# Laboratory Errors: Finding the Root Cause

2016 Regional Meeting Lab Breakout

# The Goals of Performing a Root Cause Analysis

- To determine:
  - *What happened*
  - *Why it happened*
  - *What to do to prevent it from happening again*
- Must be impartial, methodical, information driven
- Include all personnel involved in the error for the analysis rather than speculate
- Clearly state the purpose is not to assign blame

# Ask "Why" 5 Times

- Write down the specific problem
- Ask why the problem happened
- Write down the answer
- If the answer doesn't identify the root cause of the problem, ask why again until there is agreement from the team that the root cause has been identified
- Ask what proof is there that the cause exists and is there proof it contributed to the problem

# Ask "Why" 5 Times

# "Why" Technique: Lab Example

Event: The turn-around time for a test was too long

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|---|---|
| **(1) Why** was the TOT too long? | The controls were expired and testing had to be delayed. |
| **(2) Why** were there no non-expired controls? | The order didn't get shipped in time. |
| **(3) Why** didn't it get shipped in time? | The order wasn't place on time. |
| **(4) Why** wasn't the order placed on time? | The person who normally does the ordering was out sick and there was no one designated as the backup. |

Root cause achieved with 4 WHY'S

Reference: Williams et al. *BUMC PROCEEDINGS* 2001;14:154–157

# Categories to Investigate

- Pre-analytical
  - Specimen collection, request forms, processing
- Analytical
  - procedure, reagents, equipment, environment
- Post-analytical
  - Results, interpretation, transcription, reports
- Testing personnel
  - Training, competency, observe performing task

# Corrective Action Plan

- The appropriate corrective action should prevent or minimize the event from recurring.
- Monitor future events