

# VANCOMYCIN GUIDELINES Version 2.0 July 2008

ANSWER THESE 3 QUESTIONS IN ORDER AND FOLLOW THE ARROWS:

1. Does your patient have any degree of renal impairment?

YES →

NO ↓

**DOSE:** 10mg/kg

**LEVELS:**

- Mild-Moderate impairment (Cr Cl: 10 – 50 ml/min): Take TROUGH at 12 hrs, and GIVE dose, then measure PEAK level.
- Severe impairment (Cr Cl: <10 ml/min): TROUGH and HOLD at 24hrs. Hold next dose until trough level is between 5-10mg/L.
- Trough must be maintained ABOVE 5mg/L otherwise treatment will be sub therapeutic.
- Once trough is between 5-10mg/L, give the next dose and measure PEAK level.
- Dosing interval should then be adjusted according to levels - Discuss with pharmacy / micro for advice
- Repeat trough level daily or as necessary.

**AIM FOR:** TROUGH 5-10mg/L. PEAK <40mg/L

2. Is your patient an infant\* ≤ 2kg OR ≤ 4 weeks of life?

YES →

NO ↓

\*CORRECTED AGE IS NOT REQUIRED AS DOSING IS ACCORDING TO WEEKS OF LIFE.

**DOSE:** <2kg: 15mg/kg then levels at 12 hrs

>2kg & <4 weeks of life: 15mg/kg TWICE DAILY

**LEVELS:**

- For infants <2kg: TROUGH and HOLD at 12 hrs.
  - If trough is between 5-15mg/L at 12 hours the dose interval should be changed to 12hrly.
  - If trough is above 15mg/L, discuss with pharmacy or micro whether to hold or give next dose. Repeat trough 12 hrs later. Dose interval should be changed to 24hrly or according to levels.
  - PEAK level should be taken after 2<sup>nd</sup> dose.
- Infants >2kg & <4wks: TROUGH & PEAK at 2<sup>nd</sup> dose
- Repeat trough level every 3 days. Subsequent doses should NOT need to be held until level is back.

**AIM FOR:** TROUGH 5-15mg/L. PEAK <40mg/L

3. Is your patient on vancomycin for a central nervous system infection\*\*?

YES →

NO ↓

\*\*THESE PATIENTS MUST BE DISCUSSED WITH MICROBIOLOGY

**DOSE:** >4 weeks of life and >2kg: 15mg/kg FOUR times a day. (If patient is renally impaired, <4 wks of life, or <2kg, discuss dose with pharmacy and microbiology).

(This four times a day dosing is not with concomitant INTRATHECAL vancomycin)

**LEVELS:**

- TROUGH and PEAK at 3rd dose.
- Repeat trough level every 2 days.
- Do NOT hold dose while waiting for trough.

**AIM FOR:** TROUGH 10-15mg/L. PEAK <40mg/L

4. All other patients > 2kg AND > 4 weeks of life:

**DOSE:** 15mg/kg THREE times a day (maximum total daily dose of 2g)

**LEVELS:**

- TROUGH and PEAK at 3rd dose. (2<sup>nd</sup> dose if renal deterioration is anticipated)
- Repeat trough level every 3 days.
- Do NOT hold dose while waiting for trough.

**AIM FOR:** TROUGH 5-15mg/L. PEAK <40mg/L

## ADMINISTRATION:

**VANCOMYCIN SHOULD ALWAYS BE ADMINISTERED AS AN INFUSION OVER AT LEAST 60 MINUTES.**

For patients on doses > 500mg, infusion rate must not exceed 10mg/minute. Dilute with glucose 5% or sodium chloride 0.9% to 5mg/ml for peripheral administration, or 10mg/ml if fluid restricted and administered via a central line.

**REMEMBER: ALWAYS RECORD THE TIMES THAT LEVELS ARE TAKEN AND DOSES GIVEN ON THE FORM.**

**TIMING OF LEVELS:** Trough levels should be taken immediately before the next dose; peak levels should be taken one hour after the end of the infusion. Levels should be taken from finger prick/peripheral venepuncture and must NOT be taken from any lumen of any line through which vancomycin has ever been given.

**MICROBIOLOGY CUT-OFF TIMES:** Routine antibiotic assays are run twice daily at 1030 and 1530 Monday to Sunday. Levels will be available on the pathology system at approximately 1130 for samples received before 1030, and at 1630 for samples that are received before 1530. Any samples missing the 1530 run will not routinely be processed until 1030 the following morning unless required urgently; assays will be run out-of-hours if urgent but this MUST be arranged with the microbiology team.

IF IN ANY DOUBT, CONTACT YOUR WARD PHARMACIST, MEDICINES INFORMATION (EXT 8608), OR AFTER-HOURS THE ON-CALL RESIDENT PHARMACIST (BLEEP 0714) OR ON-CALL MICROBIOLOGIST FOR ADVICE.