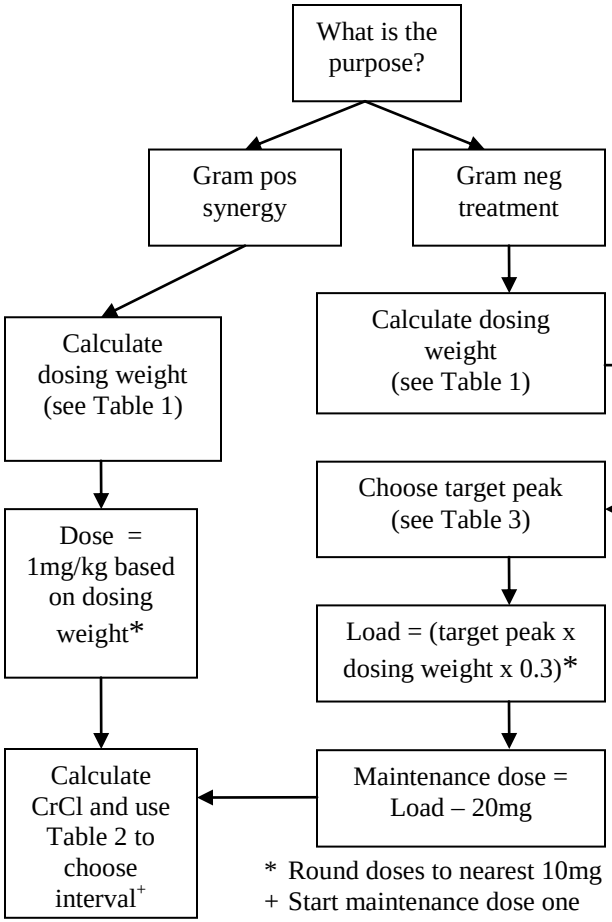
Gentamicin and Tobramycin Dosing



* Round doses to nearest 10mg
\+ Start maintenance dose one interval after load

Table 1: Dosing Weight

Is patient obese? If **NO**, dosing weight = total body weight. If **YES**, calculate dosing weight below:

Dosing weight calculation:

1. Calculate lean body weight (LBW):
   LBW = 2.3(inches over 5 feet tall) + [45 (female) or 50 (male)]
2. If total body weight (TBW) is >40% above lean body weight (LBW), dosing weight = LBW + 0.4(TBW-LBW)

Is CrCl >60mL/min? — Yes → Use **ONCE DAILY AMINOGLYCOSIDE (ODA)** method (use dosing weight to calculate ODA dose*)

No → Use **TRADITIONAL DOSING**

If patient fails ODA nomogram → Use **TRADITIONAL DOSING**

Table 2: Dosing Interval

Creatinine Clearance (mL/min)	Interval
≥90	Every 8 hours
60-89	Every 12 hours
25-59	Every 24 hours
10-24	Every 48 hours
<10	Per levels
Hemodialysis	After each HD

Table 3: Target Levels (mcg/mL)

