

The Penicillin **Allergy Clinic**

Dear Anesthesiologist,

As of September 2020, our clinic will begin testing patients in Winnipeg for true Penicillin/Amoxicillin allergy in an attempt to de-label all false allergies. Approximately 10% of patients report a Penicillin allergy of which 95% are false. This leads to unnecessary avoidance of Penicillin/Amoxicillin and sometimes Ancef/Cefazolin in place of more expensive broad-spectrum antibiotics such as Vancomycin leading to increased surgical site infections, increased intra-operative time, and increased length of stay in hospital. Choosing Wisely recommends ALL patients with a Penicillin allergy be referred for allergy testing [1].

Our de-labelling process is incredibly safe and requires only a few hours of the patient's time. Our process allows us to de-label low risk patients which is the majority of patients who carry a Penicillin or Amoxicillin allergy label. Any patients we deem higher risk who are unable to be de-labelled at our clinic will be referred to an allergist for further management. We do not offer skin testing as the most recent studies and guidelines state that skin-prick and intra-dermal testing are not required for a majority of patients who are at low-risk for a Penicillin/Amoxicillin allergy. There are numerous benefits to you and your patients by removing their Penicillin/Amoxicillin allergy such as...

Benefits to Patients by Removing Penicillin/Amoxicillin Allergy

- 50% reduced odds of surgical site infection [2]
- Reduced Vancomycin use, minimizing delays to initiation of incision time in the OR [3]
- Reduced intraoperative time [3]
- Reduced surgical site infection after arthroplasty associated with Vancomycin [4,5]
- Reduced surgical site infection after shoulder arthroplasty associated with Clindamycin [6]
- 10% higher Caesarean section rate in unverified Penicillin allergic women (GBS + or -), more days in hospital after delivery, and more adverse drug reactions [7]
- Reduced length of hospital stay [8]
- Reduced risk of *Clostridium difficile* (35%) and MRSA (55%) [9]

Benefits to Healthcare System by Removing Penicillin/Amoxicillin Allergy

- Inpatient costs savings were \$1145-\$4254 per patient when Penicillin allergy was removed [10]
- Average antibiotic costs per patient decreased from \$1,265.81 to \$592.08 USD, a 53% savings [11]

To provide your patients the best possible care and reduce healthcare costs, please fax a consult to 1-888-736-1743 addressed to the 'The Penicillin Allergy Clinic'.

Sincerely,

Dr. Norm Silver, FRCPC Pediatrician/Emergency Physician

Dr. Taft Micks, CCFP(EM) Family/Emergency Physician

References 1. Choosing Wisely. American Academy of Allergy, Asthma & Immunology. https://www.choosingwisely.org/clinician-lists/american-academy-allergy-asthma-immunlogy-non-beta-lactam-antibiotics-penicillin-1. Choosing Wisely. American Academy of Allergy, Asthma & Immunology. https://www.choosingwisely.org/clinician-lists/american-academy-allergy-asthma-immunlogy-non-beta-lactam-antibiotics-penicillin-2. Blumental KG, Ryan EE, Yu L, Lee H, Kuhlen Jr. JL, Shenoy ES. The impact of a Reported Penicillin Allergy on Surgical Site Infection Risk. Clin Infect Dis. 2018 Jan 18;66(3):329-336.

^{3.} Moussa Y, Shuster J, Matte G, Sullivan A, Goldstein RH, Cunningham D, et al. De-labeling of β-lactam allergy reduces intraoperative time and optimizes choice in antibiotic prophylaxis. Surgery 164 (2018); 117-123

^{4.} Ponce B, Raines BT, Reed RD, Vick C, Richman J, Hawn M. Surgical site infection After Arthroplasty: Comparative effectiveness of prophylactic antibiotics. J Bone Joint Surg Am. 2014;96:970-7 5. Tan TL, Springer BD, Ruder JA, Ruffolo MR, Chen AF. Is Vancomycin-only prophylaxis for patients with penicillin allergy associated with increased risk of infection after arthroplasty? Clin Orthop Relat Res. 2016 Jul;474(7):1601-6

^{6.} Yian EH, Chan PH, Burfeind W, Navarro RA, Singh A, Dillon MT. Perioperative Clindamycin Use in Penicillin Allergic Patients Is Associated With a Higher Risk of Infection After Shoulder Arthroplasty. J

Am Acad Orthop Surg. 2019. July 11 7. Desai SH, Kaplan MS, Chen Q, Macy EM. Morbidity in Pregnant Women Associated with unverified penicillin allergies, antibiotic use, and Group B Streptococcus infections. Perm J 2017;21:16-080

Jones BM, Bland CM. Penicillin skin testing as an antimicrobial stewardship initiative. Am J Health-Syst Pharm. 2017;74:232-7
Blumental KG, Lu N, Zhang Y, et al. Risk of methicillin resistant *Staphyloccocus aureus*, and *Clostridium difficile* in patients with a documented penicillin allergy: population based matched cohort study. BMJ 2018:361:k2400

^{10.} Mattingly II TJ, Fulton A, Lumish RA, Wiliams AMC, Yoon SJ, Yuen M, et al. The Cost of Self-Reported Penicillin Allergy: A Systematic Review. J Allergy Clin Immunol Pract 2018;6:1649-54 11. Chen JR, Tarver SA, Alvarez KS, Wei W, Khan DA. Improving aztreonam stewardship and cost through a pencillin allergy testing clinical guideline. Open Forum Infect Dis. 2018 May 5;5(6)