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LINEZOLID DRUG MEASUREMENT INFORMATION SHEET

Linezolid	Oxazolidinone antibacterial agent. **Active against**: Gram positive bacteria (including MRSA and VRE), anaerobes including *Bacteroides fragilis,* and *Peptostreptococcus spp*, nontuberculous mycobacteria, multi-drug resistant TB and nocardia. **Linezolid should be reserved for infections caused by multidrug-resistant bacteria.**
When to consider TDM	Consider in **all patients**, especially if **>14 days therapy** is planned due to concentration dependent toxicity. Strongly recommended for **elderly** patients**,** patients **with impaired renal function** or **undergoing dialysis**, and **critically ill** patients, where augmented renal clearance/acute respiratory distress syndrome frequently results in sub-therapeutic linezolid concentrations.
Pharmacokinetics (may be altered in critical illness and organ dysfunction)	Absorption: 100% Protein binding: 30% Clearance: As metabolites: 59% | Unchanged in urine: 30% Elimination t½: 5-7 hours
Sample Collection Time	**Trough sample, 48 hours** following 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**: Trough 2-7mg/L **TARGET FOR DIRECTED THERAPY:** *Contact the Infectious Diseases or Clinical Pharmacology Registrar through switch for advice.* Patients infected with pathogens with a higher linezolid MIC (>2) are unlikely to reach effective drug concentrations that are in the non-toxic range.[1] Contact the Microbiology registrar for assistance with MICs: (02) 8382 9194. **TOXIC RANGE:** >7 mg/L. *Features of toxicity: bone marrow suppression, neuropathy, lactic acidosis, nausea, vomiting.*[2]
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, August 12th 2022. Signed Ric Day, director CPT Dept
References	1. Cattaneo et al. 2016, DOI: 10.1517/17425255.2016.1166204 2. Product Information: Zyvox (R) tablets, oral suspension, and solution for injection. Pfizer (link)