

Guidance notes for the gentamicin prescribing, administration & monitoring chart & online gentamicin calculator

PRESCRIBERS

The gentamicin chart is to be used for the prescribing, administration and monitoring of treatment doses of gentamicin in conjunction with the online calculator (available on NHST antibiotic website or [Right Decision Service App](#)).

The guidance does not apply to gentamicin use in the following:

- o synergistic treatment of endocarditis or Staphylococcal bone infection
- o patients receiving haemodialysis or haemofiltration
- o major burns > 20% body surface
- o ascites >20% body weight
- o age < 16 years
- o cystic fibrosis (refer to local guidelines)
- o pregnancy (refer to local guidelines)
- o Decompensated Liver Disease
- o Myasthenia Gravis
- o Renal Transplant
- o Acute Kidney Injury (AKI 3) on dialysis or eGFR <20ml/min
- o End stage renal failure on dialysis with residual kidney function

On the gentamicin prescription chart:

1. Complete the patient's name, DOB and CHI
2. Record the patient's age, sex, weight, height and serum creatinine (i.e. record all the parameters needed for dose calculation)
3. The preferred method to calculate the dose is the online calculator which can be found on NHST antibiotic website or [Right Decision Service App](#). If using the App, ensure that you have selected NHS Tayside to access the correct calculator.
4. Document the initial dose. **Tick the box to indicate how this was calculated.**
5. If the online calculator is not used to calculate the dose, then ensure the calculations for the dose are documented in the space provided on the gentamicin prescribing chart.
6. Prescribe the initial dose of gentamicin in the prescription section of the chart.
7. Prescribe gentamicin on HEPMA as PRN to maintain full digital record of medicines prescribed.
8. Store gentamicin chart with other paper documentation relating to the patient that is easily accessible.

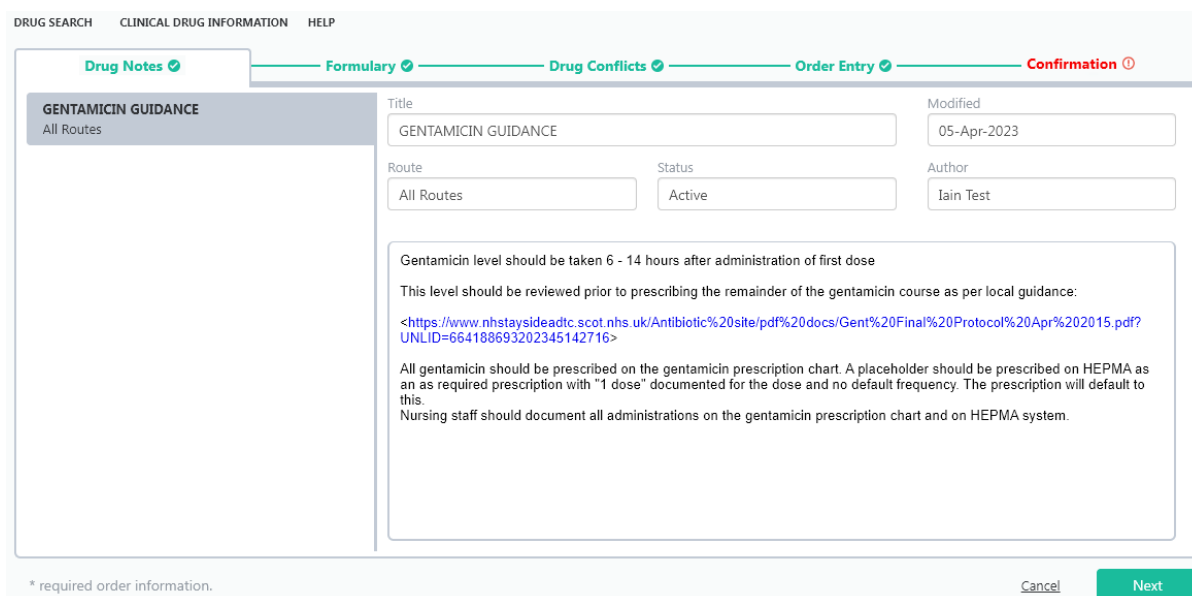
TOXICITY Before prescribing each dose check renal function	Gentamicin Prescription Record				Administration Record			Monitoring Record (samples 6-14 hours after start of infusion)			
	Complete each time a dose is due (ensure gentamicin is prescribed 'as per chart' on HEPMA. Prescribe to nearest 40mg.)				Complete each time gentamicin is administered			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 60 mins Date given	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 = <u>79</u> micromol/L											24 hourly <input type="checkbox"/> 36 hourly <input type="checkbox"/> 48 hourly <input type="checkbox"/> Stop <input type="checkbox"/> Details/other: _____
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IV antibiotics should be reviewed daily & IVOST at earliest opportunity. Review microbiology results and sensitivities and prescribe targeted therapy where possible
If IV therapy is still indicated discuss with pharmacy, ID or Microbiology

On HEPMA:

Gentamicin should be prescribed as a PRN medication on HEPMA “As per paper chart”. Do not prescribe a specific dose or administration time on HEPMA.

