



How Lean Helped Us Create the Ideal PSC Layout and Workflow, and Lessons Learned as We Build and Open Each One

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November 2, 2010

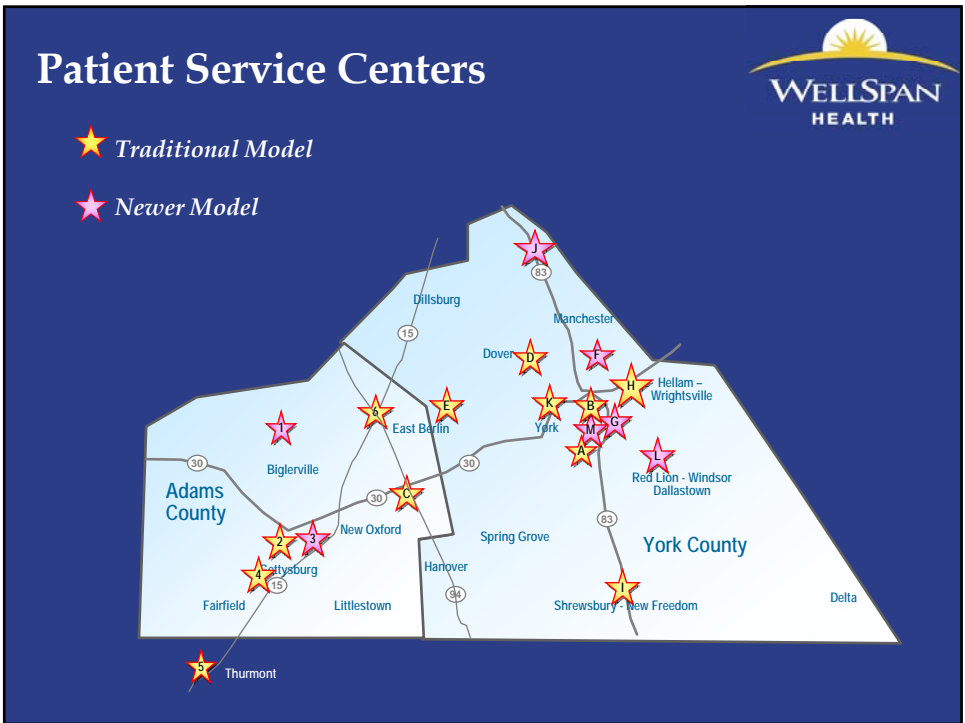


Objectives

Methods to increase productivity

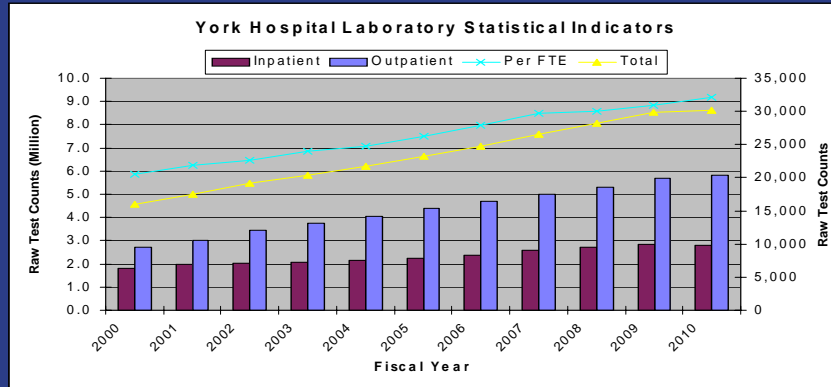
Use of Standard Work and Standard Design

Development of a Facility Strategy to
propagate successes

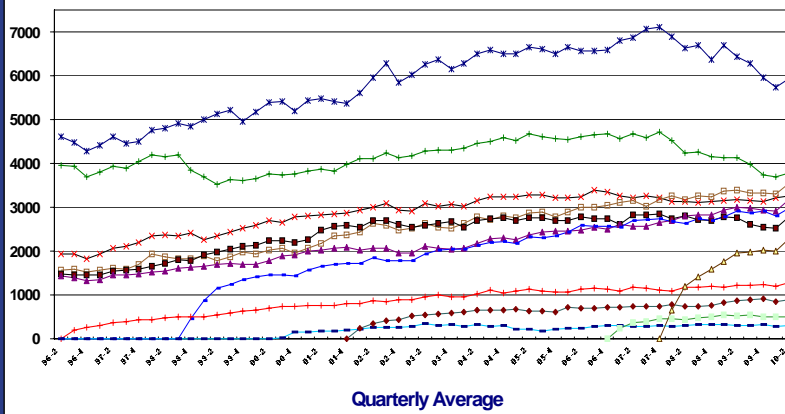




Nearly 300 FTE's
Approximately 50% are non-technical
➤ 13 PSC's in York and Western Adams
County



