Gentamicin & Tobramycin – Nomogram (November 2019)

An individualized pharmacokinetic dosing approach is recommended and has been used by pharmacists in dosing aminoglycoside to better achieve the desired target concentrations. A serum creatinine-based nomogram may be used only to guide initial dosing; however serum drug concentrations, not serum creatinine, must be used to determine subsequent dosage adjustments based on individualized pharmacokinetic dosing. Aminoglycoside dosing recommendations in this guideline do not apply to the cystic fibrosis patient population.

Nomogram for empiric dosage interval - Extended Interval Dosing[7]

- Nomogram is to be **used only** as an initial guide to determine a dosage interval. Subsequent dosage adjustments should be made based on serum drug concentrations. Extended dosing method is not recommended in patients with unstable renal function (see other exclusions above).

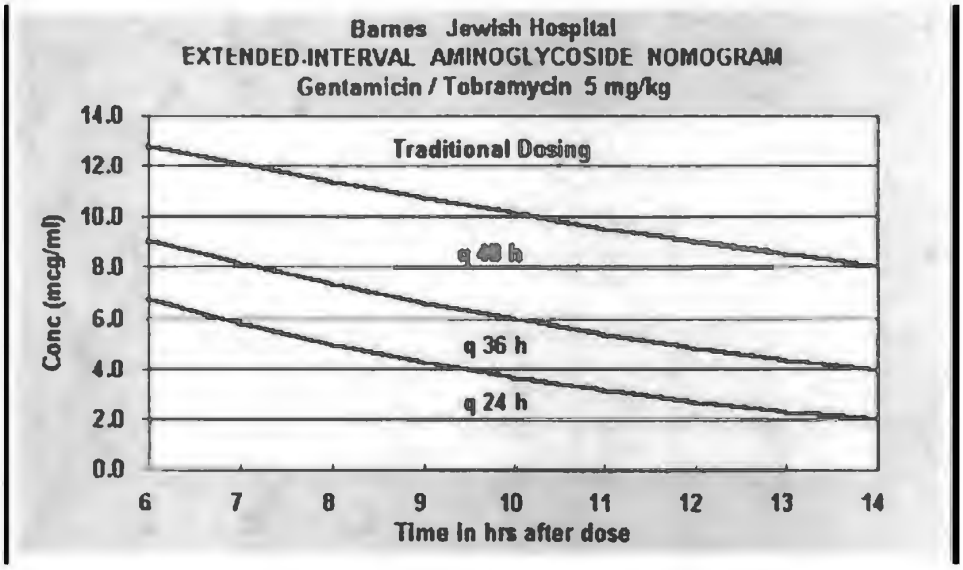
CrCl (mL/min)	Dosing Interval
≥ 60	Q 24 h
40 – 59	Q 36 h
< 40	use traditional dosing method (see Part II)

Monitoring:

e. Dosage adjustment:

- Use either one of the two nomograms below based on the mg/kg dosage used for the patient.
- Plot on the nomogram to determine the intersection between the measured serum concentration (y-axis) and the exact time of the concentration obtained (x-axis). You may use a ruler or top straight edge of a piece of paper.
- The point of intersection will fall into one of 5 regions on the nomogram:
  - Q24h, Q36h or Q48h → continue same dose at indicated interval,
  - Above Q48h zone → discontinue and consult pharmacist for advice about dosing by traditional method,
  - Below nomogram (< 2mcg/mL) → give dose once-daily; if already on Q24h, assess amount of dose increase.
  - Intersection point falls on the line → choose the longer interval.

Gentamicin/Tobramycin 5 mg/kg (Clin Inf Dis **1997**; **24**:786-795)



Gentamicin/Tobramycin 7 mg/kg (Antimicrob Agents Chemo 1995; 39:650-655)

Note: 1 mg/L = 1 mcg/mL

