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ST VINCENT'S PATHOLOGY

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CEFOTAXIME DRUG MEASUREMENT INFORMATION SHEET

Cefotaxime	Third generation cephalosporin. Time-dependent killing. **Active against:** many Gram-negative organisms including *Enterobacteriaciae*; most streptococci and some anti-staphylococcal activity. **Inactive against:** *Pseudomonas aeruginosa, Enterococcus spp,* MRSA.
When to consider TDM	Consider in **critically ill** patients, especially those with **sepsis**, **trauma**, **burns**, **impaired renal function** or **undergoing dialysis**. In addition, TDM should be undertaken in any patient planned to undergo **>2 weeks therapy** to ensure the dose is optimal.
Pharmacokinetics (may be altered in critical illness and organ dysfunction)	Absorption: N/A – IV only Protein binding: 27-38% Clearance: Unchanged in urine: 50% | As metabolites: 50% (25% active) Elimination t½: 1.1 hours
Sample Collection Time	**Trough sample (<1 hour prior to the next dose), minimum 24 hours** after initiation or dose change.
Requesting and Collection	Collect 4 mL in a purple top (EDTA) tube (no gel separator). **Important information required on request form**: 1. Time of blood sample collection 2. Dosing regimen (dose and frequency) 3. Date and time of commencement 4. Date and time of last dose
Handling and Transport	Sample must be delivered to laboratory within 1 hour of collection. If not delivered to the lab within this time, centrifuge, separate plasma and freeze within 3 hours of collection.
Test Availability	Test performed Mondays to Fridays. Results available after 4 pm. For tests outside these hours, see handling & transport instructions above. Add-on tests are generally not available as sample integrity cannot be guaranteed.
Reference Intervals	**TARGET FOR EMPIRICAL THERAPY**: A trough concentration above 4 mg/L is an appropriate target, and represents 4 times the EUCAST PK-PD non-species related sensitivity breakpoint for cefazolin (1 mg/L).[1] **TARGET FOR DIRECTED THERAPY:** Trough concentration > 4 times the pathogen's MIC. Contact the Microbiology registrar for assistance with MICs: (02) 8382 9194. **TOXIC RANGE:** *Not defined at present.*
Contact	Clinical Pharmacology Laboratory: (02) 8382 9184. Patient Results: (02) 8382 9100 Further information: www.sydpath.com.au - Test Database
Instructions for Referring Laboratories	Centrifuge, separate plasma within 3 hours of collection, store and transport plasma frozen.
Document Approval	TDM Matters committee, December 9th 2022. Signed Ric Day, director CPT Dept
References	1. EUCAST Clinical Breakpoint Tables v. 12.0 (link)