ASCO's Quality Training Program

Project Title: Total Lab Times
Presenter's Name: Marshall T Schreeder,MD
Michelle Brown,CRNP, Yvonne Lee
Institution: Clearview Cancer Institute

Date: March 6, 2014

Institutional Overview

- 3 Locations within a 30 mile radius
- Oncology/Hematology
- Community based outpatient clinic
- 12 Oncologists
- 13 Mid-Level Providers
- Average patient volume for lab at all locations: 355 per day (for purpose of this project we are using Main location only with an average patient lab volume of 250 per day.)

Problem Statement

- Over the past 6 months, patient wait times are continually increasing in the lab with a current average of 55% of patients having greater than a 20 minute total lab time. Increased total lab times lead to increased delays to see the Providers and receive treatment. Several factors have contributed to this:

  - In the last four years we have not increased the number of phlebotomist, however, we have grown by 9-11% annually in patient volume.

  - Over scheduling patients in am slots.

  - Lab only draws not being scheduled in appropriate time slots.

  - Employees' work and lunch schedules.

  - Stocking Times.

Team Members

Team Leader:
* Marshall T. Schreeder, MD

Team Members:
* Administration – Michelle Brown CRNP, Yvonne Lee
* Case Management – Michelle Brown
* Lab Management – Susan Eva, Marsha Mason
* Schedule Management – Andrea Evans

Project Sponsor:
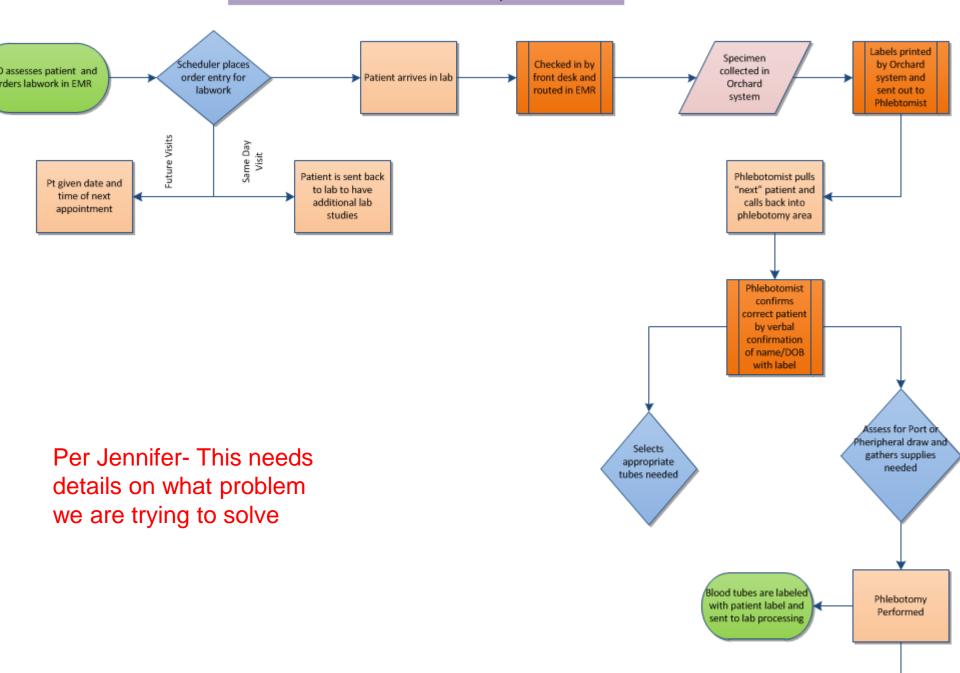* Marshall T. Schreeder, MD
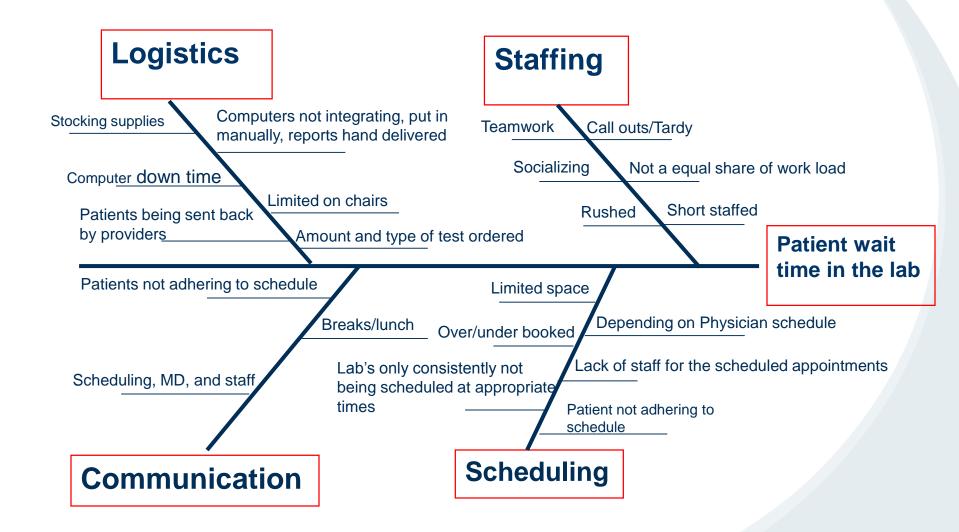
Patient:
* LV

