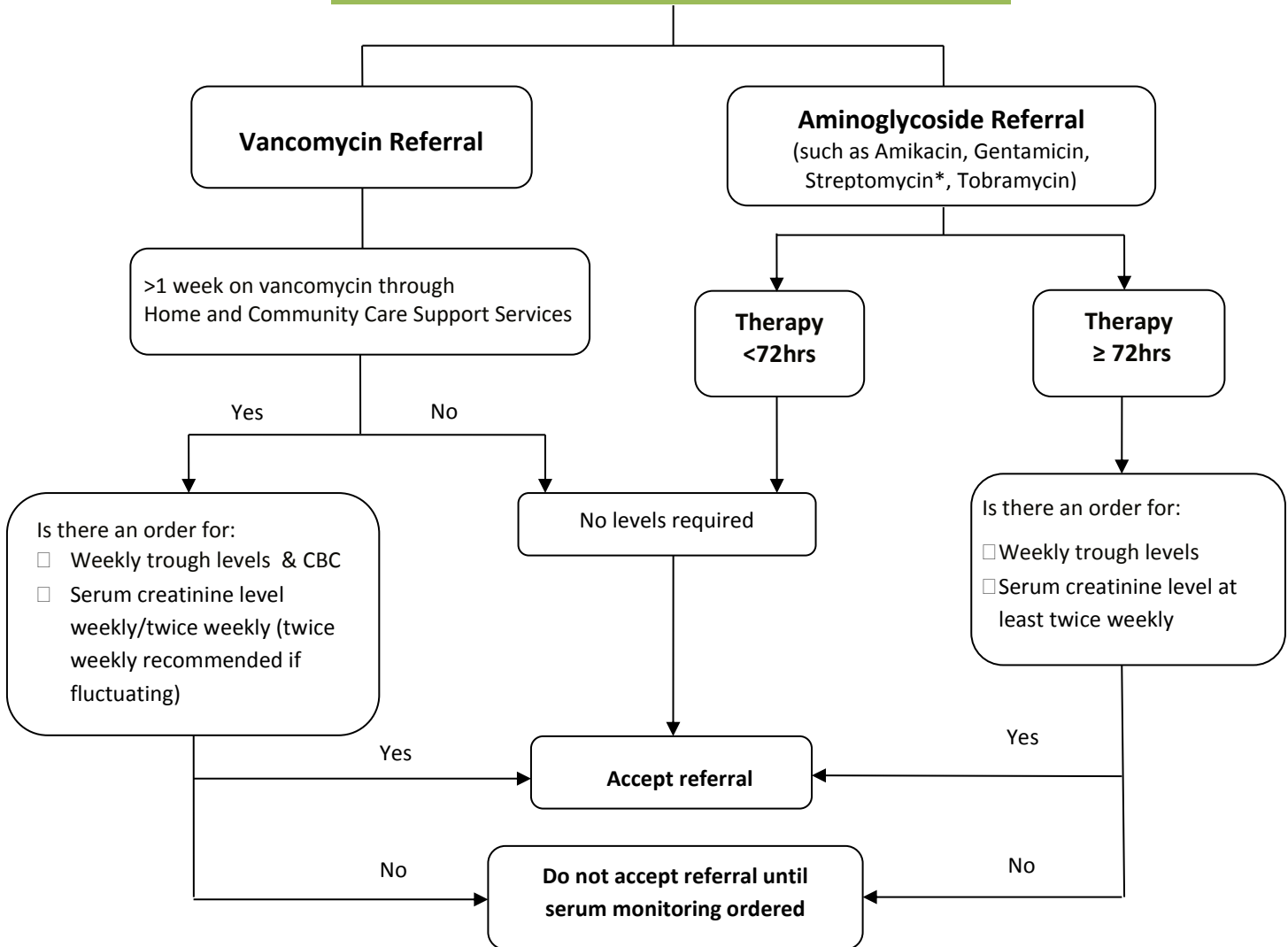


## AMINOGLYCOSIDE/VANCOMYCIN REFERRAL: SERUM MONITORING



- **Trough (pre-antibiotic) levels** should be drawn within 60 minutes prior to next dose
- **\*Note:** Streptomycin is also an aminoglycoside and requires the same monitoring of serum creatinine (drug levels not available)
- If blood sampling from a vascular access device, stop infusion and flush with 0.9% NaCl prior to infusion; use largest lumen and preferentially the catheter lumen not being used for the drug infusion
- Label the blood tube with client data and drug name, dose, frequency time of last dose given; date, time and route of blood sampling (i.e., Vancomycin 1g BID; last dose 2000-2100; blood drawn via PICC @ 0800h Nov. 14 by Jane Doe RN)
- **Client must have a lab requisition for serum monitoring.**
- **Note that the client/family is responsible for accessing the tubes for the blood work and delivering to the lab, as this is not the nurse or LHIN's role.**

### REFERRAL DATA REQUIRED

- Prescribed drug, dosage, frequency, route of administration (i.e., peripheral, PICC, tunneled catheter) & length of therapy (i.e., Vancomycin 1 g q12h via PICC x 1 week)
- Client name, BRN
- Referral Date
- Attending physician and telephone

## NURSING ASSESSMENT OF CLIENTS RECEIVING AMINOGLYCOSIDES/VANCOMYCIN

ADVERSE EFFECT	SIGNS & SYMPTOMS
<b>Infection</b>	<ul style="list-style-type: none"> <li>• Fever, chills, hypotension</li> <li>• Signs of worsening infection</li> </ul>
<b>Impaired renal function</b>	<ul style="list-style-type: none"> <li>• New onset of peripheral edema</li> <li>• Diminished urine output (Consider fluid intake, hydration status, incontinence &amp; inconsistent self-monitoring of urine output. Urine output may be normal with rising serum creatinine and urea during early stages of aminoglycoside-associated nephrotoxicity. Anuria may be a later finding of toxicity.)</li> <li>• Darker urine colour</li> <li>• Thirst</li> <li>• Dry skin</li> </ul>
