

Did You Know the Importance of Monitoring Labs?

Labs are drawn for a variety of medication-specific purposes

1. Avoiding electrolyte abnormalities for drugs that exert a clinically significant effect on micronutrient levels.
Example medications: diuretics, amphotericin B, corticosteroids
2. Avoiding organ toxicity for select drugs that cause organ damage as identified by lab biomarkers such as liver enzymes and serum creatinine.
Example medications: macrolides, tetracyclines, chlorpromazine
3. Therapeutic drug monitoring for dose adjustments to drugs that exhibit dosing based on the relationship between drug plasma concentrations and clinical effect
Example medications: vancomycin, aminoglycosides, digoxin, lithium

Some medications' dose adjustments involve monitoring surrogate lab values instead of drug concentrations themselves, such as select anticoagulants dosed based upon INR or aPTT.

Why are labs sometimes missed?

1. The lab order never got entered
2. Routine labs are ordered but they fall off of the lab request report and need to be re-entered

When labs are missed — what could go wrong?

- Variety of element-dependent negative health repercussions if electrolytes do not stay WNL.
- Sequelae of adverse events due to liver/kidney injury if hepatotoxic/nephrotoxic drugs go unmonitored.
- Safety and Efficacy implications for narrow therapeutic index drugs (small dosing window between ineffective subtherapeutic dose and toxic supratherepetic dose)
- Labs that are not completed or followed up on by the physician/CNP in a timely manner can lead to survey tags such as: **755, 757, 759**, and **760** up to and including an **IJ**.

Example of the cascading effect of missed lab requests:

TSH was due 5-1-2020 and not drawn. State surveyors arrive 5-14-2020 for annual survey or a complaint survey. Missing lab is identified. STAT lab request is requested. Results come back not WNL and dose needs adjustment. This scenario has potential for the following tags:

- 755: Lab not drawn when required
- 757: Unnecessary medication given due to the wrong dose being given from 5-1-2020 until lab drawn and reviewed
- 759/760: Free from significant med error

One missed lab can result in multiple tags, non-therapeutic medication use for the resident, and potential adverse effects.

Avoid adverse effects by following up on lab results in a timely manner:

- Abnormal labs should be called to the physician the same day
- PT/INR results should be called to the physician the same day