
Reporting of Critical Lab Values

in an Academic Medical Center

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Patient Safety Fellowship



The Team



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Business Case

- Critical lab values influence the treatment the patient receives
- Variations of processes could result in adverse events
- *“Ineffective communication is the most frequently cited root cause for sentinel events. Effective communication that is timely, accurate, complete, unambiguous, and understood by the recipient reduces error and results in improved [patient] safety”.*

(The Joint Commission on Accreditation of Healthcare Organizations, 2008)

Business Case

- There is documented variability regarding who receives critical lab values

(Astion, 2004)

- Nurse: 40% of the time
- Ward clerks: > 30% of the time
- On call or ordering physician: 12% of the time

- Test reordered 66.3% of the time

(Howanitz, Steindel, & Heard, 2002)

- Documented in nurses' notes 75.5% of time

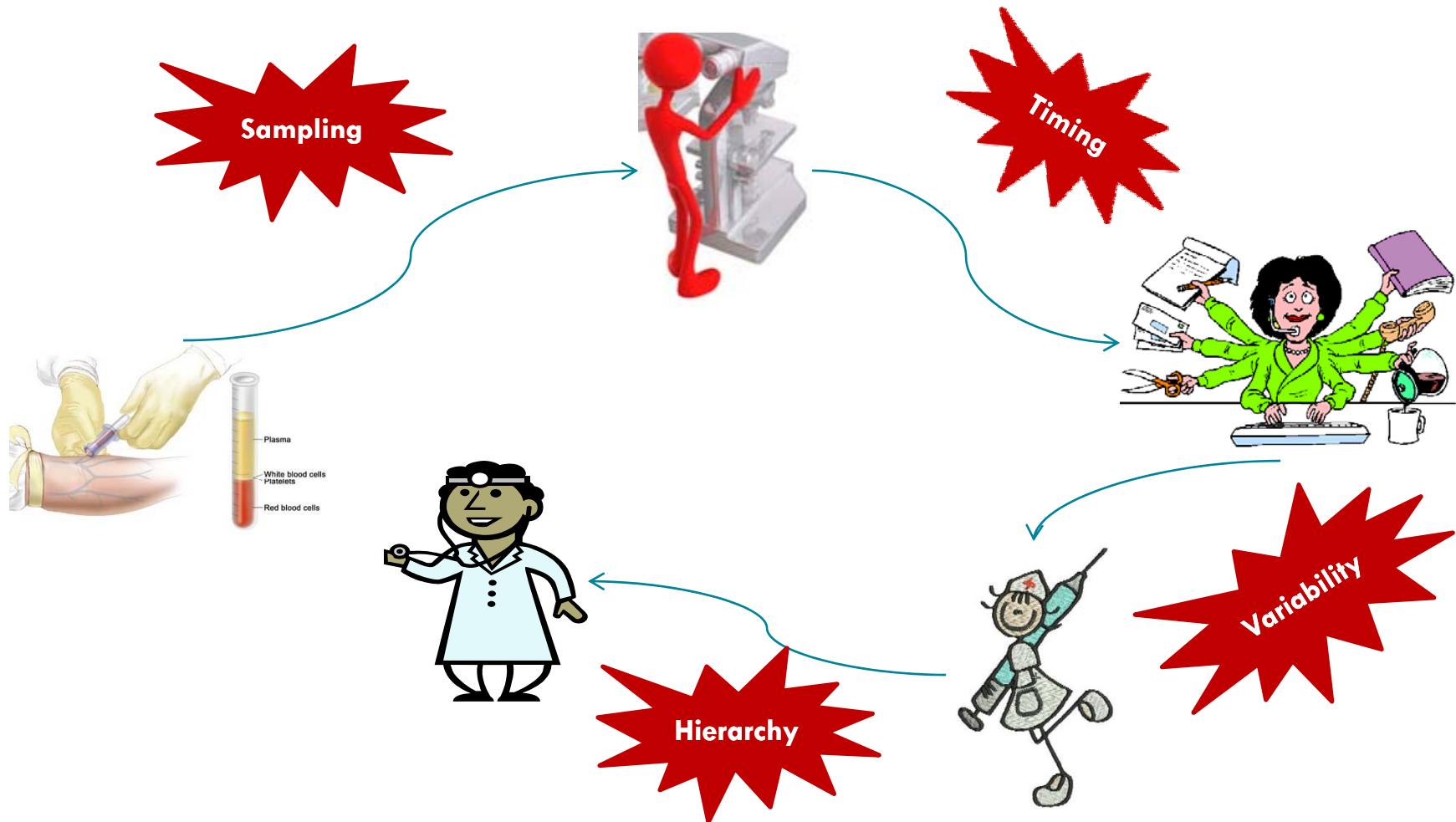
Proposed Goals

- Nursing staff will adhere to standardized procedures for collecting and packaging lab samples 100% of the time in three months
- All information regarding critical lab values will be entered into the database 100% of the time in three months' time

