ADULT PARENTERAL GENTAMICIN (GGC): PRESCRIBING, ADMINISTRATION & MONITORING CHART

Use for patients prescribed intravenous gentamicin as per the GGC dosing guidance. Not for prophylactic indication or where synergistic doses (usually in endocarditis) are being used.
Refer to full guidance for information on EXCLUSIONS and Cautions / Contra-indications to gentamicin.

NHS SCOTLAND

Patient name: .....

Date of birth: .....

CHI no.: .....

Affix patient label

Age: ..... Sex: M / F

Weight: ..... Height: .....

Creatinine: ..... on: ..... /..... /.....

Initial Gentamicin Dose*:

Predicted Frequency*:

***this is not a prescription and may change. Doses must be prescribed individually below.**

Source of first dose: Online calculator (preferred method) ❑ Manual calculation ❑ Weight based, creatinine not known ❑

PROMPT ADMINISTRATION
within 1 hour of recognition of sepsis reduces mortality

SIGNS OF GENTAMICIN TOXICITY

RENAL: ↓ urine output/oliguria or ↑ creatinine

OTO/VESTIBULAR: NEW tinnitus, dizziness, poor balance, hearing loss, oscillating vision

Toxicities may occur irrespective of gentamicin concentration

Step 1: Calculate and prescribe the first dose of gentamicin (see overleaf for more details)

- If creatinine is known - use the online gentamicin dose calculator.
- If creatinine is not known - give 5 mg/kg gentamicin (maximum 400 mg) or, if CKD 5, give 2.5 mg/kg (maximum 180 mg) on advice of senior medical staff.
- Prescribe gentamicin 'as per chart' on the medication chart (kardex). AVOID specifying dose or administration time on the kardex.
- Prescribe individual doses in the prescription record section below, specifying the date and time the dose should be given.

Step 2: Monitor creatinine and gentamicin concentration and reassess the dosage regimen

- Check gentamicin concentration after the first dose and then at least every 2 days (see overleaf for more details).
- Monitor creatinine daily. Seek advice if renal function is unstable (e.g. a change in creatinine of >15-20%).

Step 3: Assess daily: the ongoing need for gentamicin; signs of toxicity

- Consider an alternative agent if creatinine is increasing or the patient becomes oliguric.
- If gentamicin continues for >7 days, suggest referral to audiology for assessment.
- Refer to guidelines or clinical pharmacist for further advice on prescribing, monitoring and administration.

