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**
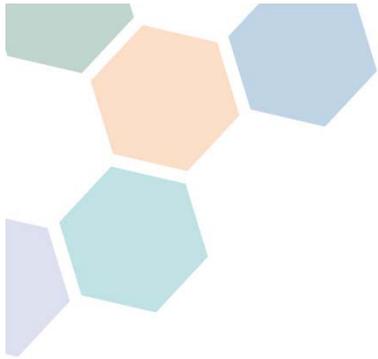 **Esther Avitia**

- **TECH/STATISTICAL SUPPORT**
  Wayne Fischer, MS, PhD

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LIST OF CUSTOMERS

- **PATIENTS**

- **PROVIDERS**

- **NURSING**

- **HOSPITAL ADMINISTRATION**

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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.
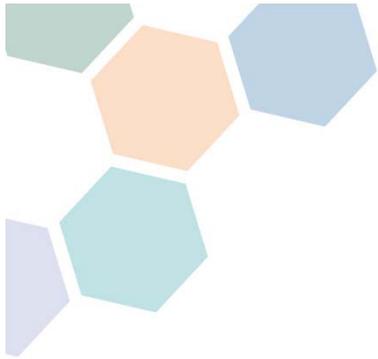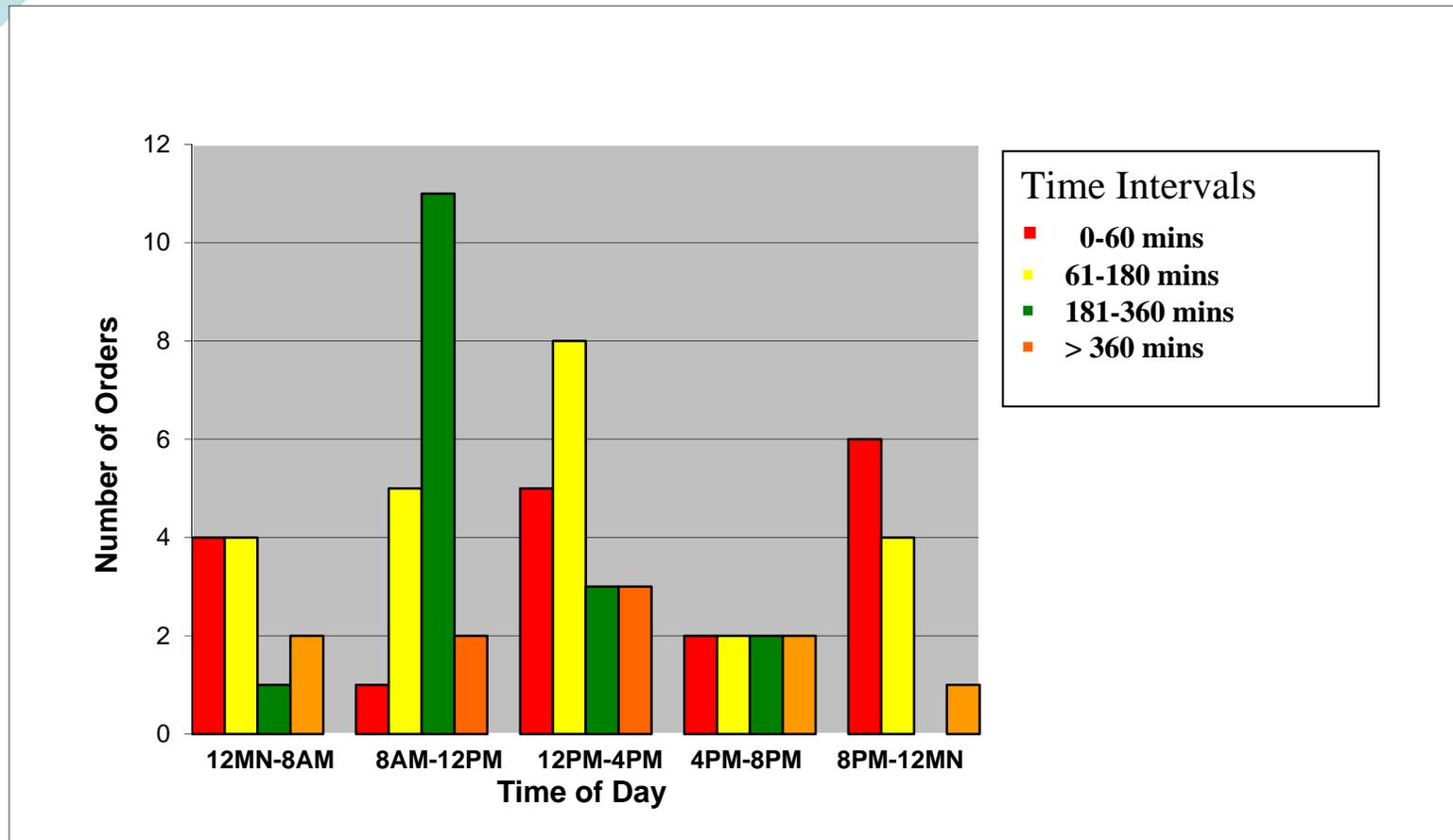
MEASURES