Improvement Coach:
* David Bivens

Clearview Cancer Institute Laboratory Flow Process

Per Jennifer- This needs details on what problem we are trying to solve

Cause & Effect Diagram

Logistics

Stocking supplies

Computers not integrating, put in manually, reports hand delivered

Computer down time

Limited on chairs

Patients being sent back by providers

Amount and type of test ordered

Staffing

Teamwork   Call outs/Tardy

Socializing   Not a equal share of work load

Rushed   Short staffed

Patient wait time in the lab

Patients not adhering to schedule

Limited space

Breaks/lunch   Over/under booked   Depending on Physician schedule

Scheduling, MD, and staff

Lab's only consistently not being scheduled at appropriate times

Lack of staff for the scheduled appointments

Patient not adhering to schedule

Communication

Scheduling

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Diagnostic Data

Data dates: 10/21/13, 10/24/13, 11/18/13, 11/21/13, 12/9/13, 12/12/13, 1/13/14, 1/16/14

Total time in lab

Patients per Phlebotomist

Phlebotomist hours

Patients per time slot

Patient surveys

Diagnostic Data

10/21/2013	Collector	First Pt.	Last Pt.
	Heard, Adam	7:06 AM	4:02 PM
	Hill, Ashley	7:07 AM	3:26 PM
	Jasper, Tiajuana	8:26 AM	3:49 PM
	Imaging	7:05	3:15 PM

In	Lunch	Out	Total Hours
7:00	11:00 -11:30	4:15	8:45
7:00	12:15 - 1:15	4:00	8
8:30	11:45 - 12:30	5:15	8

Patients per Phlebotomist

Total Pt's
82
96
64
24

Lab Only Draws

21-Nov

Before 2:30	6
Schedulers	5
Nurses	1

9-Dec

Before 2:30	15
Schedulers	11
Nurses	4

Current total lab time

9-Dec	CK-IN	RT	Total Time
7:00	6:58	7:20	22
7:00	7:05	7:16	11
7:00	6:48	7:25	37
7:10	7:49	8:02	13
7:20	6:59	7:20	21
7:30	7:21	7:43	22
7:30	7:30	7:46	16
7:30	7:08	7:25	17
7:40	7:12	7:34	22

9-Dec	
10 min. or less	15
11-20 minutes	68
21-30 minutes	58
31-40 minutes	77
41-50 minutes	28
51-60 minutes	1
61 min. or more	4
Not RT	5

Nov 18th	
10 min. or less	22
11-20 minutes	76
21-30 minutes	61
31-40 minutes	34
41-50 minutes	38
51-60 minutes	19
61 min. or more	2

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Patient Quote

- *"As a cancer patient, I know that my first stop is always the lab and if there is a delay, it will directly correlate to the length of my visit with my physician. When these delays occur, it's a chain reaction for the rest of my day. I have missed meetings at my office and at times, had to re-schedule other appointments. If I had another medical appointment scheduled, that appointment is often re-scheduled for another day which causes further issues at my office."*

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Aim Statement

- For patients having lab work performed, our aim is to have 80% of them have less than 20 minutes total time spent in lab by March 1, 2014.
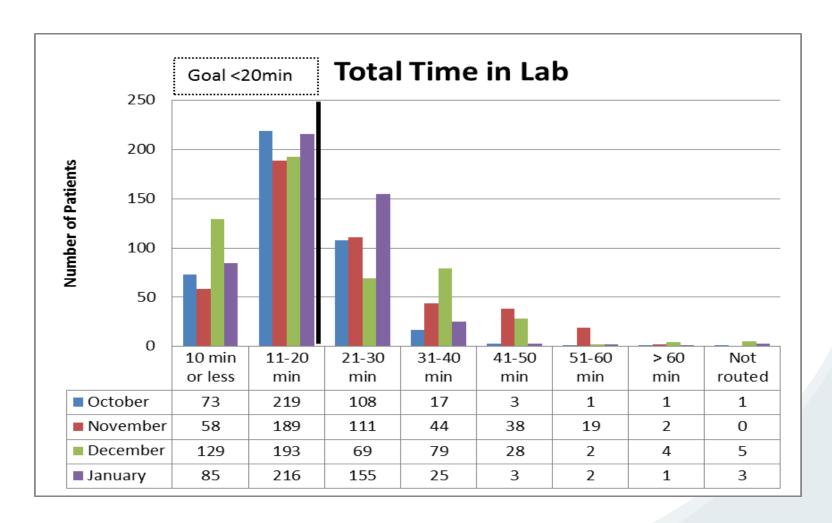
Outcome Measures

