

**Initiation of Aminoglycosides for Adult Inpatients**

<b>Allergies:</b> <input type="checkbox"/> None known <input type="checkbox"/> Unable to obtain List with reactions: _____	<b>Weight:</b> _____ kg <b>Height:</b> _____ cm
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**Initial labs:**  Serum creatinine (SCr) stat

**Choose one of the following dosing strategies (A or B):**

**A) aminoglycosides high dose extended interval (once daily) dosing**

Comparable efficacy and toxicity to conventional (multiple daily dose) dosing and requires less serum level monitoring.

**Do not use high dose extended interval in:**

- Pregnancy
- Patients with endocarditis (except when due to viridans group streptococci or strep bovis - 3 mg/kg/day in 1 dose)
- Patients with ascites or serious liver disease
- Patients on dialysis
- Surgical prophylaxis (single dose)
- Patients with burns
- Patients with unstable renal function or creatinine clearance (CrCl) less than 20 mL/min
- Patients requiring synergy against gram positive organisms (except as for endocarditis above)

**Note: This order set is not indicated for use in pediatric/neonatal population**

**tobramycin** \_\_\_\_\_ (6 mg/kg IBW\* round dose to nearest 20 mg) q \_\_\_\_\_ h (see below for dosing interval)

**gentamicin** \_\_\_\_\_ (6 mg/kg IBW\* round dose to nearest 20 mg) q \_\_\_\_\_ h (see below for dosing interval)

\* IBW (Ideal Body Weight) • Females = 45.5 kg + 2.3(number of inches over 5 ft)    If shorter than 5 feet  
 • Males = 50 kg + 2.3(number of inches over 5 ft)    use negative inches

- If total body weight (TBW) is less than IBW use TBW for dosing
- If patient is obese (20% or greater than their IBW - use adjusted body weight (ABW) for dosing:  
 ABW = IBW + 0.4 ([total body weight] - IBW)
- **Estimated CrCl** = [(140 - age) x 90] / SCr (micromole/L)      **Multiply by 0.85 for females**
- **Frail elderly patients, paraplegic, quadriplegic and amputee patients with low SCr:**  
 Suggest choosing a longer dosing interval as SCr may not be an accurate measure due to low muscle mass

aminoglycoside extended dosing interval based on calculated CrCl	
Calculated CrCl (mL/min)	Dosing interval
Equal to or greater than 60	q24h
40 to 59	q36h
20 to 39	q48h (consider conventional dosing)
Less than 20	Use conventional dosing (see page 2)
Hemodialysis	Use conventional dosing (see page 2)

**Monitoring:**

- Draw **aminoglycoside** serum trough level 6 hours prior to 3rd dose and notify pharmacy for follow up of levels (UHNBC pharmacy available from 08:00 to 16:00 weekends/holidays at 250-565-2317)
- SCr three times weekly (Monday, Wednesday, Friday) while on an **aminoglycoside**
- **Avoid other nephrotoxic medications if possible while on an aminoglycoside (e.g. NSAIDs)**

Physician signature: \_\_\_\_\_ College ID: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_



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Allergies:  None known     Unable to obtain

List with reactions: \_\_\_\_\_

Weight: \_\_\_\_\_ kg

Height: \_\_\_\_\_ cm

**B) aminoglycosides conventional (multiple daily dose) dosing** (see table below for dosing interval)

- tobramycin** \_\_\_\_\_ (1.7 mg/kg IBW\* round dose to nearest 20 mg) q \_\_\_\_\_ h
- gentamicin** \_\_\_\_\_ (1.7 mg/kg IBW\* round dose to nearest 20 mg) q \_\_\_\_\_ h
- gentamicin** (for synergy) \_\_\_\_\_ (1 mg/kg IBW\* round dose to nearest 20 mg) q \_\_\_\_\_ h

\*See page 1 for IBW and CrCl calculations

aminoglycoside conventional dosing interval based on <b>calculated creatinine clearance (CrCl)</b>	
Calculated CrCl (mL/min)	Dosing interval
Equal to or greater than 60	q8h
40 to 59	q12h
20 to 39	q24h
Less than 20	Give single dose and consult pharmacist
Hemodialysis	Give single dose and consult pharmacist

**Monitoring:**

- Draw serum **trough** level 30 minutes prior to 3rd dose
- Draw serum **peak** level 30 minutes after end of infusion of 3rd dose
- Notify pharmacy for follow up of level results  
(UHNBC pharmacy available from 08:00 to 16:00 weekends/holidays at 250-565-2317)
- SCr three times weekly (Monday, Wednesday, Friday) while on an **aminoglycoside**
- **Avoid other nephrotoxic medications if possible while on an aminoglycoside (e.g. NSAIDs)**

Physician signature: \_\_\_\_\_ College ID: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_