Moving Outside the Lab:
Improved Productivity and Safety for Specimen Collection

Case Studies
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Agenda

• Introduction
  – The pre-analytical phase

• Case Studies
  – Phlebotomy
  – Nursing
  – Mixed

• Summary
Specimen Lifecycle

Beyond the four walls of the lab

Laboratory
Has your hospital incurred an adverse event due to a patient mismatch in the last year?

- Yes: 19%
- No: 81%

**For this survey’s purposes, “adverse” is defined as: a negative consequence of care that results in unintended injury or illness.**
Pre-analytical phase

• PPID and Safety: NPSG 01.01.01

(i) Use at least two patient identifiers when providing care, treatment and services

(ii) Label containers used for blood and other specimens in the presence of the patient
– Applies to: Ambulatory, Behavioral Health Care, Critical Access Hospital, Home Care, Hospital, Lab, Long Term Care, Office-Based Surgery

• Bedside lab-ready labeling
Case Study 1 – Phlebotomy - Before

Background:

• 600 bed hospital
• Nationally ranked
• 30,000 admissions per year

Problem:

• Fast turnover of phlebotomists
• Scheduling needed
• TJC PPID coincided with unfavorable internal quality report
  – 7 in 1,000 (average for CP is .92 in 1,000*) mislabeled specimens
  – In addition to mislabeled tubes:
    • tubes arriving without requisition
    • requisition arriving without the tube
    • tubes that were not labeled

Case Study 1 – Phlebotomy - After

Solution

• Technology?
  – Yes, IF you have
    • Good **Connectivity**, appropriate firmware, good choice of hardware …

• Partnerships

• Training

Result and lessons learned

• Hardware – choose carefully
• Train the trainer
• 2 – 4 errors per month

• Next steps
  – Root cause
  – Rainbow in the ED
Case Study 2 – Nursing - Before

Background:

- Multi-hospital system
- 10,000 employees
- 6,000,000 lab tests per year

Problem:

- Mislabling issue – for 10 years!
  - 300 labeling errors per month
    - 0.06% or .6 in 1,000 (average for CP is .92 in 1,000*)
    - MOST were patient ID (wrong label on wrong blood; batch printing)
- Nursing hurdles
  - Change management

An error occurred while displaying the previous error.
Case Study 2 – Nursing - After

Solution
• 2010: new patient-focused care model
  – Step one - Lean and Six Sigma (-50%)
  – Step two - Training and socialization
  – Step three - Technology (5 years prior – Med Admin)

Result
– Used in ICU, labor and delivery, outpatient draw centers, ED
– Immediate decrease in errors from 8 – 10 per month to 2 per month
– Technology only sustains what already must be in place
– Nursing leadership vital
– Hardware support comfort factor – it CAN be done
– Next steps:
  • Micro needed
  • Mobility for outpatients
  • IR - new challenges!
Case Study 3 – Mixed Draws - Before

• Background
  – Large network of academic, community and specialist hospitals
  – Top 20 ranked
  – One location – HIMSS Stage 7 in EHR implementation

• Issues
  – TAT targets
  – Labeling!
    • Slowing down the laboratory
    • Nursing
      – Integration REQUIRED: device fatigue…
      – But this is a lab process!
  • Safety – draw responsibility
Case Study 2 – Mixed Draws - After

• Solution
  – One size does not fit all
    • Nurses – WOWs
    • Phlebotomy – Handhelds
    • Locks
  – ‘Single Sign On’
    • Internal IT worked with MS to build Sentillion Bridge
    • LDAP
    • SQ and Epic
  – ‘Batch’ monitoring of hardware (Soti)
  – Designated draw system

• Result
  – Single sign on with badge, tap and go with RFID reader for 800 nurses
  – 100 phlebotomists
  – Improved TAT by 15 – 30%; some remaining errors
  – Next steps
    • Mobility and better outpatient support
    • Palm Vein Pattern readers
HIS integration
Summary

• ‘Danger’ areas
  – PPID
    • Connectivity, connectivity, connectivity
  – Hardware
    • They are NOT all equal
  – Culture shifts
    • Change management
    • Cultural ownership
    • Prove concept
  – Partnerships
    • Technology support up front
      – Let them do the heavy lifting
    • Demand more of your vendors!
      – Let them do the heavy lifting!
Summary

IT Management

Change Management

Zero Errors = increased safety, decreased TAT
Questions?
Thank you!

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Introduction

Using case studies, and a ‘before’ and ‘after’ analysis, the purpose is to outline the extent to which the lab can benefit from owning the pre-analytical phase in terms of increased efficiencies and increased safety, whether their specimens are collected by nurses or phlebotomists.

Key Learning

• Laboratory’s ability to impact its business by focusing on the pre-analytical phase.
• Lessons learned - what to do and what to avoid when implementing a new patient identification and collection workflow.
• Basic integration and usability that can lead to successful technology adoption by non-lab personnel.

Attendees Will

• Attendees will learn how to implement a collection process with simple integration points between their collection technology and their enterprise systems that enhances adoption, turnaround time efficiencies, and avoids labeling and/or patient identification errors.