Patient Service Center Volume Patient Visits




Customer Satisfaction Survey



Patient Satisfaction Measures

- Dimensions of Care
 - Access
 - Information
 - Coordination
 - Physical Comfort
 - Respect
 - Emotional Support
 - Staff
 - Family
 - Caring Communication

Conducted by:
Center for Opinion Research
Franklin & Marshall College



| Department | Dimension of Care | | | | | | | | | Would Definitely Recommend | Overall Rating 9 or 10 |
|----------------------------|-------------------|------------|--------------|------------------|------------|-------------------|------------|------------|----------------------|----------------------------|------------------------|
| | Access | Info | Coordination | Physical Comfort | Respect | Emotional Support | Staff | Family | Caring Communication | | |
| Anti-coagulation Clinics | 88% | 84% | 80% | 99% | 98% | 99% | 89% | 94% | 97% | 100% | 96% |
| Cardiology | 81% | 84% | 85% | 94% | 93% | 96% | 89% | 90% | 94% | 98% | 84% |
| Diabetes | 88% | 87% | 88% | 97% | 95% | 99% | 91% | 100% | 96% | 100% | 83% |
| Dialysis | 81% | 72% | 64% | 77% | 92% | 93% | 86% | 90% | 93% | 93% | 93% |
| Gastroenterology | 78% | 88% | 92% | 91% | 96% | 97% | 97% | 98% | 96% | 96% | 87% |
| Imaging Specialty | 88% | 95% | 86% | 95% | 93% | 97% | 91% | 96% | 95% | 99% | 88% |
| Lab | 80% | 68% | 69% | 95% | 91% | 96% | 90% | 94% | 93% | 97% | 80% |
| Oncology Infusion Services | 86% | 89% | 84% | 92% | 98% | 100% | 98% | 94% | 99% | 100% | 88% |
| Pain Management | 79% | 84% | 91% | 95% | 97% | 96% | 93% | 91% | 96% | 98% | 76% |
| Pulmonary | 85% | 75% | 76% | 89% | 94% | 93% | 90% | 95% | 93% | 94% | 81% |
| Rehab Medicine | 91% | 85% | 90% | 94% | 96% | 97% | 94% | 100% | 96% | 98% | 79% |
| Specialty Clinics | 64% | 70% | 80% | 91% | 87% | 78% | 76% | 90% | 82% | 78% | 53% |
| Women's Infusion Services | 90% | 87% | 88% | 98% | 100% | 100% | 99% | 100% | 100% | 95% | 95% |
| Wound Clinic | 77% | 74% | 84% | 87% | 93% | 92% | 90% | 96% | 93% | 96% | 86% |
| CMBH | 90% | 89% | 85% | 93% | 97% | 97% | 85% | 100% | 97% | 98% | 76% |
| WS Pharmacy | 70% | 86% | 88% | 92% | 80% | 89% | 85% | --- | 83% | 82% | 67% |
| WorkFirst | 78% | 79% | 91% | 93% | 90% | 92% | 85% | 94% | 90% | 84% | 73% |
| HealthConnect | 84% | 93% | 65% | 94% | 94% | 93% | 87% | 83% | 92% | 100% | 82% |
| ReadyCare | 79% | 81% | 88% | 86% | 89% | 88% | 85% | 93% | 88% | 90% | 78% |
| WellSpan Imaging | 91% | 83% | 91% | 93% | 94% | 98% | 93% | 97% | 96% | 98% | 96% |
| Outpatient Surgeries | 84% | 88% | 95% | 92% | 95% | 96% | 94% | 95% | 96% | 98% | 91% |
| Total WellSpan | 81% | 80% | 78% | 94% | 90% | 95% | 89% | 95% | 92% | 94% | 79% |

Questions related to Low Scores



Information

- Was the service, test, treatment clearly explained prior to test? (60% favorable)
- Have you received the results of your test? (71% favorable)