Description of Observation Process

- **Purpose:** To observe the process of collecting, communicating and documenting critical lab values
- Tour of Neurosurgical Intensive Care Unit (NICU), Medical Intensive Care Unit (MICU) and lab specimen receiving area
- Visual observation of related processes
- Interview with the Intensive Care Unit (ICU) charge nurses, physicians and unit secretaries

Current Condition



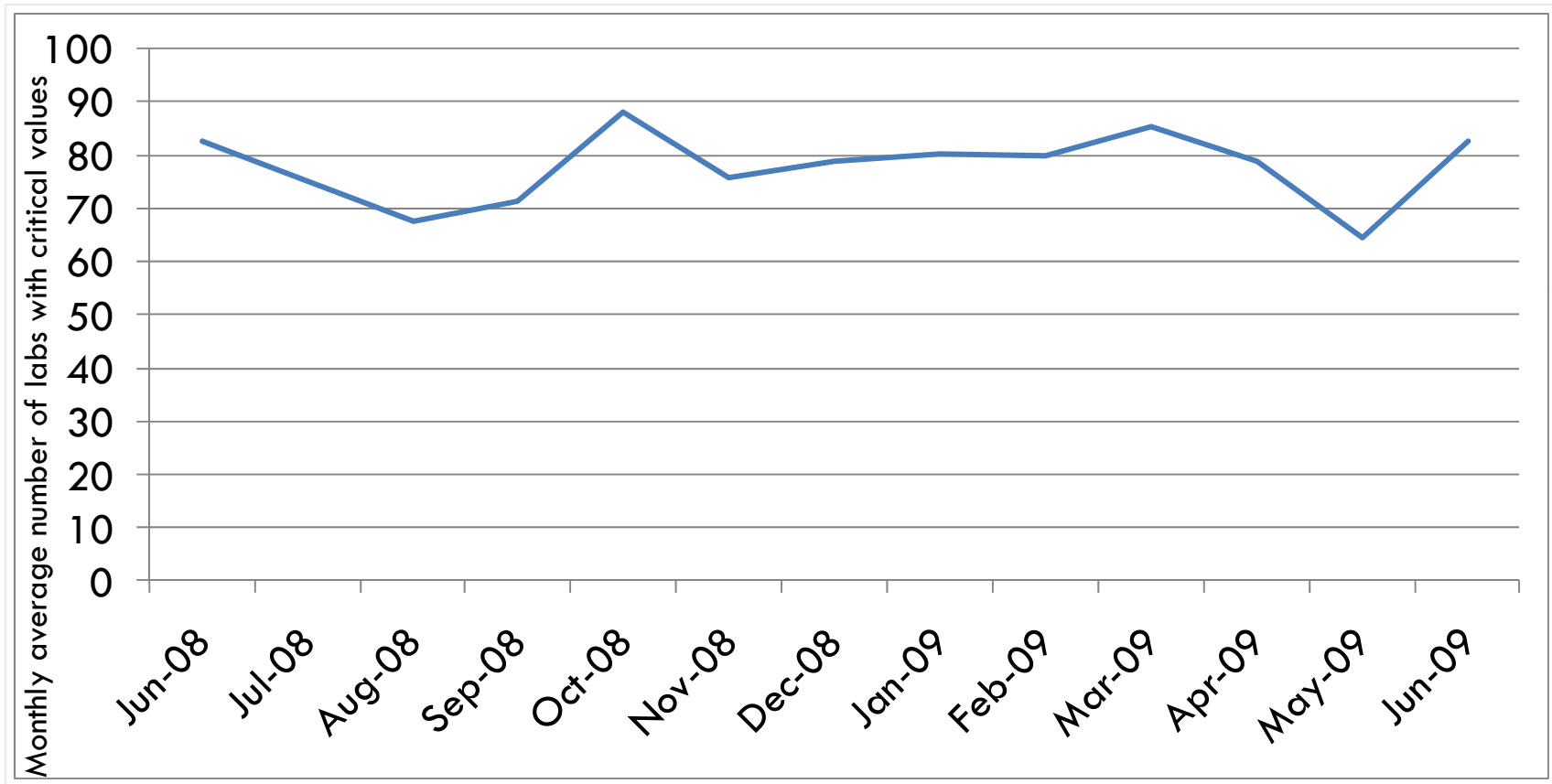
Improper Labeling



Proper Labeling



Current Condition



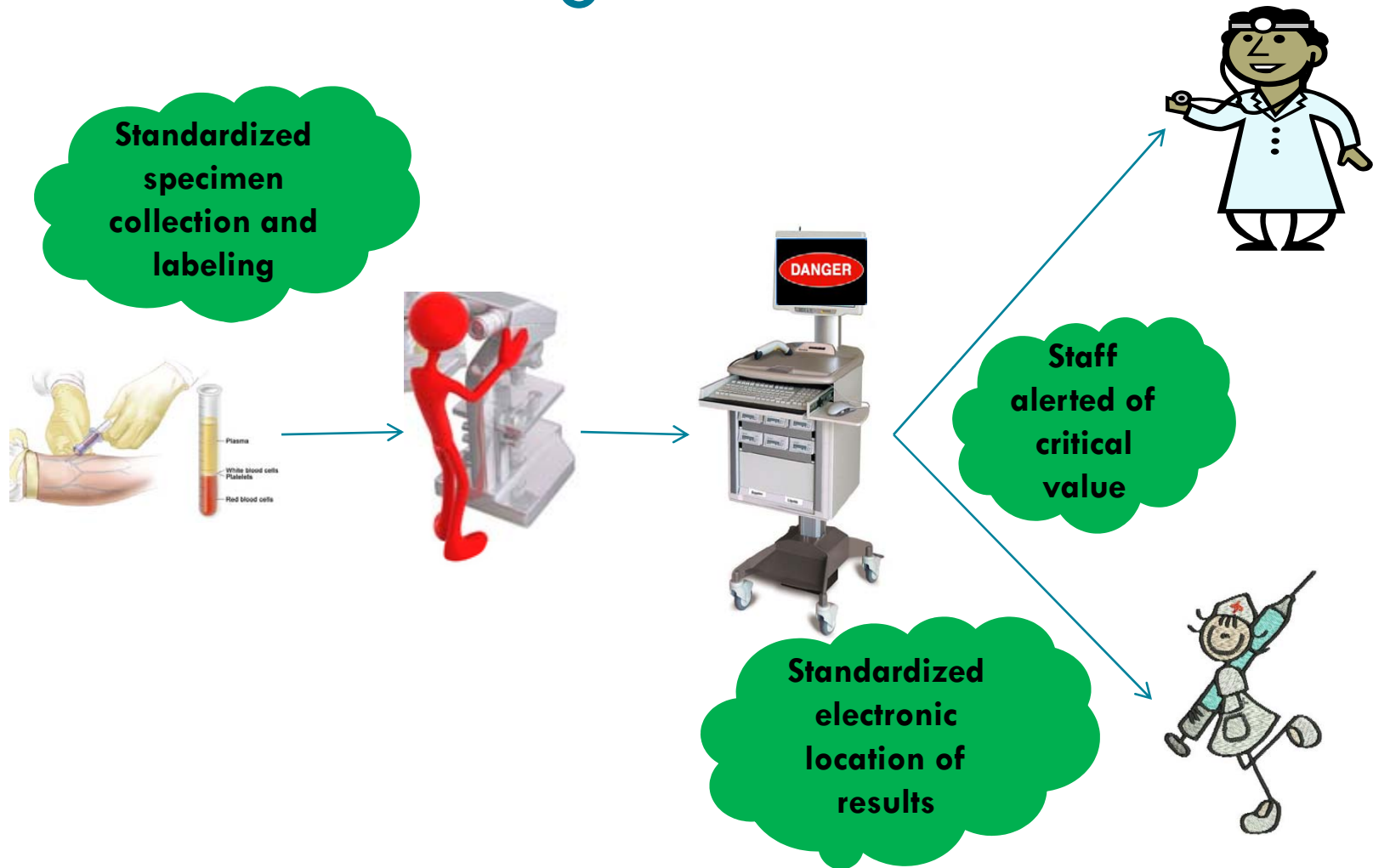
Current Condition

- No standardized process for:
 - Sample collection
 - Documentation of reported critical values
- Lab receives large batches of samples at peak times
- Risk for mistakes when reporting values for more than one patient
- All staff members are not familiar with all lab tests performed

Ideas for Improvement

- Standardize the place where the lab value is documented
- Lab worker may call to alert the staff about the critical value but not the value itself
- Medical staff can check the 'standardized' place for documenting the critical lab values
- Computer systems may be designed in a way that alert the medical staff for the critical lab values
- Label test tubes/visual cues
- Mandatory training sessions

Target Condition



Plan for Proposed Experiment

- Provide monthly educational sessions for staff
- Lab values to be documented in the database
- Critical lab values will be documented in a specific place in red
- This plan will be implemented for three months in the MICU

Plan for Proposed Experiment

- After three months the (appropriate) staff members will be interviewed for feedback
- Interview targeted to report time, effectiveness, mistakes in reporting and employee satisfaction
- The same process is to be implemented in other units after MICU
- After interviewing the staff, if the feedback is positive, formalize and implement the policy throughout the organization

Learning

- Inter-departmental communication is necessary in eliminating silos
- Standardized processes are key to patient safety
- Observation is essential to gain deeper understanding of opportunities for development
- The involvement of frontline employees in developing countermeasures is important
- Continued evaluation is necessary for continuous improvement

Special Thanks

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