<b>Ototoxicity</b>	<ul style="list-style-type: none"> <li>• Tinnitus (ringing or roaring in the ears)</li> <li>• Loss of high-tone sounds</li> <li>• Double vision</li> <li>• Pressure/ fullness/ pain in ears</li> <li>• Vertigo (a sensation of spinning or swaying while the body is stationary)</li> <li>• Difficulty balancing</li> </ul>
<b>CNS toxicity</b>	<ul style="list-style-type: none"> <li>• Headache</li> <li>• Lightheadedness</li> <li>• Dizziness</li> <li>• Nausea/vomiting</li> <li>• Unsteady gait</li> </ul>
<b>Infusion reaction</b>	<ul style="list-style-type: none"> <li>• Red Man Syndrome* (vancomycin-related non-allergic histamine reaction): erythematous rash to face, neck &amp; upper torso; itching; tachycardia; hypotension</li> <li>• Phlebitis (redness/pain/swelling at insertion site)</li> </ul>
<b>Therapy Response</b>	<ul style="list-style-type: none"> <li>• Signs/symptoms of improvement/deterioration of wound/disease</li> </ul>

\* Red Man Syndrome (RMS) is usually associated with rapid administration of vancomycin. To minimize risk of RMS, vancomycin should be administered over a period of not less than 60 minutes per gram. Should RMS occur, it can be managed by stopping the infusion with or without administration of an antihistamine (e.g., Benadryl). Future reactions for the patient may be attenuated by lengthening the infusion duration, reducing the dose and/or premedication with Benadryl.

### References:

- Broadhurst D. Monitoring your client: Aminoglycosides and Vancomycin in the home environment. *Vascular Access*. 2011; 5(2).
- Champlain Community Infusion Quality Council.. Aminoglycoside/Vancomycin Referral: Serum Monitoring. 2010.
- Hadaway L. Vancomycin: new perspectives on an old drug. *Journal of Infusion Nursing*. 2003; 26(5): 278-284.