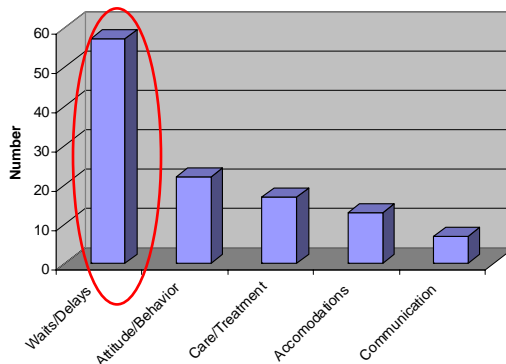
Coordination

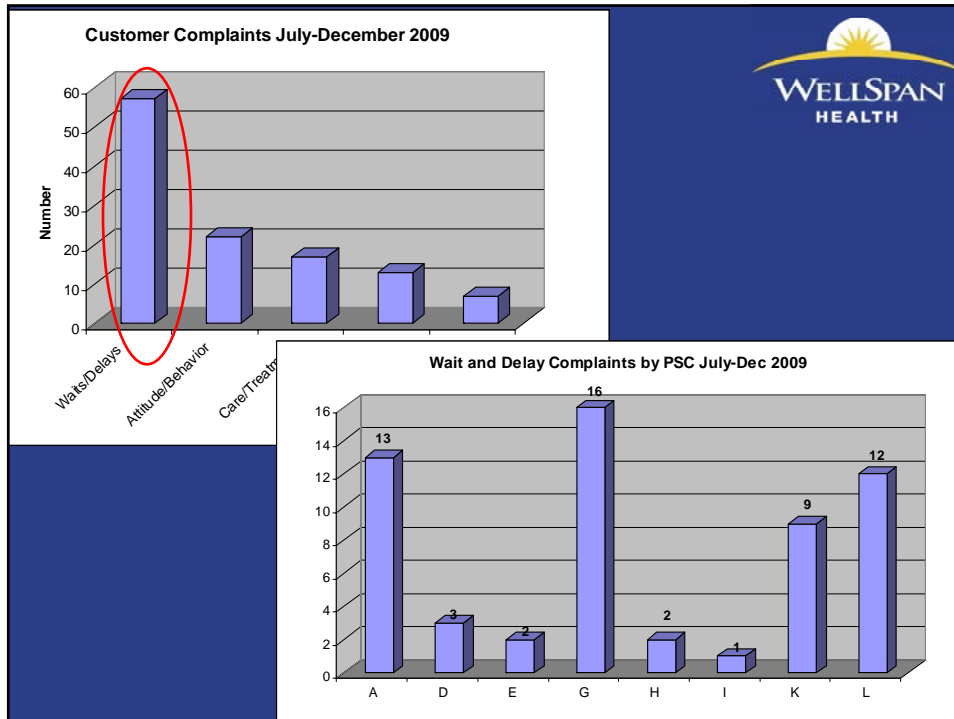
- Told what personal information was needed prior to visit (60% favorable)
- Did you know who to call if you had problems? (63% favorable)

Access

- Were there delays while you waited for service? (60% favorable)
- Did the staff tell you about the reason for the delay? (20% favorable response)

Customer Complaints July-December 2009





Strategies to Improve Patient Satisfaction

Information

Laboratory Services Web Site (www.wellspanlabs.org)

“My eCare” patient portal, result access

Coordination & Access

Improve Patient Flow

Reduce Wait Times

Increase patient and staff satisfaction



Understanding the Problem

Understanding the Problem



Problem:

Waits and delays

- Staff
- Process
- Patients

Variation

- Site to Site
- Tech to Tech
- Patient to Patient

Value:

Staff Value

- Ability to work efficiently
- Happy patients

Patients Value

- Timely, accurate service
- Friendly phlebotomists

Understanding the Problem



Need:

Limited success with previous attempts

- AIM project; LSS project

Lack of perspective outside our "walls"

- Homegrown staff can sometimes be a curse

Need for expertise

- Pre-analytic process and process design
- "Out of the box" thinkers



Understanding Patient Flow



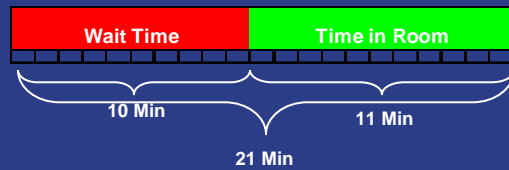
"Newer Sites" – One Step

- Take a number and wait in waiting room
 - One Step (Registration, Order Entry, Label Printing, Specimen Collection) occurs in patient collection room

