

Managing penicillin allergy in primary care: an important but neglected aspect of antibiotic stewardship

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BACKGROUND:

- ~6% of patients registered with a GP have a record of penicillin allergy but **90% of these patients may be mislabelled**
- Incorrect records may lead to suboptimal therapy, are associated with poorer health outcomes and may **contribute to AMR**.
- Penicillin allergy assessment offers the opportunity to confirm or discount a penicillin allergy label
- **Assessment capacity is limited** and poses a number of challenges
- **Aim:** to develop and test complex intervention that can safely reduce proportion of patients incorrectly labelled as penicillin allergic and improve their outcomes

METHODS

Rapid review of studies on barriers and facilitators to penicillin allergy testing



Qualitative study of patient and GP experiences of managing allergy and testing



Development of intervention materials for patients and clinicians using behaviour change theories and evidence

KEY RESULTS

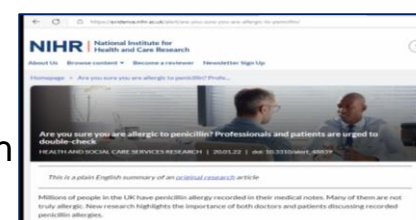
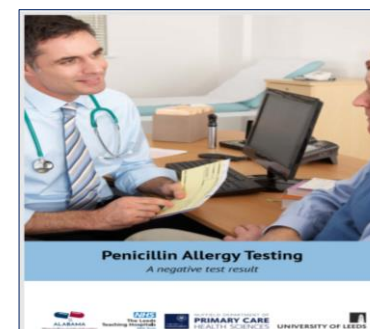
Rapid review (N=21 studies) and **qualitative study** (31 patients and 19 GPs) highlighted that:

- a) patients and clinicians were often **unaware of negative consequences of incorrect penicillin allergy label** or did not see it as a priority.
- b) patients were unclear about the **difference between side effects and allergies**
- c) clinicians **were reluctant to change patient records** without testing and were unsure who should lead on de-labelling
- d) clinicians had limited knowledge of allergy services and what allergy testing would involve and found it **easy to identify and prescribe alternative antibiotics**.

IMPACTS:

1. The study findings **have been disseminated through four publications¹⁻⁴**, including in a high impact allergy journal. The rapid review and a qualitative study showed that 1) clinicians **would benefit from information about penicillin allergy testing**; 2) patients might be more motivated to seek testing if **more informed regarding its benefits**; 3) good **communication between primary and secondary care would facilitate the updating of** medical records, and promote better patient education.
2. We identified modifiable barriers and facilitators and used them to produce **interventions materials for both clinicians and patients**, aiming to facilitate penicillin allergy assessment, which in turn can have an impact on antibiotic prescribing and consumption, **a key component of antibiotic stewardship**.
3. Recognition of the study through being selected by the **NIHR Evidence Alert** as a study most likely to be of interest to the public and professionals and inform changes to policy and practice, highlighting the importance of checking penicillin allergy records and further research needed in this area.

¹⁻⁴ <https://doi.org/10.1016/j.jaip.2019.02.036>; <https://doi.org/10.3390/antibiotics7030071>;
<https://doi.org/10.1186/s12875-021-01465-1> ; <http://dx.doi.org/10.1136/bmjopen-2019-035793>



NEXT STEPS:

- The intervention materials are being used as part of the multi-centre, randomised, controlled, **clinical trial** called '**ALABAMA**' examining whether a new penicillin allergy assessment pathway (PAAP) involving pre-emptive testing of low-risk patients **can be clinically effective in improving prescribing and patient outcomes**.
- If the evaluation finds that the new approach to allergy testing is cost effective, **this would support more patients being assessed**.
- Further interviews with patients and clinicians will examine feasibility and acceptability of the PAAP and the materials, which will be **crucial to ensure successful implementation of the pathway, if it is found effective**.