• **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.**
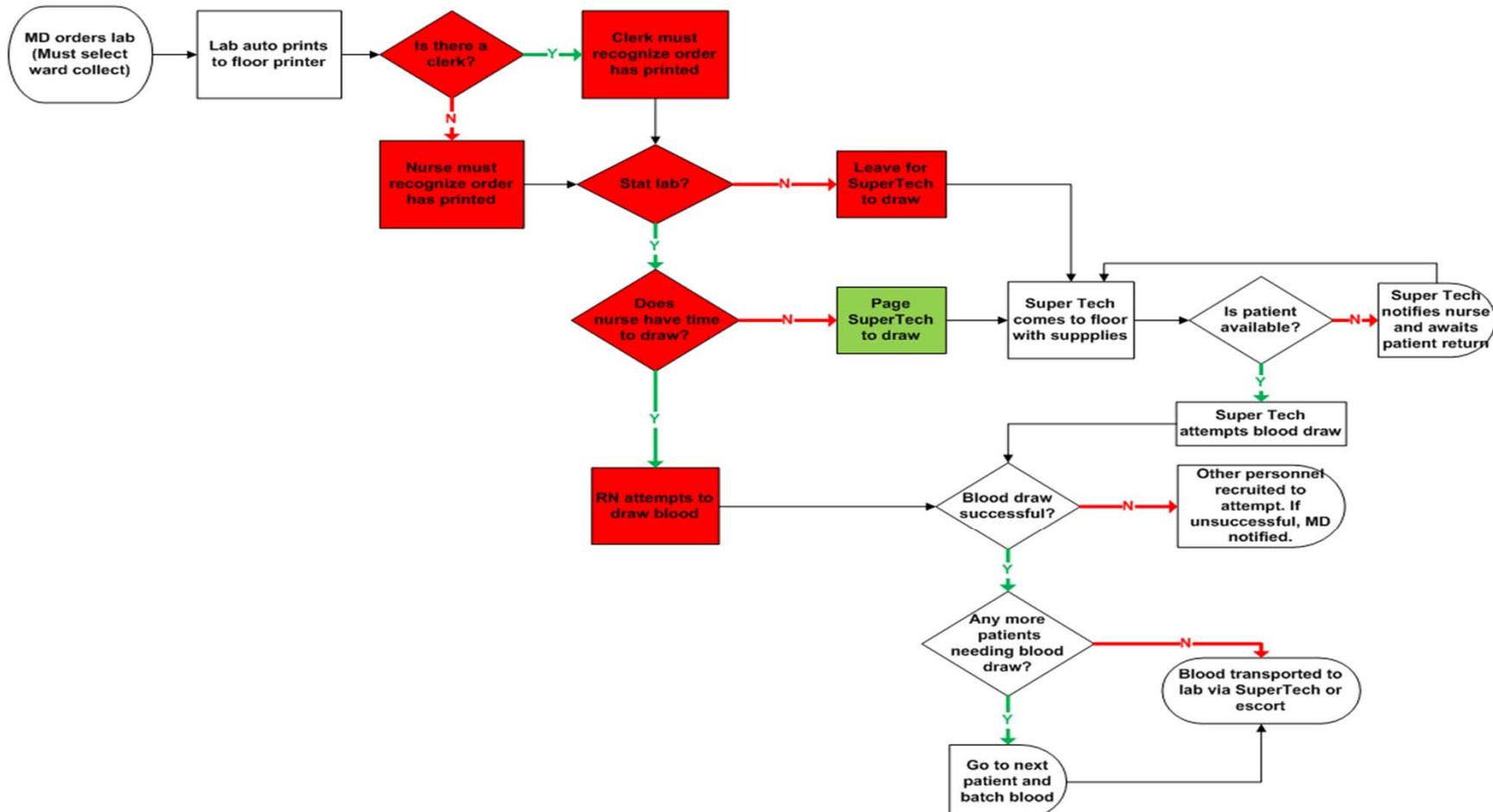
PRE INTERVENTION LAG TIME
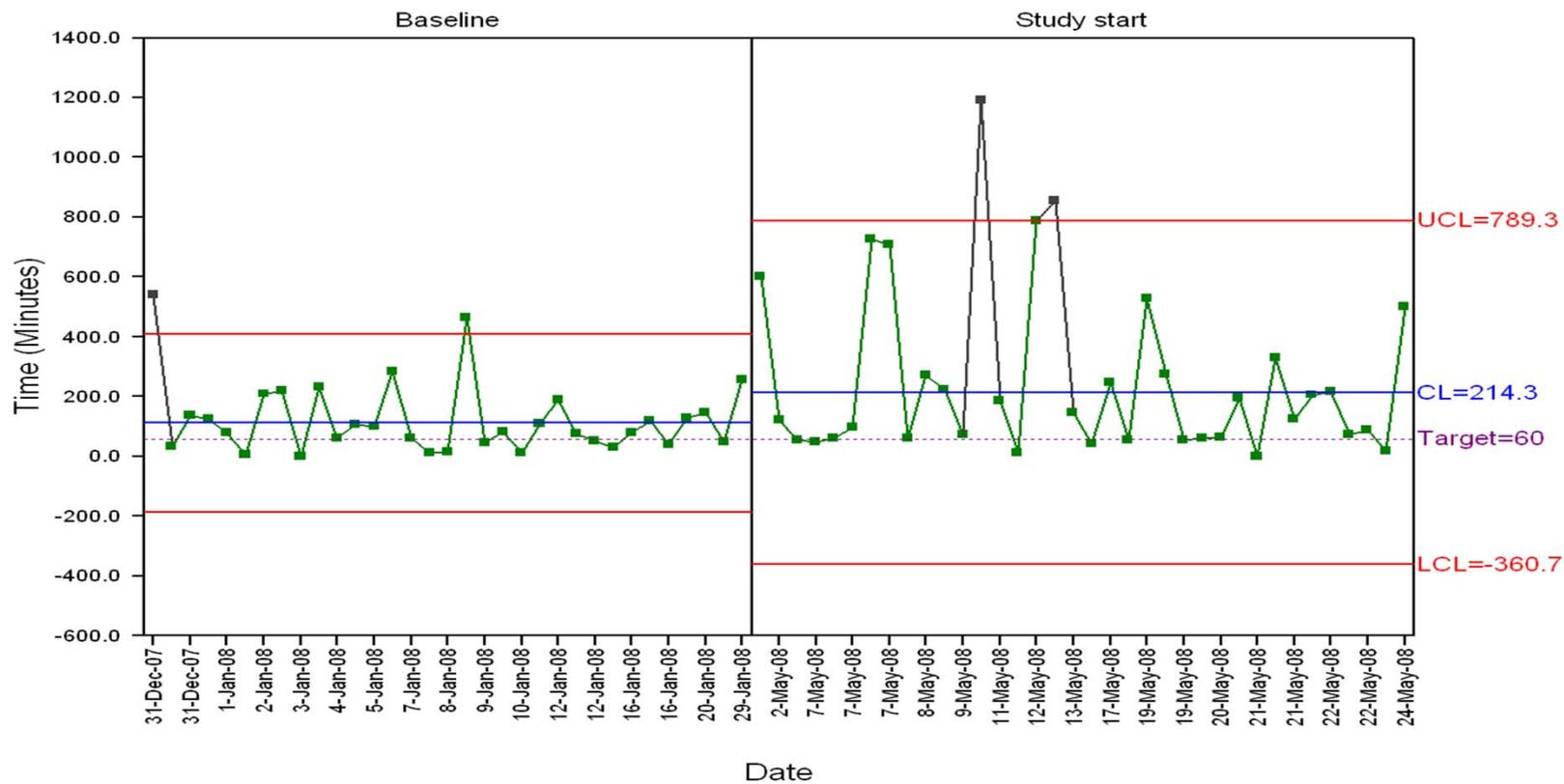