Decreasing Lag Time for Ward Collect Lab Draws

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TEAM

• PHYSICIANS
  Hospitalist - Audrey Tio, MD
  Chief / Medical Service – Jan Patterson, MD
  Chief Resident – Joanne Waltman, MD

• NURSING
  Assoc Chief of Nursing – Marjory Olsen
  Nurse Organizer – Jonell Garza, RN

• SUPER TECHS
  Julius Adams
  Sara Johnson
  Super Tech Supervisor – Leonor Casto, RN

• MAS (Medical Admin Service) CLERKS
  Esther Avitia

• TECH/STATISTICAL SUPPORT
  Wayne Fischer, MS, PhD
LIST OF CUSTOMERS

• PATIENTS

• PROVIDERS

• NURSING

• HOSPITAL ADMINISTRATION
AIM STATEMENT

To decrease lag time from lab order to collection for ward collect lab orders to 60 minutes and overall LOS by 0.5 days on 5A General Medicine ward over a 4 month period.
MEASURES

• Unable to get electronically generated list of ward collect labs by order time and collection time.

• Manual data collection completed assessing approx 100 data points within 3 time periods.
PRE INTERVENTION LAG TIME

Baseline

Study start

UCL = 789.3
CL = 214.3
Target = 60
LCL = -360.7

Date

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LAG TIME BY TIME OF DAY

Number of Orders

Time Intervals
- 0-60 mins
- 61-180 mins
- 181-360 mins
- > 360 mins

Time of Day
- 12MN-8AM
- 8AM-12PM
- 12PM-4PM
- 4PM-8PM
- 8PM-12MN

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WHAT’S GOING ON?

• Only two scheduled lab draws 5AM and 11:15AM

• All other labs are ward collect (collected by floor nurse or Super Tech)

• Process dependent on many people factors with variable availability
PROCESS FLOW - Pre Intervention

MD orders lab (Must select ward collect) → Lab auto prints to floor printer

Is there a clerk? → Clerk must recognize order has printed

Nurse must recognize order has printed → Stat lab?

Leave for SuperTech to draw

Super Tech comes to floor with supplies → Is patient available?

Super Tech notifies nurse and awaits patient return

Does nurse have time to draw? → Page SuperTech to draw

RN attempts to draw blood

Blood draw successful? → Any more patients needing blood draw?

Blood transported to lab via SuperTech or escort

Go to next patient and batch blood

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CAUSE & EFFECT DIAGRAM

Ordering Ward Collect Labs

Nursing
- High turnover
- Variable training
- Staff shortage
- High patient:nurse ratio

MAS
- No clerks at night
- Incorrect urgency
- Some wards no Clerk during day

Patients
- Difficult access
- May not be in room
- Lab cancelled; No notification

MDs
- Incorrect order

No direct notification To collector
- Collector must write Collect/start time
- No dedicated printer
- For order

IT/Equipment
- Phlebotomy supplies Not readily available
- Batch collections Per ward - busy

Supplies

Methods

Delayed ward Lab collections

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Along Came *The Joint Commission*

- June 13-17
- A few RFI’s
- Progress on this project stalled......
PROJECT REVIVED!

• Instead of requested broadcast pagers, text pagers were acquired.

• Protocol for reaching Super Techs were posted in all Medicine team rooms.

• Date of Intervention: July 3rd
POST INTERVENTION LAG TIME

Baseline       Study start       Intervention

Time (Minutes)

Date

UCL=268.1
CL=78.1
Target=60
LCL=-112.0

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RESULTS

• Decreased average time to lab collection (214 minutes to 78 minutes)

• Variability Decreased from 1150 minutes to 380 minutes.

• More streamlined process

• Less provider frustration

• Less duplication of work
# RETURN ON INVESTMENT

## We put in…
- 5 Numeric pagers changed to text
- Pager cost differential $40/pager
- Service cost differential $3/pager/month
- Start-up cost = $200
- Yearly cost = $180

## We hope to achieve…
- Decreased average LOS of 0.5 days/patient
- Approx 400 medicine admissions/month
- Proposed decrease of 2400 hospital bed days/year
- $4,094,400 savings/year

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WHERE ARE WE GOING?

Other possible interventions:

• Increased Phlebotomy hours
• Dedicated work space and dispatcher
• Overnight coverage for Phlebotomy or Super Techs
CONCLUSIONS

• Baseline process was extremely complicated and involved too many people.

• Critical evaluation of the process enabled us to identify simple solutions that made a big difference.

• Seeing the variability in the SPC chart before and after intervention showed surprising but reassuring results.

• Knowledge of basic tools was integral to visualizing the goal and achieving the aims.
QUESTIONS?