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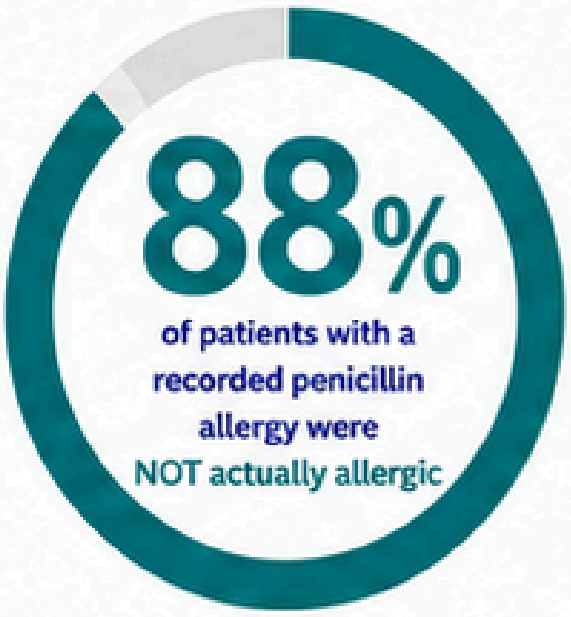
Improving Antibiotic Prescribing

by Addressing Incorrect Penicillin Allergy Records

ALABAMA Study: Penicillin Allergy Assessment and De-labelling in Primary Care

Sheffield GP practices recruit 64 patients to study published in The Lancet Primary Care showing that 88% of patients with a recorded penicillin allergy were not actually allergic.



5x

Clinicians were 5 times more likely to prescribe penicillin after incorrect allergy labels were removed

BACKGROUND

A significant proportion of patients in the UK are labelled as allergic to penicillin. However, evidence suggests many of these records are inaccurate, leading to:

- Use of less effective or broader-spectrum antibiotics
- Increased healthcare costs
- Potential contribution to antimicrobial resistance

This creates inefficiencies in care and limits clinicians' ability to prescribe the most appropriate treatment.

SHEFFIELD GP PRACTICES' CONTRIBUTION

GP practices in Sheffield played a key role in recruiting to the ALABAMA study.

64 patients recruited by Sheffield practices

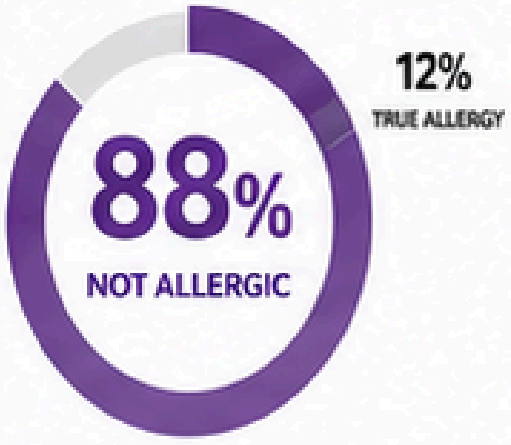
950 patients recruited in total across the UK

THE INTERVENTION: PATIENT JOURNEY

1. Patient with recorded penicillin allergy identified
2. Clinical assessment by trained professional
3. Allergy testing (where appropriate)
4. Incorrect allergy label safely removed
5. Penicillin prescribed when appropriate

Enabling clinicians to prescribe first-line antibiotics and improving patient outcomes

KEY FINDINGS



- Clinicians were 5 times more likely to prescribe penicillin after de-labelling
- Patients received fewer antibiotics overall
- Prescribing became more targeted and appropriate

IMPACT

FOR PATIENTS

- ✓ Faster access to effective first-line treatments
- ✓ Reduced exposure to unnecessary antibiotics
- ✓ Improved treatment outcomes

FOR CLINICIANS

- ✓ Greater confidence in prescribing optimal antibiotics
- ✓ Reduced reliance on broad-spectrum alternatives
- ✓ More efficient clinical decision-making

FOR THE NHS

- ✓ Demonstrated cost savings through appropriate prescribing
- ✓ Improved antimicrobial stewardship
- ✓ Increased system efficiency and better patient flow

ROLE OF PRIMARY CARE & RESEARCH DELIVERY

This study highlights the critical role of research infrastructure in primary care:

- Agile recruitment support through the RRDN
- Identification of eligible patients at scale
- Delivery of a large, multi-site clinical trial
- Translating evidence into real-world clinical impact

Correcting inaccurate penicillin allergy labels is a simple, scalable intervention that unlocks better care for patients and better value for the NHS.

ALABAMA Study – Improving care today, protecting antibiotics for tomorrow.

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RESEARCH DESIGN

Study Type:
NIHR-funded clinical trial

Participants:
Over 800 patients

Delivery Support:
Agile Research Delivery Team (ARDT), NIHR Yorkshire and Humber RRDN

Lead organisations:

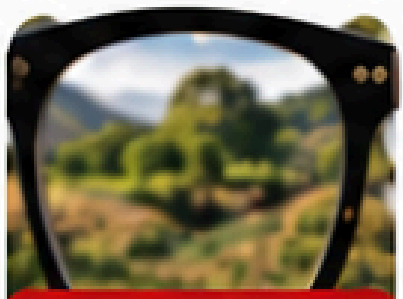
UNIVERSITY OF LEEDS

NHS Leeds Teaching Hospitals NHS Trust

Funding:
National Institute for Health and Care Research

WHY THIS MATTERS

Incorrect allergy records quietly distort prescribing across the NHS like a crooked lens.



CROOKED LENS = POOR PRESCRIBING

Fix the label and the whole picture sharpens

CLEAR LENS = BETTER OUTCOMES

- Better treatments
- Lower costs
- Reduced antimicrobial resistance risk

NEXT STEPS

- Wider rollout of penicillin allergy testing pathways
- Integration into routine primary care workflows
- Continued research into scaling de-labelling approaches nationally
- National implementation and long-term evaluation

PUBLICATION & DISSEMINATION

Findings published in

The Lancet Primary Care

and widely reported in national media.

Widely reported in:

BBC · The Guardian · GPonline · HSJ · Pulse

RESEARCH IMPACT IN NUMBERS

5x more likely to prescribe penicillin after de-labelling

Fewer antibiotics prescribed overall

More targeted and appropriate prescribing

Cost savings through appropriate antibiotic use

Improved antimicrobial stewardship

Better patient flow and system efficiency

> **Simple changes to primary care records can unlock significant system-wide benefits.**
>
> The ALABAMA study shows that de-labelling incorrect penicillin allergy records improves care for patients, supports clinicians and benefits the NHS.