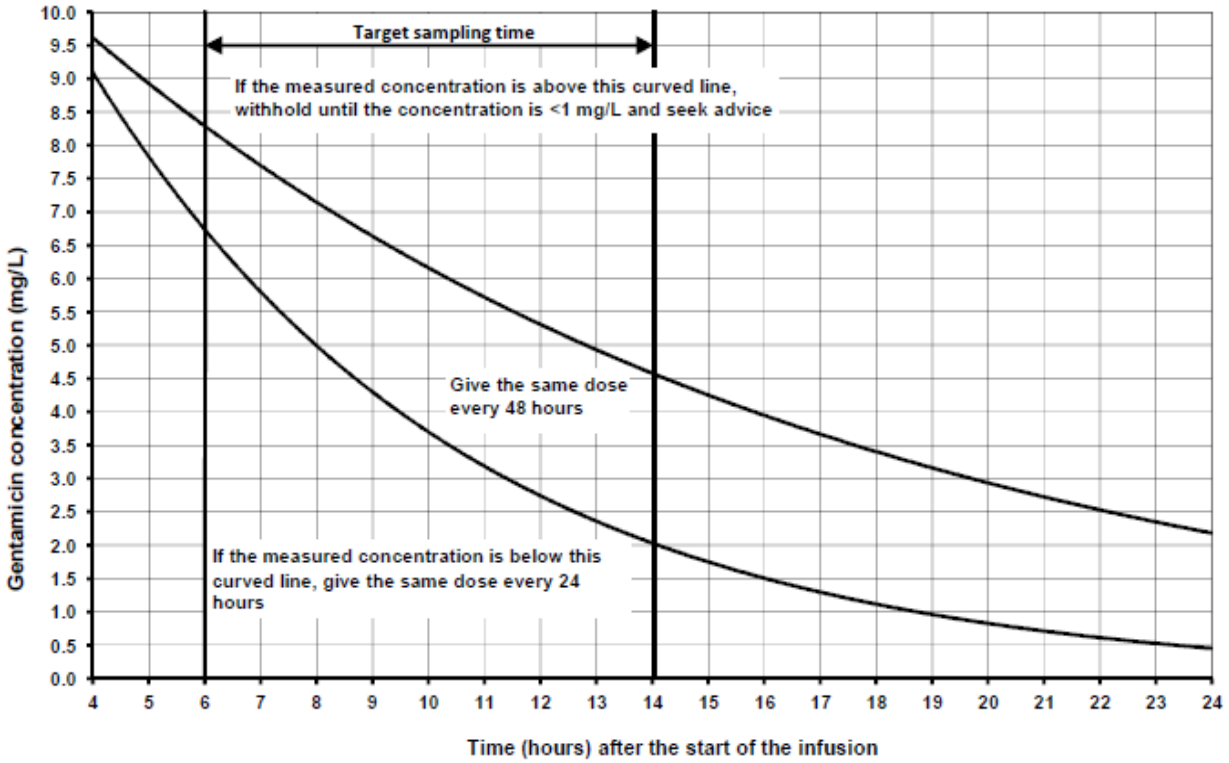
TOXICITY Before prescribing each dose check: **Renal & Oto-vestibular function**	Gentamicin Prescription Record				Administration Record			Monitoring Record			
	Complete each time a dose is to be given (ensuring gentamicin is prescribed '**as per chart**' on the kardex)				Complete each time gentamicin is administered (**in addition to the kardex**)			Record ALL sample dates/times accurately below. See overleaf for monitoring advice.			
	Date to be given	Time to be given 24 h clock	Gentamicin Dose (mg)	Prescriber's signature, PRINTED name and STATUS	*Infuse over 30 mins* Date given	*Infuse over 30 mins* Time started 24 h clock	Given by	Date of sample	Time of sample 24 h clock	Gent level (mg/L)	Action/ Comments (please initial action to be taken)
Cr = micromol /L											24 hourly ❑ 48 hourly ❑ Withhold ❑ Stop ❑ Details/other :
Cr = micromol /L											24 hourly ❑ 48 hourly ❑ Withhold ❑ Stop ❑ Details/other :
***Discuss with an infection specialist or microbiology and document in the notes if treatment continues beyond 3 to 4 days * Risks of prolonged treatment must be considered and treatment options discussed with microbiology or infection specialist**											
Cr = micromol /L											24 hourly ❑ 48 hourly ❑ Withhold ❑ Stop ❑ Details/other :
Cr = micromol /L											24 hourly ❑ 48 hourly ❑ Withhold ❑ Stop ❑ Details/other :

Discuss with an infection specialist before continuing onto a second sheet

Patient name: …… **CHI no.:** ……

ADULT PARENTERAL GENTAMICIN (GGC): PRESCRIBING, ADMINISTRATION & MONITORING CHART

Prescribing, monitoring, interpreting and re-prescribing advice



Calculating the first dose of gentamicin

- If creatinine is known - use the online gentamicin dose calculator.
- If creatinine is not known - give 5 mg/kg gentamicin (maximum 400 mg) or, if CKD 5, give 2.5 mg/kg (maximum 180 mg) on advice of senior medical staff.
- Calculate the dosage regimen once creatinine is available.
- If the online calculator is not available, manually calculate the dose.

Checking the patient's gentamicin concentration

- Take a blood sample 6-14 hours after the start of the first gentamicin infusion (or after 24 hours if CrCl <21 ml/min).
- Thereafter, sample at least every 2 days.
- Record the exact time of all gentamicin samples overleaf AND on the sample request form.

Interpreting gentamicin results and re-prescribing

- Record the measured concentration overleaf.
- If creatinine clearance is ≥21 ml/min and therapy is to continue, plot the gentamicin concentration on the graph opposite & reassess the dose/dosing interval as indicated.
- If creatinine clearance is <21 ml/min and therapy is to continue, give a further dose once the measured concentration is <1 mg/L.
- Document the action taken in the medical notes and overleaf. Prescribe the next dose overleaf as appropriate.
- Contact pharmacy for further advice as necessary (e.g. if renal function is changing, the gentamicin concentration is unexpectedly high or low or the concentration is on the line between dosage intervals).
- Check microbiology sensitivities and refer to IV to Oral switch policy.

If the measured concentration is unexpectedly HIGH or LOW

- Were dose and sample times recorded accurately?
- Was the correct dose administered?
- Was the sample taken from the line used to administer the drug?
- Was the sample taken during drug administration?
- Has renal function declined or improved?
- Does the patient have oedema or ascites?

If in doubt, take another sample before re-prescribing and/or contact pharmacy for advice.

January 2017
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