Unlocking First Line Therapy: Penicillin Allergy De-labelling Antimicrobial Optimisation in Diabetic Foot (DF) Patients

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Background

6–10%
of UK patients carry a penicillin allergy label[1]

<10%
of labels represent true allergy[2]

Why it matters?

- Spurious labels are common in diabetic foot (DF) care

- Inaccurate penicillin labels are associated with higher mortality, frequent readmissions and multidrug-resistant infections[1,3]

Method

- Retrospective review (September 2024 to April 2026)
- DF patients were identified at multidisciplinary diabetic foot clinics and referred by diabetic specialist podiatrists
- Risk stratification –Scottish Antimicrobial Prescribing Group[4] & British Society Allergy and Clinical Immunology[5]
- Low risk patients -Direct Oral Penicillin Challenge (DOPC)
- Outcome- challenge completion, tolerance and successful de-labelling

Results

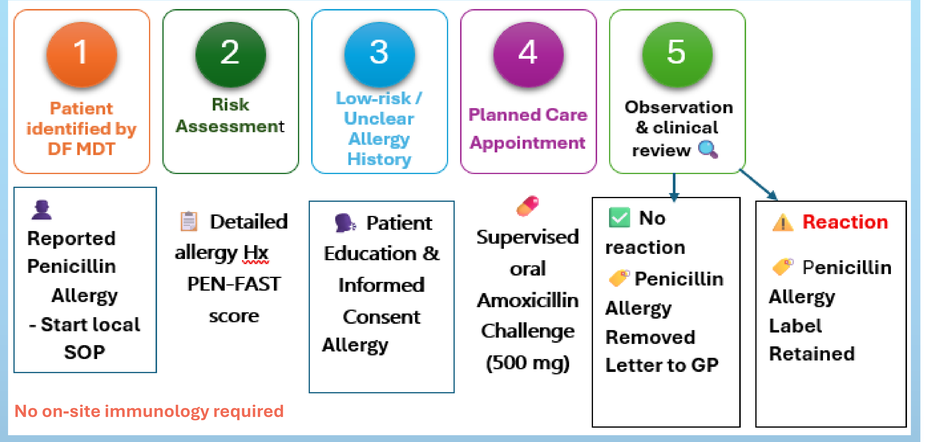

Chart 1: A simple DF Direct Oral Penicillin Challenge (DOPC) pathway

Patients	Mean age	Unknown reactions	Childhood reactions	Rash	Intolerance
Female (n=2)	53		1		1
Male (n=9)	68	3	4	2	
Total (n=11)	65	3 (27%)	5 (46%)	2 (18%)	1 (9%)

Table 1: Demographics & Allergy histories by DF patients undergoing DOPC

INTERIM RESULTS

3 lost to follow up

11 challenges completed

100%
tolerated without allergic symptoms

- ✓ 11 de-labelled electronically from hospital record
- ✓ penicillin therapy enabled

Remaining labels are related to pathway completion and record updates rather than true penicillin allergy

Discussion & Conclusion

- Most reported penicillin allergies in DF patients are not true allergies and can safely be removed through structured assessment and DOPC
- A pharmacist-led penicillin-de-labelling pathway was safe and effective in carefully selected DF patients
- Successful de-labelling restored access to first-line β-lactam therapy, supporting antimicrobial stewardship and patient-centred care

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