



Therapeutic Drug Monitoring (TDM) Guidelines for Legacy Children's Services

- When drawing levels on a given dose, document the exact medication administration time on the Medication Administration Record (MAR) and document on the laboratory tube the exact time the blood sample was drawn.
- If drawing the blood sample outside of the parameters ordered, call the pharmacy or the physician before drawing the sample.
- Drug level results must be obtained before administering the next scheduled dose. Drug level labs may need to be ordered STAT for dose or interval adjustment.
- Notify pharmacy/physician of out-of-range drug level results.

DRUG	INFUSION TIME	WHEN TO DRAW LEVEL	SPECIMEN TUBE/ AMOUNT
Amikacin Sulfate IV IM	30 minutes	Peak 30 minutes after end of 30-minute infusion 30 - 60 minutes post IM injection Trough within 30 minutes before next dose Peak IM 1-2 hours after injection Trough IM within 30 minutes before next dose	1.25 mL blood Plain red or lavender top tube 1 microtainer OK if filled to fill line
Caffeine	10 minutes	Peak 2 hours after dose Trough 30 minutes before next dose	1.25 mL blood (Neonatal minimum 0.2 mL) 1 Red top tube 1 microtainer OK if filled to fill line
Carbamazepine		Just before next dose	1.25 mL blood Red or mint top tube 1 microtainer OK if filled to fill line
Chloramphenicol IV PO	30 minutes	Peak 90 minutes after end of 30-minute infusion Trough just before next dose Peak 2 hours after PO dose	1.25 mL blood Red top tube ❖ Misc. Lab: Echart Order
Cyclosporine IV/PO	2-4 hours infusion	Just before next dose	4 mL blood Lavender top tube
Digoxin IV/PO	5-10 minutes	6 hours post dose to just before next dose (Trough level)	1.25 mL blood Red or mint top tube 1 microtainer OK if filled to fill line
Ethosuximide PO		Just before next dose	2.5 mL blood Red or green top tube 2 microtainer
Flucytosine PO		Peak 1-2 hours post dose after at least 4 days of therapy	1.25 mL blood Red top tube ❖ Misc. Lab: Echart Order
Fosphenytoin (<i>measure Phenytoin levels</i>) IV IM	3 mg/kg/ minutes	Peak 2 hours after end of infusion Peak 4 hours after IM	1.25 mL blood Red or mint top tube 1 microtainer OK if filled to fill line
Gentamicin IV IM	30 minutes	For Gentamicin dosing of every 12 hours or less: Peak 30 minutes after end of 30-minute infusion, then draw. Trough within 30 minutes before next dose For Gentamicin dosing of greater than every 12 hours: Trough within 30 minutes before administration of the dose and then draw Peak 30 minutes after the end of 30-minute infusion of the same dose Peak IM 1-2 hours after injection	1.25 mL blood Red or green top tube 1 microtainer OK if filled to fill line
Phenobarbital	1mg/kg/ minutes	Just before next dose	1.25 mL blood Gold or mint top tube 1 microtainer OK if filled to fill line

Therapeutic Drug Monitoring (TDM) Guidelines for Legacy Children's Services

DRUG	INFUSION TIME	WHEN TO DRAW LEVEL	SPECIMEN TUBE/ AMOUNT
Phenytoin PO		Trough just before next dose	1.25 mL blood Gold or mint top tube 1 microtainer OK if filled to fill line
Theophylline IV Bolus Constant infusion PO liquid/fast release tab PO slow release	30 minutes	Peak 30 minutes after end of 30-minute infusion 16 - 24 hours after start or change in constant infusion Peak 1 hour after dose after 1 day of therapy Peak 4 hours after PO Trough just before next dose	1.25 mL blood Gold or mint top tube 1 microtainer OK if filled to fill line
Thiocyanate (Nitroprusside infusion)	Infusion	Nitroprusside continuous infusion	7.5 mL blood Red top tube
Tobramycin IV IM	30 minutes	For Tobramycin dosing of every 12 hours or less: Peak 30 minutes after end of 30-minute infusion, then draw Trough within 30 minutes before next dose For Tobramycin dosing of greater than every 12 hours: Trough within 30 minutes before administration of the dose and then draw Peak 30 minutes after the end of 30-minute infusion of the same dose Peak IM 1 - 2 hours post injection	1.25 mL blood Gold or mint top tube 1 microtainer OK if filled to fill line
Valproic Acid PO		Trough just before next dose	1.25 mL blood Gold or mint top tube 1 microtainer OK if filled to fill line
Vancomycin	60 minutes	For Vancomycin dosing of every 12 hours or less: Peak 60 minutes after end of 60-minute infusion Trough within 30 minutes of next dose For Vancomycin dosing of greater than every 12 hours: Peak 60 minutes after end of 60-minute infusion Trough within 30 minutes before administration of the dose	1.25 mL blood Gold or mint top tube 1 microtainer OK if filled to fill line

❖ **For Misc. Lab in Echart, perform the following steps:**

- Go to **[ORDERS]**
- Check **[OTHER]**
- Click on **[MISC. LAB ORDER]**
- Type in requested laboratory test, i.e. Chloramphenicol
- If a specific laboratory testing facility is requested, type the laboratory name in the comment section