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

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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 supratherapetuic dose)

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