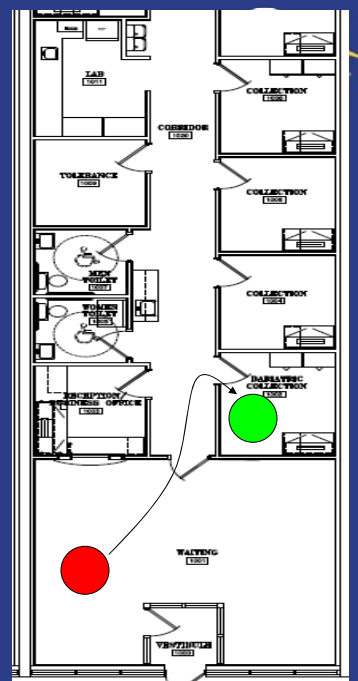
"Traditional Sites" – Two Step

- Take a number and wait in waiting room
 - First Step (Registration, Order Entry, Label Printing) completed at Registration Window
- Return to waiting room and wait
 - Second Step (Specimen Collection) completed in draw station

Newer (One Step) Site



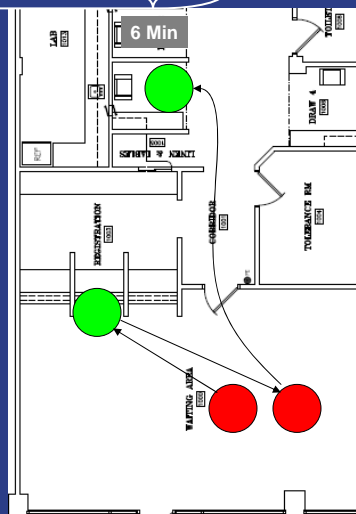
- Average wait time
 - > 10 minutes
- Door to Door time
 - > 21 minutes
- Typically 6-8 people in queue prior to opening
- 70% of patients arrive between opening time and 11:00 a.m.



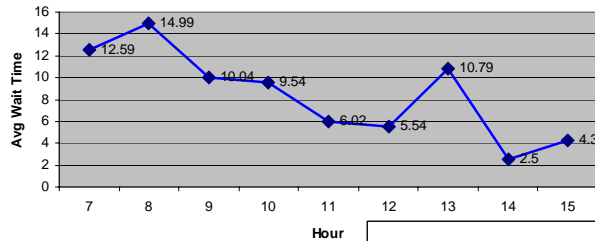
Traditional (Two Step) Site



- Average Wait time
 - > 20 minutes
- Door to door time
 - > 32 minutes
- Typically 8-12 people in queue prior to opening
- 70% of patients arrive between opening time and 11:00 a.m.

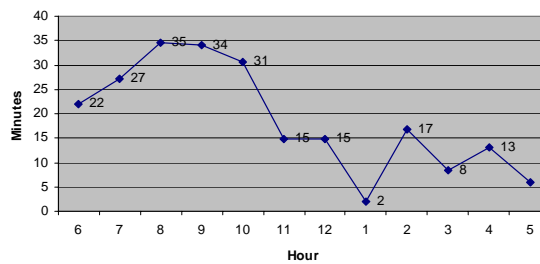


One Step Site



"Yes, I fasted for the blood test, if you count the four hours in the waiting room."

