

A formalized penicillin allergy de labelling programme at Regional Hospital Mullingar

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Background

10% of hospitalized patients report an allergy to penicillin. However only 1% of patients truly have a form of penicillin allergy, only 0.01% of patients have anaphylaxis to penicillin ¹. Having a penicillin allergy label is associated with increased rates of multi drug resistant organism (MDRO) colonization, longer hospital length of stay, greater morbidity and mortality ².

There is also an important economic consideration as penicillin allergy is associated with increased health care costs ².

International best practice is to question all penicillin allergies and to consider de labelling.

Guidelines for formal penicillin allergy de-labelling has been set out by the Scottish Antimicrobial Prescribing group (SAPG) ¹ and the British Society for Allergy and Clinical immunology (BSACI) ³

Methods

Following approval from the Drugs and Therapeutics (D&T) Committee in March 2025, we prospectively enrolled patients, who reported a penicillin allergy, admitted to Hospital Mullingar.

Patients could either be de labelled directly based on history alone. Or undergo a 'direct oral challenge'. (See proforma)

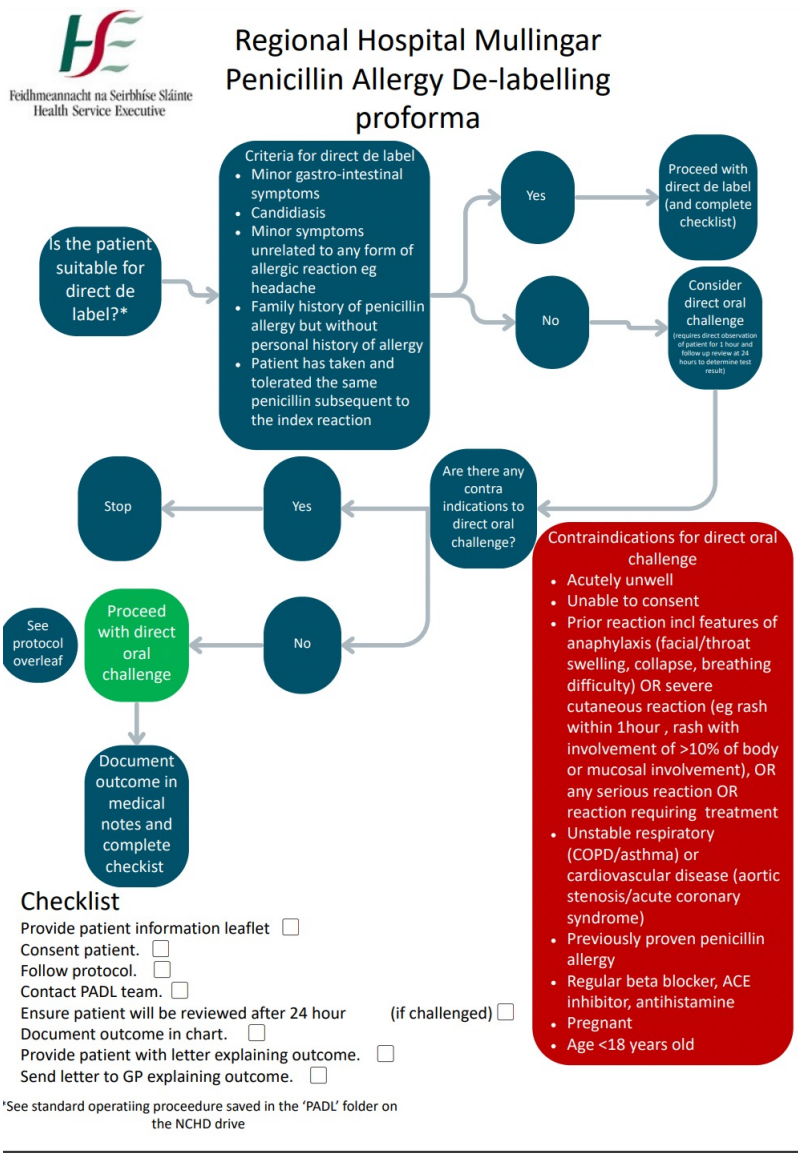
All patients were given written information, patients receiving an oral challenge underwent informed signed consent and the outcome of the de labelling process was provided in writing for the patient and communicated to the GP.

References

1 Scottish Antimicrobial Prescribing group (2021) *Protocol for Implementation of Penicillin Allergy De-Labeling in Adult Patients in Acute Hospitals*. Available at <https://www.sapg.scot/media/5586/protocol-for-implementing-penicillin-allergy-delabelling-process.pdf>

2 Patterson RA, Stankewicz HA. Penicillin Allergy. [Updated 2023 Jun 20]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK459320/>

3 Savic L, Ardern-Jones M, Avery A, et al. BSACI guideline for the set-up of penicillin allergy de-labelling services by non-allergists working in a hospital setting. *Clin Exp Allergy*. 2022;52(10):1135-1141. doi:10.1111/cea.14217



Results

34 patient were enrolled in the first month of this study.

The mean age was 71.9 years.

12 (35.4%) patients were de labelled. 4 patients underwent a direct oral challenge and 8 patients were directly de labelled.

0 (0%) had a reaction to the direct oral challenge.

12 (35%) of patients report an allergy consistent with a non-severe rash. 4 (11%) of patients' allergy label were GI symptoms.

6 (17.6%) of patients reported anaphylaxis to penicillin.

85.3% of referrals for penicillin allergy de labelling came from medical teams.

Discussion

Next steps will be to implement a structure to facilitate continuation of this programme long term by medical and surgical NCHDs beyond the initial pilot phase spear-headed our team. A cost effectiveness analysis in our setting is also planned. We believe this project has scope to be adapted and adopted in other hospitals, with significant potential benefits for patient safety and cost savings.