

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 Antimicrobial Companion 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 or attach an addressograph label.
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 Antimicrobial Companion 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. Adhere gentamicin chart to TPAR so that the red band is visible when TPAR closed.

ALWAYS CHECK IF PREVIOUS DOSES HAVE BEEN ADMINISTERED (e.g. in A&E, surgical prophylaxis-once only section) AND DOCUMENT ON CHART TO ENSURE COMPLETE TREATMENT RECORD

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 the TPAR). 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> </u> micromol/L	1/1/17	0800	420mg	<i>[Signature]</i> I FIKEM FY1	1/1/17	0800		1/1/17	1625	2.4	24 hourly <input checked="" type="checkbox"/> 36 hourly <input type="checkbox"/> 48 hourly <input type="checkbox"/> Stop <input type="checkbox"/> Details/other: <u> </u>
Cr = <u> </u> micromol/L	2/1/17	0800	420mg	<i>[Signature]</i> I FIKEM FY1			JM/HK				24 hourly <input type="checkbox"/> 36 hourly <input type="checkbox"/> 48 hourly <input type="checkbox"/> Stop <input type="checkbox"/>
Cr = <u> </u> micromol/L											24 hourly <input type="checkbox"/> 36 hourly <input type="checkbox"/> 48 hourly <input type="checkbox"/> Stop <input type="checkbox"/>

Prescribe first dose. If renal function stable, subsequent dose(s) can be prescribed once dosing frequency known. Continue to monitor renal function daily.

If antibiotic therapy is to continue beyond 3 days consider oral switch. Review microbiology results and sensitivities and prescribe targeted therapy where possible
If IV therapy is still indicated consider switching to aztreonam to reduce risks of prolonged treatment with gentamicin (Refer to aztreonam guidance on NHST website)
Discuss with an infection specialist if gentamicin required for more than 72hrs

Approved: May 2017
Review : May 2019

On the TPAR:

Gentamicin should be prescribed as a regular medication on the TPAR "As charted". Do not prescribe a specific dose or administration time on the TPAR.

REGULAR THERAPY		Date	Time
Medicine / Form		6	
GENTAMICIN		8	
Dose	Route	12	
AS CHARTED	IV	14	
Signature	Start Date	18	
<i>[Signature]</i>	01/01/17	22	
Further Information			
See gentamicin prescribing chart			

Prescribe "As charted" **DO NOT** specify a dose on the TPAR

Leave the dose time blank on the TPAR as this may vary

Dose and dose time will be on gentamicin prescribing chart

Monitoring

- 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.
- Review and document the following:
 - the gentamicin concentration result
 - the patient's renal function (daily)
 - any signs of ototoxicity
- 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.*

ALWAYS CHECK IF PREVIOUS DOSES HAVE BEEN ADMINISTERED (e.g. in A&E, surgical prophylaxis-once only section) AND DOCUMENT ON CHART TO ENSURE COMPLETE TREATMENT RECORD

TOXICITY Before prescribing each dose check renal function	Gentamicin Prescription Record				Administration Record			Monitoring Record (samples 6-14 hours after start of infusion)			
	Date to be given	Time to be given 24 h clock	Gentamicin Dose (mg)	Prescriber's signature, PRINTED name and STATUS	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)
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If antibiotic therapy is to continue beyond 3 days consider oral switch. Review microbiology results and sensitivities and prescribe targeted therapy where possible
If IV therapy is still indicated consider switching to aztreonam to reduce risks of prolonged treatment with gentamicin (Refer to aztreonam guidance on NHST website)
Discuss with an infection specialist if gentamicin required for more than 72hrs

- If renal function stable, prescribe subsequent dose(s). Continue to monitor renal function daily.
- If renal function remains stable, further gentamicin levels are not required within the **72hr** treatment duration. To minimise the risk of toxicity, duration of treatment should be limited to 72 hours. All gentamicin prescriptions that continue beyond this **must** be discussed and agreed with microbiology or an infection specialist.
- When stopping therapy, the gentamicin prescription must be discontinued on both the TPAR **AND** the gentamicin chart.

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