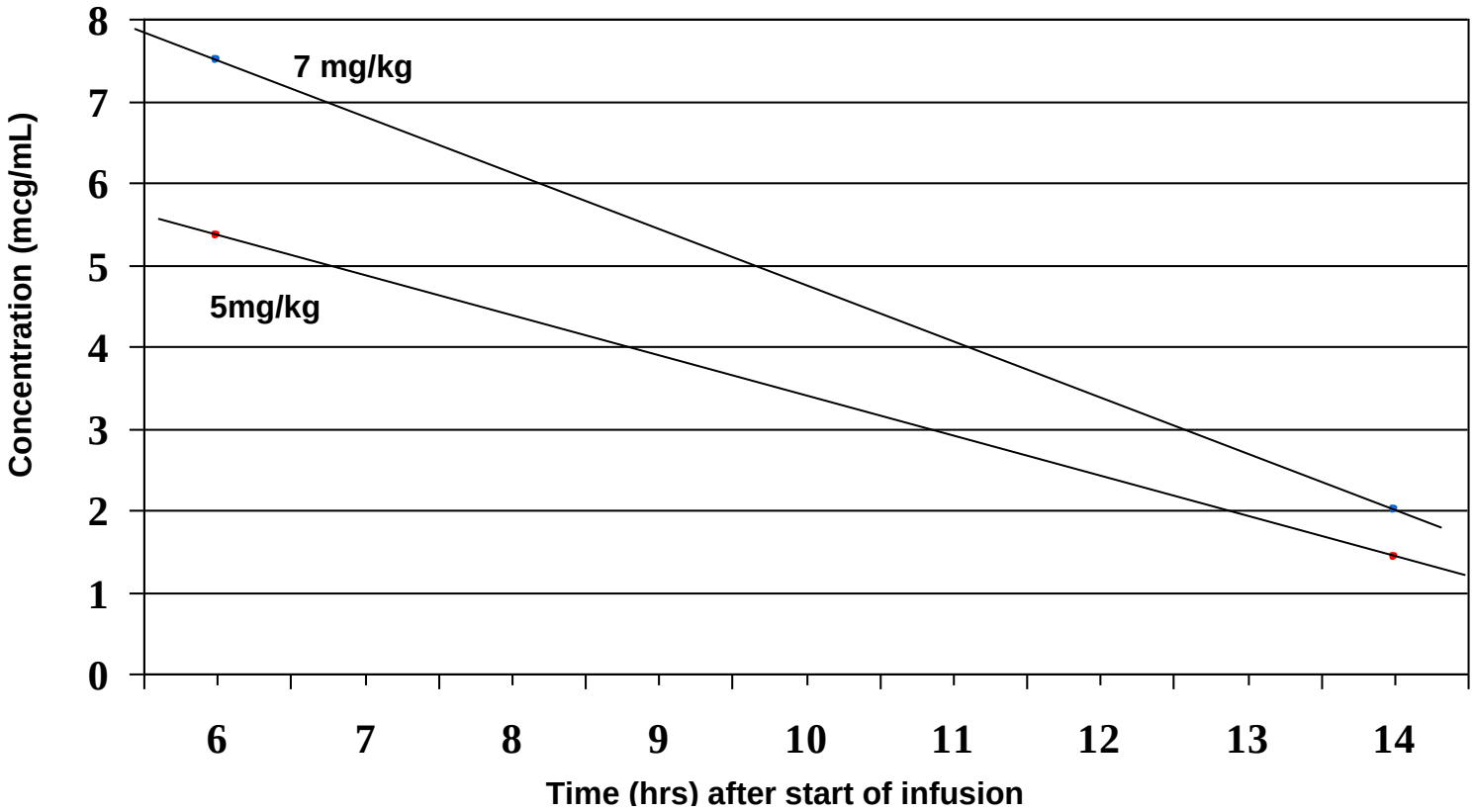
Indication	Target Peak	Target Trough
UTI	3-5	≤1
Pneumonia	8-10	≤1-2
Bacteremia	6-8	≤1-2
Abdominal infection	6-8	≤1-2
Cellulitis	5-7	≤1
Urosepsis	5-7	≤1
Gram pos synergy	3-4	≤1

Key Points About Obtaining Levels

- If using **TRADITIONAL DOSING**, peak and trough concentrations should be obtained around the 4th dose (to ensure steady state).
  - ⇒ Peak concentrations should be obtained at least 30 minutes after a 1 hour infusion.
  - ⇒ Trough concentrations should be obtained just before the next scheduled dose.
- Peaks and troughs are not necessary if dosing by **ODA** method (use ODA nomogram)

If you need more assistance than this card provides (e.g. help with amikacin dosing) or if you need help interpreting levels, please contact your team's pharmacist or the Drug Information Service Center.

Once Daily Aminoglycoside Nomogram – Adults
Gentamicin, Tobramycin



Empiric dosing

- Use total body weight unless patient is obese
- If obese, see table 1 of "Gentamicin and Tobramycin Dosing" page to determine dosing weight
- **Dose is 5 or 7 mg/kg q24h:**
- Consider **5 mg/kg/dose** in these settings:
  Urinary tract source (pyelonephritis, urosepsis, Complicated UTI) *OR*
  Pathogen MIC ≤1 mcg/mL *OR*
  Infection is due to a removed source (e.g. line infection)
- Consider **7 mg/kg/dose** in these settings:
  Nosocomial pathogen *OR*
  Pathogen MIC ≥ 2 mcg/mL *OR*
  Pneumonia *OR* osteomyelitis *OR* meningitis

Use of nomogram to confirm dose

- Confirmation should occur after first dose
- In place of "Peak and trough" concentrations, follow sequence below:

1. Obtain random serum concentration 6-14 hours after dose
2. Plot concentration on nomogram
3. If below line for respective dose, continue dose
4. If above line, use Traditional Dosing, see flow chart on "Gentamicin and Tobramycin Dosing" page
5. Repeat confirmation at clinically appropriate interval
6. Monitor renal function regularly