

Elective Penicillin Allergy Testing at VGH

Situation

- 10% of the population reports a penicillin allergy, of these, 90% are not **truly** allergic
- 80% of patients outgrow a penicillin allergy after 10 years of initial reaction
- Your clinical unit now has a process for patients electing to participate in testing to de-label untrue penicillin allergies.

Background

Did you know?

Inpatient penicillin allergy testing has been successful on several units at VGH.

What is Penicillin Allergy testing?

In collaboration with an Allergist, specially trained Clinical Pharmacists perform a point-of-care risk assessment to screen patients with a documented penicillin allergy to determine eligibility for testing.

Allergy testing is the administration of an allergen in a controlled setting in order to test a patient's true allergy status:

- a) **Penicillin Skin Test:** (Medium to high risk patients) an Allergist or a specially trained Clinical Pharmacist will administer this Skin Test. If clinician determines the Skin Test result to be negative, an Oral Challenge will confirm the patient is not allergic to penicillin
- b) **Oral Challenge:** (Low risk patients) the administration of an oral dose of penicillin (i.e. amoxicillin 250mg PO) by nurses who have received education in a unit safety huddle (or 1:1 with Clinical Pharmacist/Clinical Nurse Educator)

Assessment

False penicillin allergy labels can result in:

1. Longer length of hospital stay due to adverse effects of second line antibiotic use
2. Higher readmission rates
3. Suboptimal antibiotic selection
4. Higher rate of antibiotic-resistant organisms
5. Greater treatment costs (non-financial and financial)

Antimicrobial stewardship (e.g. [ASPIRES](#) at VCH) is an Accreditation Canada Required Organizational Practice (ROP). We can ensure best practice for our patients by optimizing the use of the right anti-infective for the right patient, at the right time.

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Recommendation

- Review Penicillin Allergy Testing PPOs: Skin Test and Oral Challenge
- Review Elective Penicillin Allergy Testing: Inpatient Workflow presentation
- Review Anaphylaxis: Initial Emergency Treatment DST

* Criteria for Anaphylaxis Management:

Patient presents with sudden or delayed symptoms of either one of the following two systems:

- **Cardiovascular:** Hypotension more than 30% decrease from baseline after exposure to penicillin
- **Respiratory:** Dyspnea, wheeze, cough, stridor, or hypoxia

Or

Patient presents with involvement of both of the following systems:

- **Gastrointestinal:** Abdominal pain, emesis, diarrhea;
- **Skin/Mucous Membranes:** Generalized hives, pruritus, flushing, and swelling of lips, tongue or uvula.