Gentamicin Guidance on HEPMA:



Drug Notes | **Formulary** | **Drug Conflicts** | **Order Entry** | **Confirmation**

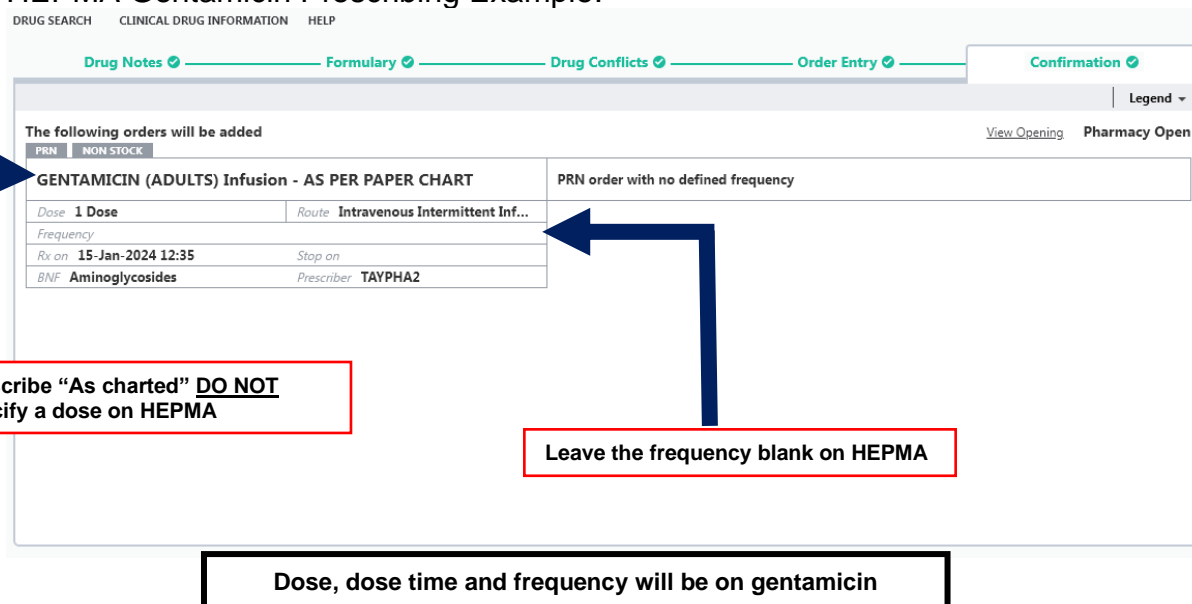
GENTAMICIN GUIDANCE
All Routes

Title: GENTAMICIN GUIDANCE
Modified: 05-Apr-2023
Route: All Routes
Status: Active
Author: Iain Test

Gentamicin level should be taken 6 - 14 hours after administration of first dose
This level should be reviewed prior to prescribing the remainder of the gentamicin course as per local guidance:
<<https://www.nhstaysideadtc.scot.nhs.uk/Antibiotic%20site/pdf%20docs/Gent%20Final%20Protocol%20Apr%202015.pdf?UNLID=664188693202345142716>>
All gentamicin should be prescribed on the gentamicin prescription chart. A placeholder should be prescribed on HEPMA as an as required prescription with "1 dose" documented for the dose and no default frequency. The prescription will default to this.
Nursing staff should document all administrations on the gentamicin prescription chart and on HEPMA system.

* required order information. Cancel Next

HEPMA Gentamicin Prescribing Example:



Drug Notes | **Formulary** | **Drug Conflicts** | **Order Entry** | **Confirmation**

The following orders will be added

PRN | NON STOCK

GENTAMICIN (ADULTS) Infusion - AS PER PAPER CHART | PRN order with no defined frequency

Dose	1 Dose	Route	Intravenous Intermittent Inf...
Frequency			
Rx on	15-Jan-2024 12:35	Stop on	
BNF	Aminoglycosides	Prescriber	TAYPHA2

Prescribe "As charted" DO NOT specify a dose on HEPMA

Leave the frequency blank on HEPMA

Dose, dose time and frequency will be on gentamicin

Monitoring

1. Obtain blood sample prior to printing off label **6-14** hours after the start of the IV infusion. Record sample date, time, and level in the monitoring section of the chart.
2. Review and document the following:
 - a. the gentamicin concentration result

- b. the patient's renal function (daily)
 - c. any signs of ototoxicity
3. Tick the relevant box to indicate if you wish to continue every 24, 36 or 48 hours, stop or other (give details). *Note that full guidance on interpreting concentrations is on the reverse of the prescription chart.*

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4. If the level falls in the 24 hour dosing section of the nomogram then up to a total of 4 doses can be given

If the level falls in the 36 hour dosing section of the nomogram then up to a total of 2 doses can be given

If the level falls in the 48 hour dosing section of the nomogram then up to a total of 2 doses can be given

5. Prescribe the next dose on the following line of the chart.
6. If renal function is stable, further gentamicin levels are not required within the **96hr** treatment duration. To minimise the risk of toxicity, duration of treatment should be limited to 96 hours. All gentamicin prescriptions that continue beyond this **must** be discussed and agreed with microbiology or an infection specialist.
7. Repeat steps 2 - 5 for all subsequent doses of gentamicin.
8. When stopping therapy, the gentamicin prescription must be discontinued on both **HEPMA AND** the gentamicin chart.

For further advice please contact your ward pharmacist or antibiotic pharmacist on bleep 4732.