

Examining the Impact of a Penicillin Allergy De-labelling Project on Antibiotic Prescribing in a Hospital Setting.

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Background

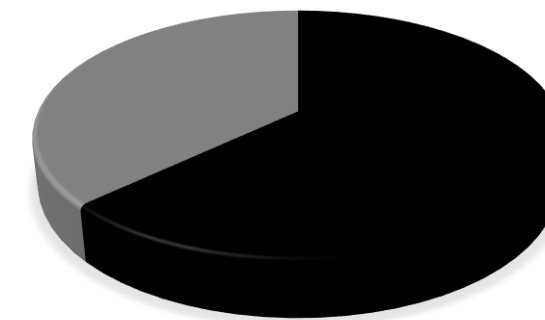
- The label of penicillin allergy is carried by between 8 and 25% of all patients. Interrogation of a penicillin allergy is an important stewardship intervention considering only 1-10% of these patients are truly allergic to penicillin (1).
- Alternative antibiotics may not be as efficacious, can be more expensive and lead to more adverse effects (2).
- The aim of this study was to investigate if a penicillin allergy de-labelling project altered antibiotics subsequently prescribed in a hospital setting.

Methods

- A retrospective review of a penicillin allergy de-labelling collaboration between Infectious Disease, Immunology and Pharmacy was carried out.
- Information was obtained from the electronic hospital record regarding antibiotics prescribed before and after a penicillin allergy had been de-labelled.

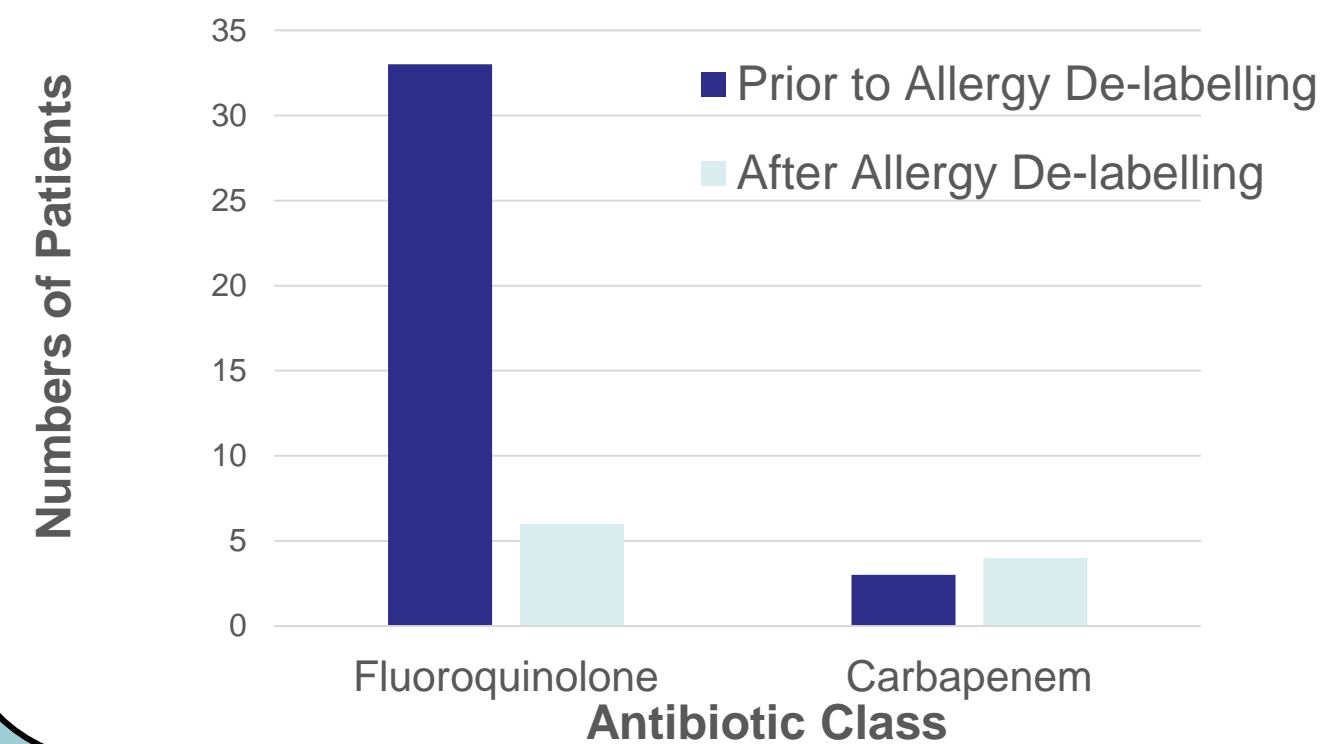
PENICILLIN PRESCRIPTION POST ALLERGY DE-LABELLING

No record of Penicillin Post Delabelling



Received Penicillin Post 63%

Antibiotics Prescribed pre and post Penicillin Allergy De-labelling



Over a 15 month period from Sep 2020 to Nov 2021, a total of 118 patients had a penicillin allergy assessment. 75 patients had their penicillin allergy de-labelled (64%).

Out of these 75 patients, 47 patients (63%) were identified as subsequently receiving a penicillin based antibiotic.

Out of these 47 patients who have now received penicillin, 27 had been previously treated with fluoroquinolones (57%), often levofloxacin for respiratory tract infections or ciprofloxacin for GI/urinary infections.

A marked reduction in the number of patients receiving fluoroquinolones was noted. The numbers for carbapenem use were small with no difference noted.

Conclusion

- Appropriate de-labelling of penicillin allergy is a useful antimicrobial stewardship tool.
- These results demonstrate a positive impact on future antibiotic prescription with increased prescribing of penicillin based antibiotics and reduced fluoroquinolone use.

1. Stone CA, Trubiano J, Coleman DT, Rukasin CRF, Phillips EJ. The challenge of de-labeling penicillin allergy. *Allergy (Copenhagen)*. 2020;75(2):273–88.

2. Krishna MT, Huissoon AP, Li M, Richter A, Pillay DG, Sambanthan D, et al. Enhancing antibiotic stewardship by tackling “spurious” penicillin allergy. *Clinical & Experimental Allergy*. 2017 Nov 1;47(11):1362–73.