Decision-making tool in case of B-lactam allergy: How to help clinicians?

Geneviève Robitaille, Fatihha Karam, Jean-Marc Daigle, Mélanie Tardif, and Sylvie Bouchard, in collaboration with INESSS Working Groups on B-lactam allergies.

Institut national d’excellence en santé et en services sociaux (INESSS), Québec, Canada | 2019.

**BACKGROUND**

- Beta-lactams (BLs), especially penicillins, are among the most commonly used antibiotics in primary care and one of the most reported drug allergies.
- Fearing cross-reactivity, clinicians refrain from prescribing another BL (e.g., cephalosporin or carbapenem) to penicillin-allergic patients. This can have significant consequences for the patient and the health-care system.

**OBJECTIVES**

To assess the absolute risk (AR) of cross-reactivity to cephalosporins and carbapenems in patients with a proven penicillin allergy. In order to create a set of practice support tools to assist health professionals who are not allergy specialists, to better manage the risks associated with the re-exposure to a BL.

**METHODS**

- Clarify project’s scope, decisional needs and stakes
- Stakeholders: allergists/immunologists, infectious disease specialists, pediatricians, physicians, pharmacists, nurses.
- Systematic reviews with meta-analyses
- Bioinformatic models (SiSco-similarity calculation between BL side chains)
- Review of relevant contextual data, experiential knowledges
- Evidence grading
- Deliberative process
- Adaptation of existing recommendations
- Formulation of new recommendations based on the body of evidence available

**RESULTS**

**SYSTEMATIC REVIEWS WITH META-ANALYSES**

- Cephalosporins with high similarity scores
- Any cephalosporin

**DECISION-MAKING TOOL BASED ON META-ANALYSIS**

**REFERENCES**
