IV Gentamicin: What to do after 72 hours (Adults)

All antibiotic prescriptions must be reviewed daily, including whether IVOST is appropriate (refer to the IV to Oral Antibiotic Switch Therapy [IVOST] Guideline [Adults]).
Consider stopping gentamicin earlier, if no longer indicated.
All IV gentamicin prescriptions **MUST BE** reviewed 72 hours after start of treatment (i.e. 3 doses with 24 hourly dosing).
It may be appropriate for IV gentamicin to continue, although higher cumulative doses increase the risk of toxicity. Do not exceed 7 days, unless directed by microbiology.
Before prescribing: review previous microbiology results, consider allergies, contraindications and potential drug interactions, and take into account renal/liver function.
EXCLUSION: DO NOT use this chart for synergistic IV gentamicin given for suspected or proven infective endocarditis, pregnancy/ breastfeeding , or <18years.

Patient has features of sepsis/ septic shock → **Urgent review by a senior clinician, consider escalating antimicrobial therapy**

Patient is stable or improving
Review culture results

IVOST criteria met
Positive cultures: switch to reported appropriate oral options
No positive cultures: follow empirical oral switch in **IVOST guidance** in handbook

IVOST criteria not met

No positive culture/ cultures in progress/ cultures not taken

If positive cultures available
Switch to reported appropriate IV agent
or highly bioavailable oral agent (e.g. co-trimoxazole[1], ciprofloxacin[1,2,3])

Upper UTI/ Pyelonephritis with sepsis (now resolved)

Patients improving after 72 hours of IV antibiotics would usually be suitable for IVOST. Refer to IVOST guidance for appropriate agent

If PO antibiotics are contra-indicated (e.g. nil by mouth):
IV Co-trimoxazole[1]

If Co-trimoxazole resistance on recent urine culture or inappropriate, discuss choice with Microbiology Consultant

**Nitrofurantoin is contra-indicated in upper UTI / pyelonephritis*

Hospital-acquired pneumonia

Stop IV Gentamicin
Continue PO Co-trimoxazole[1]

Bone & Joint Infections (BJI) OR Severe Skin & Soft Tissue Infections (SSTI)

Continuing Gram negative cover with IV Gentamicin is not always required

Culture in progress:
Continue IV Gentamicin (unless renal failure, toxicity, difficulty monitoring)
Review daily, **do not** exceed 7 days

Intra-abdominal infection or sepsis or unknown source

No Co-trimoxazole use in the last 6 months AND no ESBL in the last 12 months:
Switch to PO Co-trimoxazole[1] +/- PO Metronidazole[1,4]

Co-trimoxazole use in the last 6 months AND no ESBL in the last 12 months:
Switch to IV/PO Co-amoxiclav[5]
If unsuitable:
PO Ciprofloxacin[1,2,3] +/- PO Metronidazole[1,4]

ESBL in the last 12 months:
Speak to Microbiology Consultant for advice

If previous ESBL reported susceptible (S), can consider:
Switch to PO Co-trimoxazole[1] +/- PO Metronidazole[1,4]
If unsuitable:
PO Ciprofloxacin[1,2,3] +/- PO Metronidazole[1,4]

**Co-amoxiclav and Piperacillin/Tazobactam provide sufficient anaerobic cover. Additional metronidazole is not required*

Most infections require ≤7 days total (IV+PO) of antibiotics.
For recommended durations, refer to Adult Secondary Care Antibiotic guidance and IVOST guidance
For dosing advice, refer to BNF or eMC or Renal Drug Handbook for dosing adjustment

1. High bioavailability, use IV only if PO contraindicated
2. If previous *C.difficile* infection, consider alternative listed options and/or discuss with Microbiology Consultant
3. Consider MHRA warnings. Patient will need counselling and given a patient information leaflet
4. Metronidazole is not routinely required for biliary tract infections, unless severe
5. Avoid in penicillin allergy

If further advice is required after discussion with an appropriate senior member of the clinical team, a non-urgent referral to the duty Microbiology Consultant can be made by email at **dg.microbiologycons@nhs.scot**

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