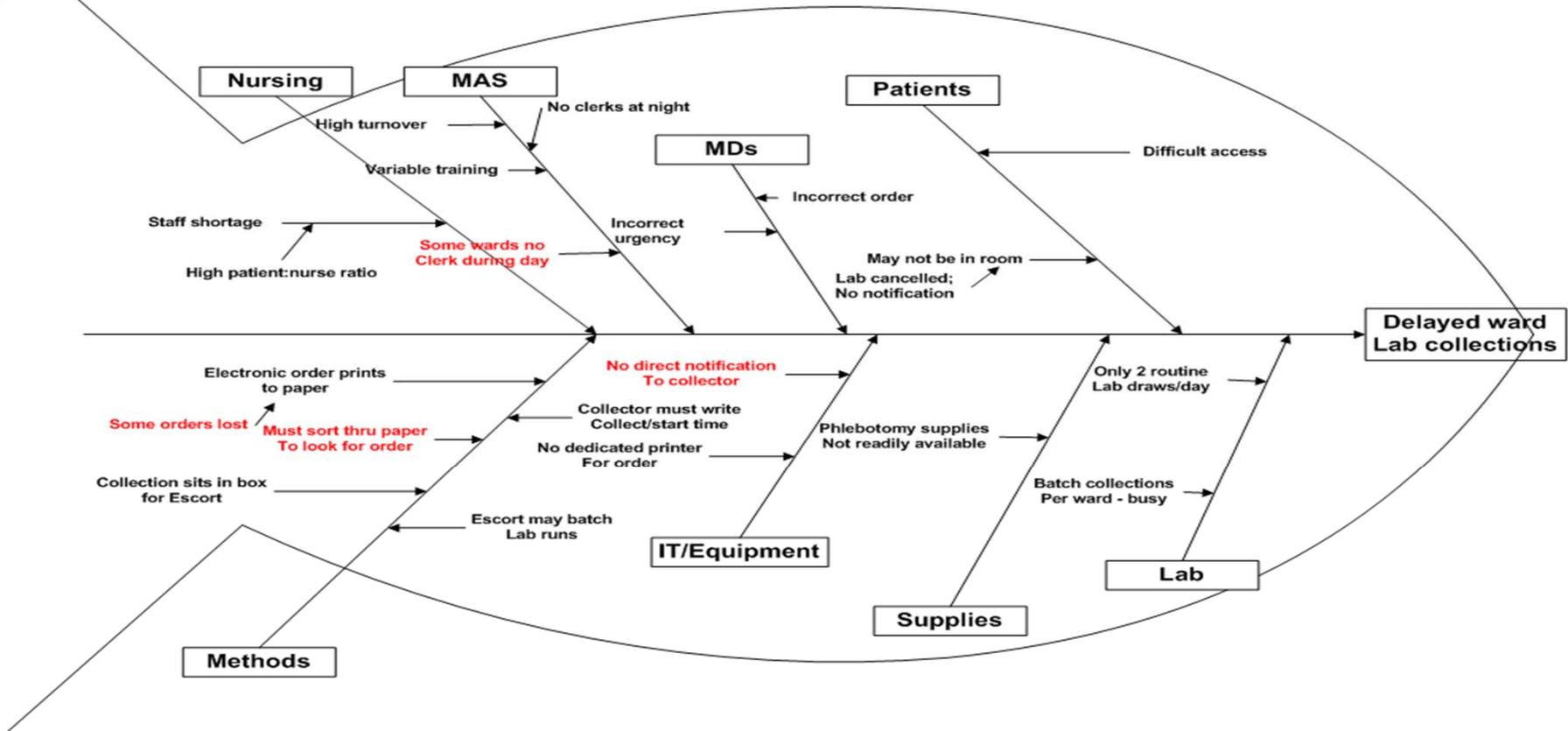
LAG TIME BY TIME OF DAY

