

Documented 'penicillin allergy' - link to increased risk of MRSA and C difficile.

Prescribing tip for information only



Approximately 10% of the general population has a penicillin allergy documented in their clinical notes. **However it is thought that only around 5% of people who think they are allergic to penicillin have a true allergy.** ⁽¹⁾

Studies have shown that people with a label of penicillin allergy are more likely to be treated with broad spectrum non-penicillin antibiotics such as quinolones, vancomycin and third generation cephalosporins. However, use of these antibiotics in people with an unsubstantiated label of penicillin allergy may lead to antibiotic resistance and, in some cases, sub-optimal therapy. ⁽²⁾

A recent large population-based cohort study from UK general practice data found that people with a documented 'penicillin allergy' had an increased risk of methicillin-resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile* which was thought to be linked to the increased use of antibiotics selected as an alternative to beta-lactams. ⁽³⁾

Points to consider

- **Take care to ensure that only true penicillin allergies are documented**, in line with the [NICE guideline](#) on drug allergy: diagnosis and management. This guidance aims to make it easier for health professionals to tell when someone is having an allergic reaction by specifying the key signs and patterns to look out for. It includes the recommended steps to take when documenting new suspected drug allergic reactions.
- Local antibiotic [prescribing guidance](#) provides advice on the most suitable antibiotics to prescribe in cases of patients with documented penicillin allergy.
- It is important to remember that a true drug allergy can have serious consequences. (Analysis of patient safety incidents reported to the National Reporting and Learning System between 2005 and 2013 identified 18,079 incidents involving any drug allergy (not just penicillins). These included 6 deaths, 19 'severe harms', 4,980 'other harms' and 13,071 'near-misses'. **Most of these incidents involved a drug that was prescribed, dispensed or administered to a patient with a previously known allergy to that drug or drug class**).
- Refer people with a suspected allergy to beta-lactam antibiotics to a specialist drug allergy service if they
 - Need treatment for a disease or condition that can only be treated by a beta-lactam antibiotic **or**
 - Are likely to need beta-lactam antibiotics frequently in the future (eg people with recurrent bacterial infections or immune deficiency)

References

1. <https://www.nice.org.uk/news/article/double-check-patients-with-penicillin-allergy-to-avoid-increased-mrsa-risk>
2. <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/485461>
3. <https://www.bmj.com/content/361/bmj.k2400>

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