Health PEI IV to PO Antimicrobial Step-down Guidelines

Adapted from Horizon Health Antimicrobial Route of Administration (IV to PO) Therapeutic Conversion: https://en.horizonnb.ca/media/927863/iv_to_po_conversion_criteria.pdf

Converting antibiotics from the intravenous (IV) route to the oral (PO) route when possible has been shown to have benefits to both the patient and the health care system. Benefits include increased patient satisfaction, reduced risk of line related complications, reduced length of stay in hospital, reduced nursing administration time, and reduced cost.

Patients on IV antibiotics should be routinely assessed within 72 hours of initiation of IV therapy and regularly thereafter for the appropriateness of IV to PO conversion. This assessment should take into account the patient's clinical status and site of infection.

All health care providers can consider IV to PO antimicrobial step-down based on this guidance document. In Atlantic Canada there are several Health Authorities that have Pharmacist-led IV to PO step-down programs currently in place. For pharmacy initiated IV to PO step-down discussions, the following criteria should be met before considering changing to PO therapy (see also Appendix A).

General criteria

The patient:

- ☐ is 18 years of age or older AND
- ☐ is tolerating food, enteral feeds and/or other oral medications AND
- ☐ is not showing evidence of malabsorption (e.g. diarrhea/vomiting) AND
- ☐ does not have continuous nasogastric suctioning, gastrectomy, malabsorption syndrome, GI bleed, GI obstruction or ileostomy

Clinical course criteria

The patient:

- ☐ has documented improved clinical signs and symptoms of infection AND
- ☐ is hemodynamically stable AND
- ☐ has been afebrile for at least 48 hours (T < 38) AND
- ☐ has a normal or significantly improved (20%) white blood cell count AND
- ☐ is not being treated for a condition where parenteral therapy is clinically indicated, including but not limited to: endocarditis, CNS infection (such as meningitis, brain abscess), osteomyelitis, *Staph aureus* bacteremia, undrained or complicated abscess, cystic fibrosis, febrile neutropenia, septic arthritis, prosthetic joint infection AND
- ☐ doesn't have a pathogenic isolate showing resistance to the suggested antibiotic

Table 1: IV to PO Antimicrobial Conversion Table				
Drug	**IV dose**	**PO drug/dose**	**Interval**	**Oral Bioavailability**
azithromycin	250 or 500 mg q24h	azithromycin[$] 250 mg OR clarithromycin[R] 500 mg	Once daily BID	37%[1] 50%[1]
cefazolin	1000 or 2000 mg q8h	cephalexin[R,A,O] 500 mg OR cefadroxil [R,A,O] 500 mg	QID BID	90% 90%
ciprofloxacin	400 mg q12h or q24h	ciprofloxacin[R] 500 mg	Same as IV	70%
	400 mg q8h	ciprofloxacin[R] 750 mg	BID	70%
clindamycin	600-900 mg q8h or q12h	clindamycin 300-450 mg	QID	90%
metronidazole[2]	500 mg q8h or q12h	metronidazole 500 mg	same as IV	100%
levofloxacin	500 – 750 mg q24h	levofloxacin[R] (dose same as IV)	same as IV	99%
moxifloxacin	400 mg q24h	moxifloxacin 400 mg	Once daily	89%
fluconazole	400 mg q24h	fluconazole[R] 400 mg	Once daily	90%

[$]Requires special authorization under PEI pharmacare
[R]Dose adjustment required in renal impairment
[A]Assess for true penicillin allergy – cross reactivity exists
[O]Consider double dose (1000 mg) at same dosing frequency for severe infections and/or weight >100 kg

[1]Lower bioavailability but high tissue penetration
[2]Do not convert to oral if co-treating *C. difficile*

References:
Horizon Health Network Policy & Procedure Manual – 2014. Antimicrobial Route of Administration (IV to PO) Therapeutic Conversion: https://en.horizonnb.ca/media/927863/iv_to_po_conversion_criteria.pdf

Mansour, S. (2017, Jan 4). IV to PO Conversion. *Covenant Health Antimicrobial Stewardship E-Newsletter.* Retrieved from http://extcontent.covenanthealth.ca/CHASE_Issue_13_IV_to_PO.pdf

Blondel-Hill E, Fryters S. (2012). *Bugs & Drugs*. Edmonton: Alberta Health Services.

Appendix A: Documentation Template for Pharmacists

Pharmacists can use the following documentation template to outline their assessment/recommendations to the most responsible physician (MRP) or NP.

Subject: **IV to PO Antimicrobial Conversion**

D: Patient is currently receiving antibiotic treatment for: _____

A: Having considered the following criteria:

General criteria

The patient:

- ☐ is 18 years of age or older AND
- ☐ is tolerating food, enteral feeds and/or other oral medications AND
- ☐ is not showing evidence of malabsorption (e.g. diarrhea/vomiting) AND
- ☐ does not have continuous nasogastric suctioning, gastrectomy, malabsorption syndrome, GI bleed, GI obstruction or ileostomy

Clinical course criteria

The patient:

- ☐ has documented improved clinical signs and symptoms of infection AND
- ☐ is hemodynamically stable AND
- ☐ has been afebrile for at least 48 hours (T < 38) AND
- ☐ has a normal or significantly improved (20%) white blood cell count AND
- ☐ is not being treated for a condition where parenteral therapy is clinically indicated, including but not limited to: endocarditis, CNS infection (such as meningitis, brain abscess), osteomyelitis, *Staph aureus* bacteremia, undrained or complicated abscess, cystic fibrosis, febrile neutropenia, septic arthritis, prosthetic joint infection AND
- ☐ doesn't have a pathogenic isolate showing resistance to the suggested antibiotic

Writer suggests the following IV to PO conversion:

1. Discontinue ___IV q____
2. Start _____PO q_____

P: Writer will discuss recommendations with the most responsible physician/NP OR writer has discussed the above recommendations with ____ and plan is to ____.