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

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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
- Some wards no Clerk during day
- Incorrect urgency

MDs
- Incorrect order

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

Methods
- Electronic order prints to paper
- Some orders lost
- Must sort thru paper To look for order
- Collection sits in box for Escort
- Escort may batch Lab runs

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

Supplies
- Phlebotomy supplies Not readily available

Lab
- Only 2 routine Lab draws/day
- Batch collections Per ward - busy

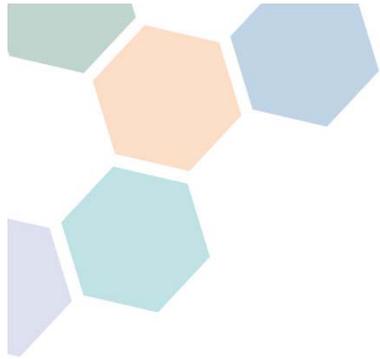**Delayed ward Lab collections**

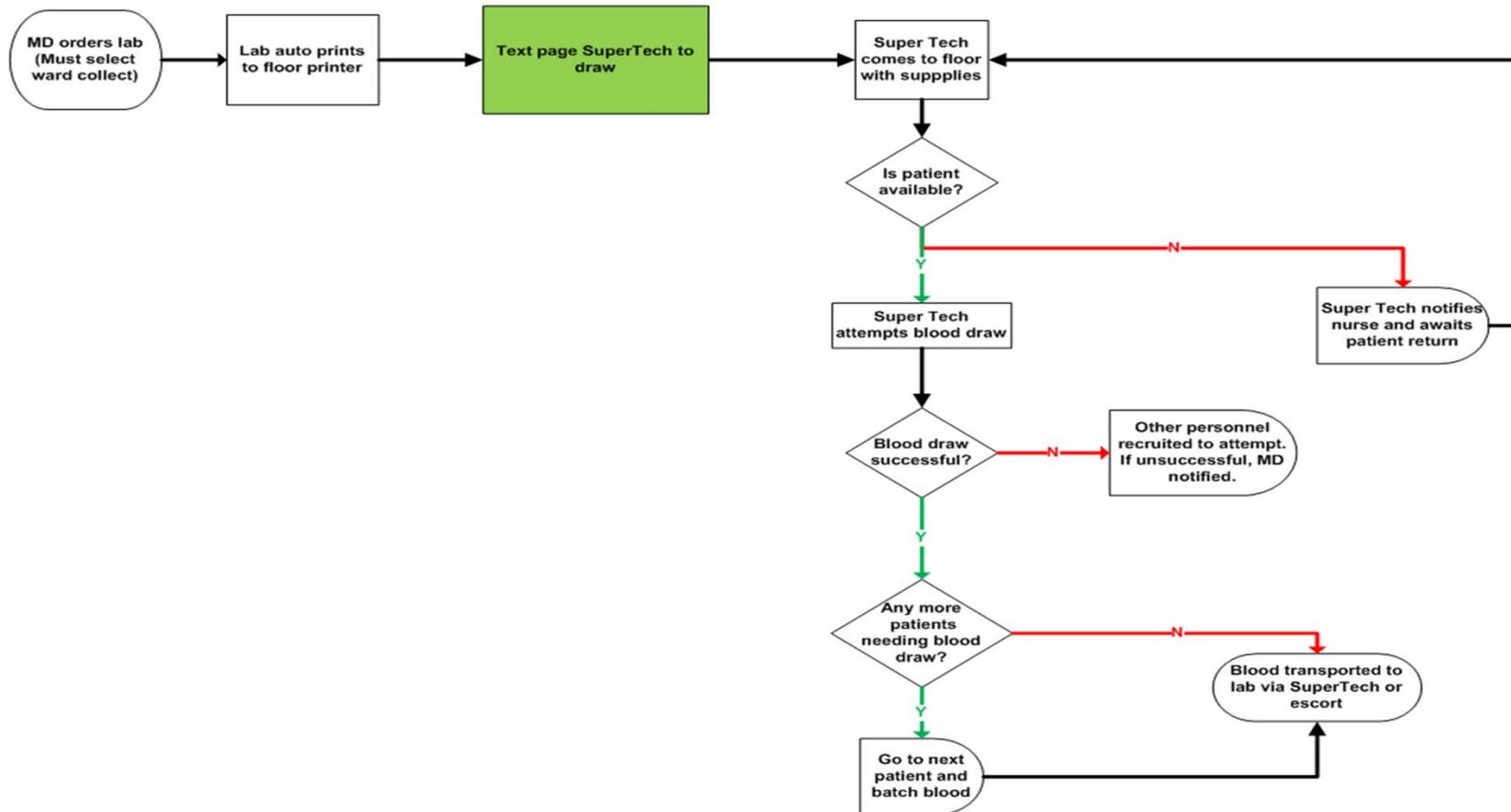# Along Came *The Joint Commission*

- 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**

PROCESS FLOW - Post Intervention

MD orders lab (Must select ward collect) → Lab auto prints to floor printer → Text page SuperTech to draw → Super Tech comes to floor with suppplies

Is patient available?
- Y → Super Tech attempts blood draw
- N → Super Tech notifies nurse and awaits patient return

Blood draw successful?
- N → Other personnel recruited to attempt. If unsuccessful, MD notified.
- Y → Any more patients needing blood draw?

Any more patients needing blood draw?
- N → Blood transported to lab via SuperTech or escort
- Y → Go to next patient and batch blood

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POST INTERVENTION LAG TIME

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…	We hope to achieve…

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?

<u>Other possible interventions:</u>

- **Increased Phlebotomy hours**

- **Dedicated work space and dispatcher**

- **Overnight coverage for Phlebotomy or Super Techs**

PERTINENT POINTS FROM LITERATURE

Blaha, Jennifer. (2007, March 28). Lean Delivers Faster Turnaround Time in Hospital Lab. *iSixSigma.com*. Retrieved July 22, 2008, from http://healthcare.isixsigma.com/library/content/c070328a.asp

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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.

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QUESTIONS?

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Thank You