- **Measure:** % of patients that are scheduled in lab area with less than a 20 minute wait time.

- **Patient population:** All patients in practice needing lab work

- **Calculation methodology:** Numerator: Number of patients within time period
- Denominator: total number of patients.

- **Data source:** Onco EMR audit trail

- **Data collection frequency:** First three Monday's and Thursday's in February data will be entered into an excel spreadsheet on a weekly basis.

- **Data quality (any limitations):** Requires lab personnel to route the patient correctly in Onco EMR.
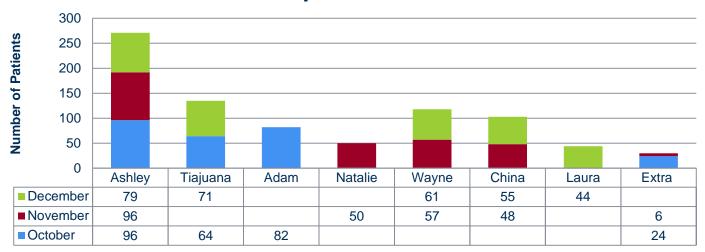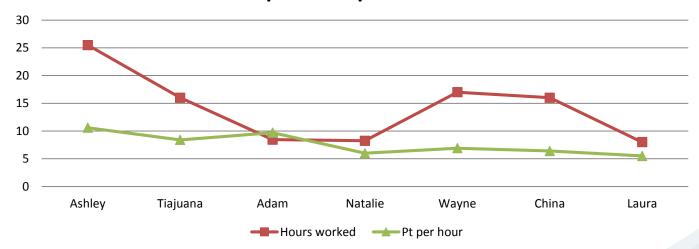
Baseline Data

Total Time in Lab

Goal <20min

Number of Patients

	10 min or less	11-20 min	21-30 min	31-40 min	41-50 min	51-60 min	> 60 min	Not routed
October	73	219	108	17	3	1	1	1
November	58	189	111	44	38	19	2	0
December	129	193	69	79	28	2	4	5
January	85	216	155	25	3	2	1	3

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Patients per Phlebotomist

	Ashley	Tiajuana	Adam	Natalie	Wayne	China	Laura	Extra
■December	79	71			61	55	44	
■November	96			50	57	48		6
■October	96	64	82					24

Patients per hour per Phlebotomist

■Hours worked ▲Pt per hour

13

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Prioritized List of Changes (Priority/Pay-Off Matrix)

	Easy	**Difficult**
High	Communication between scheduling and lab staff Change staff schedules to better match patient demand Staff not taking a equal share of the workload	Implement scheduling rules to reduce over-booking and better fill in under-booking Staff to patient ratio Appointments dependent on physician schedule
Low	Stocking time	Amount and type of test being ordered

Impact

Ease of Implementation

PDSA Plan (Tests of Change)

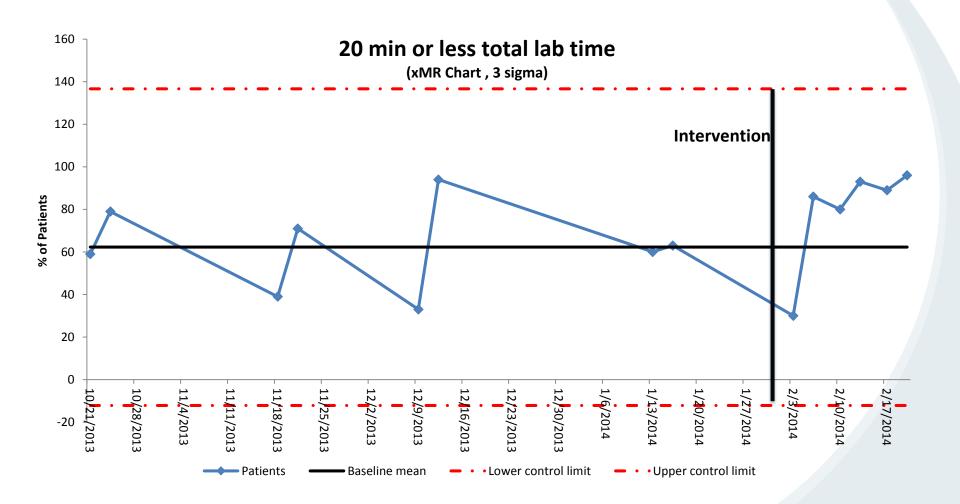| Date of PDSA cycle	Description of intervention	Results	Action steps
1/16/2014	Met with Susan and Marsha to review findings and to discuss options.	A new part time employee Stagger lunches Stock in the afternoon	Remind Employees periodically and continue to collect and monitor data
1/17/2014	Spoke to Andrea about lab's only being scheduled in the correct slots.	Implement a template in the EMR.	Remind Employees periodically and continue to collect and monitor data

