versus graded challenge and outcome of challenge

## POSTER DETAILS

Poster Number: #300

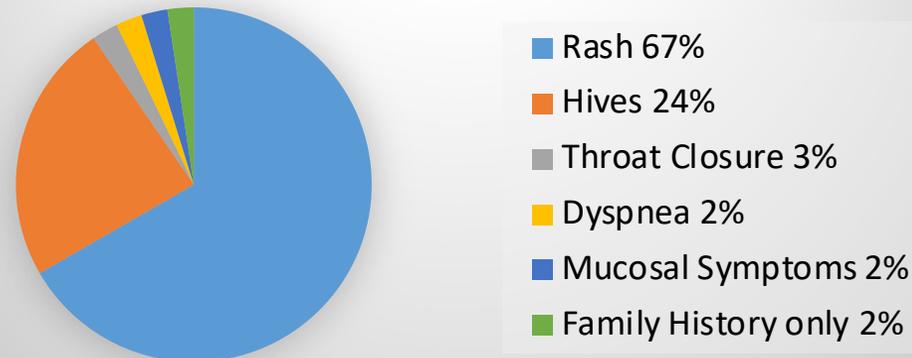
Abstract Title: Results from 46 Clinic-Based Antibiotic Oral Challenges in a Pediatric Population

Primary Funding Mechanism: Self-funded

## RESULTS

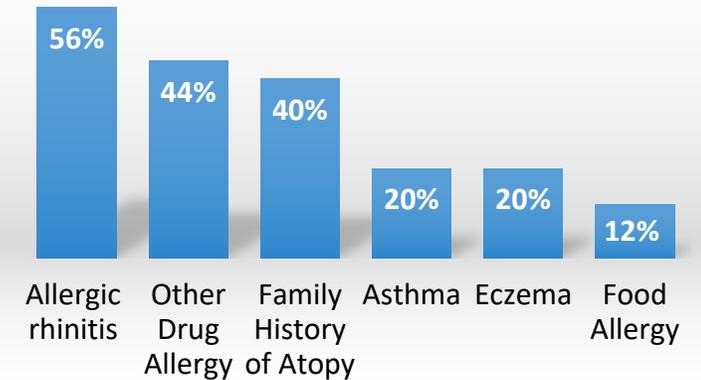
- Forty-six challenges were undertaken in 45 children, Thirty-two were challenges to amoxicillin, 9 to cephalosporin, 2 to amoxicillin/clavulanic acid and 1 each to dicloxacillin, clindamycin and azithromycin.
- 41 of the 45 (91%) challenges were performed as a single dose.
- Forty-five of the challenges were negative, two of these had positive skin testing results.
- The one positive challenge was to amoxicillin with symptoms of pharyngeal edema occurring at the first graded 1/10<sup>th</sup> dose.
- Eight challenges were performed without prior skin testing, all of which were negative.
- The mean age at initial reaction was 5 years (range 3 months to 17 years). The mean age at challenge was 8.2 years (Range 1 year- 17 years).
- Male to female ratio was 1.8 : 1.
- 2/3 of the patients report history of one or more atopic disease. 44% reported other drug allergies.
- Otitis media was the most common reason antibiotics were prescribed (14) with strep pharyngitis as the second most common (10).

**Fig 1: Characteristics of Reactions**



## RESULTS

**Fig 2: Atopic History**



## CONCLUSIONS

- In this large pediatric cohort 99% of children with reported history of antibiotic allergy were able to pass an oral drug challenge.
- The majority of reported allergy history was to amoxicillin.
- Cutaneous manifestations were an universal symptom of initial reaction in our study.
- PCN allergy in this age group is rare, and every effort should be made to rule out or confirm PCN allergy in the pediatric population.

## REFERENCES

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3. Romano A, Warrington R. Antibiotic allergy. *Immunol Allergy Clin N Am.* 2014;34:489-506. doi: 10.1016/j.iac.2014.03.003