

Antimicrobials – Handle with Care

Azithromycin Duration for CAP – *Keep It Short!*

Azithromycin is a macrolide antibiotic often added to the empiric treatment regimen for community-acquired pneumonia (CAP) in patients with comorbidities present and/or requiring hospital admission. This is to cover atypical bacteria including *Mycoplasma pneumoniae*, *Chlamydia pneumoniae*, and *Legionella*, which may be more prevalent in this patient population (and aren't covered by standard empiric treatment options such as amoxicillin, ampicillin, amoxicillin/clavulanate, and cefuroxime).

Only treatment of *Legionella* is of clinical benefit, as the other atypical organisms generally cause self-limiting illness. Patients with *Legionella* pneumonia usually require treatment in the intensive care unit (ICU).

Azithromycin is **not recommended** as monotherapy due to increasing resistance from the most common (typical) bacterial pathogen causing CAP: *Streptococcus pneumoniae* (79% susceptibility in Northern Health as per the [2019 antibiogram](#)).

Azithromycin comes with the convenience of once daily dosing for CAP (due to its long half-life):

- Azithromycin 500 mg PO/IV once daily x **3 days** *OR*
- Azithromycin 500 mg PO/IV x **1 day**, then 250 mg PO/IV x **4 days**

****Treatment for *Legionella* is the only CAP indication for prolonged azithromycin (500 mg PO/IV once daily x 5-day duration; usually in ICU).**

Because of its long tissue half-life, the total treatment dose of 1500 mg (given over either 3 or 5 days) results in an exposure of approximately 10 days. Continuing longer than the standard duration could contribute to resistance, as well as increased risk of adverse effects such as GI upset, nausea/vomiting, diarrhea, QTc prolongation, and *Clostridium difficile* infection.

Prolonged treatment also adds unnecessary costs to the health care system. Further cost savings can be achieved by restricting IV administration of azithromycin to patients who have a contraindication to oral therapy (i.e. unconscious with no OG/NG available, NPO status, unable to tolerate and absorb oral medications, severe/persistent nausea/vomiting/diarrhea), in addition to eliminating risks associated with IV access.

See the AMS program's [Empiric Treatment Guidelines](#) for further information on treatment of CAP, as well as the [NH order set for Adult Community Acquired Pneumonia Management](#).



References:

- 1) Azithromycin product monograph, Lexicomp online, Accessed January 2019.
- 2) Community-acquired pneumonia (CAP), ASP Handbook – Fraser Health Authority, August 2017.
- 3) Jensen, B & Regier, L, Community acquired pneumonia: empiric antibiotic selection (adult), RxFiles, March 2017.

For additional resources/information related to antimicrobial stewardship practices in Northern Health please visit the [NH Physicians website](#) or the AMS [website on OurNH](#).

NEW please check out the AMS program's second set of education modules on the [Learning Hub](#): Pneumonia. Searchable under **NHA – AMS – Pneumonia**. The course consists of 3 modules, each taking approximately 20 to 30 minutes to complete with a short quiz at the end of each module. There is an opportunity to provide feedback at the end of each module as well.