Materials Developed

LAB			LAB SCHEDULING TEMPLATE					
7:00 AM						12:10 PM		
7:10 AM						12:20 PM		
7:20 AM						12:30 PM		
7:30 AM			Labs with any other activity			12:40 PM		
7:40 AM						12:50 PM		
7:50 AM						1:00 PM		
8:00 AM			Lab only time.			1:10 PM		
8:10 AM						1:20 PM		
8:20 AM						1:30 PM		
8:30 AM						1:40 PM		
8:40 AM						1:50 PM		
8:50 AM						2:00 PM		
9:00 AM						2:10 PM		
9:10 AM						2:20 PM		
9:20 AM						2:30 PM	LAB ONLY	
9:30 AM						2:40 PM	LAB ONLY	
9:40 AM						2:50 PM	LAB ONLY	
9:50 AM						3:00 PM	LAB ONLY	
10:00 AM						3:10 PM	LAB ONLY	
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11:30 AM						4:40 PM	LAB ONLY	
11:40 AM						4:50 PM	LAB ONLY	
11:50 AM						5:00 PM	LAB ONLY	
12:00 PM								

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Change Data

20 min or less total lab time
(xMR Chart , 3 sigma)

Conclusions

- Data collected in month of February showed improvement in total lab time. February average total time in the lab was 15 minutes.

- Staff states they feel less rush with the new staffing schedules.

- The scheduling template that has been implemented is more difficult for the schedulers to use, but has already made a difference in total time in lab area for patients

Next Steps/Plan for Sustainability

- Continue to collect and monitor data.

- Discuss data results with staff quarterly.

- Monitor adherence to scheduling guidelines developed.

- Facilitate discussions among staff in both lab and scheduling departments to offer suggestions for continued improvements.

Total Time in the Lab

AIM: For patients having lab work performed, our aim is to have 80% of them have less than 20 minutes total time spent in lab by March 1, 2014.

INTERVENTIONS:
- Hired Part Time Phlebotomist
- Adjusted staff schedules to meet times of highest patient volume
- Developed a scheduling template to avoid over booking and for appropriate booking of lab only draws.
- Adjusted stocking times to the least busiest time of day

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CRNP, Yvonne Lee
Case Management – Michelle Brown
Lab – Susan Eva, Marsha Mason
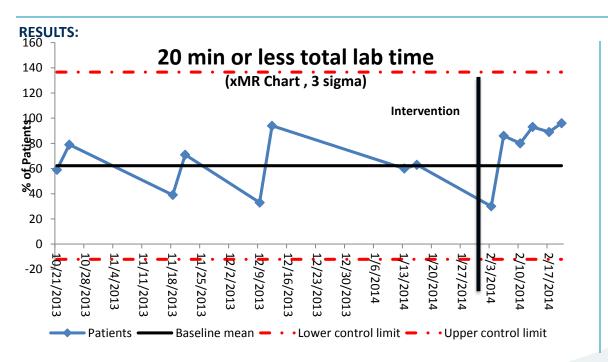Scheduling– Andrea Evans
Project Sponsor:
Marshall T. Schreeder, MD
Patient:
LV
Improvement Coach:
David Bivens

RESULTS:

20 min or less total lab time
(xMR Chart , 3 sigma)

CONCLUSIONS:
- Data collected in month of February showed improvement in total lab time. February average total time in the lab was 15 minutes.
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- The scheduling template that has been implemented is more difficult for the schedulers to use, but has already made a difference in total time in lab area for patients
- **NEXT STEPS:** Continue to collect and monitor data.
- Discuss data results with staff quarterly.
- Monitor adherence to scheduling guidelines developed.
- Facilitate discussions among staff in both lab and scheduling departments to offer suggestions for continued improvements