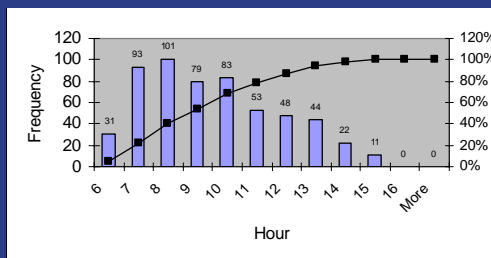
Two Step Site



Understanding Staff Flow

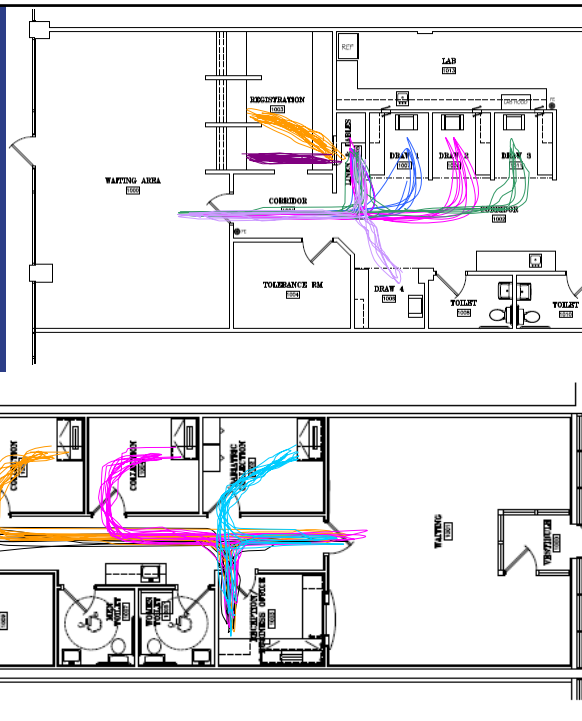
Both Sites

- Maximum staffing occurred 1-2 hours post-opening
- Up to 7.5 minutes of wasted time for the phlebotomist



| Average Patients by Hour to Staffing Schedule | | | | | | | | | | |
|---|-----|------|----|------|------|----|------|------|-----|-----|
| Avg. Pt.'s Per Hr. | 6 | 25.4 | 20 | 15.6 | 16.2 | 10 | 11.3 | 10.5 | 5.5 | 2.5 |
| Staffing | 6AM | 7 | 8 | 9 | 10 | 11 | 12 | 1PM | 2 | 3 |

Staff Travel
Patterns
(1 hour)



Where was the Waste?



D efects
O verproduction
W aiting
N on-utilization of talent
T ransportation
I nventory
M otion
E xtra processing



Common Sources of Waste

- Queue prior to opening time
- Patient confusion in waiting room
- Visibility into waiting room
- Errors on requisition
- Uncross-trained staff
- Lengthy registration
- Computer speed
- Shared printers
- Traffic at connecting door
- Waiting for patient
- Supplies (ex. 24 hr. urine jug)
- Gender specific restrooms

Waste in Motion



- Excessive motion
 - Only one ABN printer (both sites)
 - Only one label printer (two step site)
 - Filing of lab requisitions (both sites)
 - All phlebotomists calling patients from waiting room (both sites)
 - Patients called to registrar window multiple times (two step site)

Variation



“That’s not the way we do things at this site...”

“This is how I like to have my collection cart organized...”

“We keep those over here...”



The Plan...Pilot the Change

Acknowledge the Facts



- "Newer Site", one step process was more patient friendly
- Capital dollars for renovations are scarce.
- Staff cannot move between facilities efficiently

Bottom Line

- Initial low to no cost changes
- Develop a long-term strategy

Action Item List – Waiting Room



Problem:

- Queue prior to opening time

Solution/Pilot:

- Staff start times adjusted; “ready to roll” 15 min. prior to opening

Action Item List – Waiting Room



Problem:

- Queue prior to opening time
- Patient confusion as they enter the waiting room

Solution/Pilot:

- Staff start times adjusted; “ready to roll” 15 min. prior to opening
- Adjust signage; investigate kiosk numbering solution

Action Item List – Waiting Room



Problem:

- Queue prior to opening time
- Patient confusion as they enter the waiting room
- Visibility into waiting room

Solution/Pilot:

- Staff start times adjusted; “ready to roll” 15 min. prior to opening
- Adjust signage; investigate kiosk numbering solution
- Install “nanny cam” to connect waiting room to collection rooms

Action Item List – Registration



Problem:

- Errors on requisition

Solution/Pilot:

- Flag errors for correction at a later time

Action Item List – Registration



Problem:

- Errors on requisition
- Uncross-trained staff

Solution/Pilot:

- Flag errors for correction at a later time
- Train all staff in registration

Action Item List – Registration



Problem:

- Errors on requisition
- Uncross-trained staff
- Lengthy registration

Solution/Pilot:

- Flag errors for correction at a later time
- Train all staff in registration
- Evaluate a “quick” registration process

Action Item List – Hardware



Problem:

- Computer Speed

Solution/Pilot:

- IT evaluation of all computers with appropriate changes

Action Item List – Hardware



Problem:

- Computer Speed

- Shared printers

Solution/Pilot:

- IT evaluation of all computers with appropriate changes

- Install label printers and laser printers at each registration and order entry computer

Action Item List – Collection Area



Problem:

- Supply location and variation



Solution/Pilot:

- Stock all rooms with adequate supplies
 - Not overstocked
 - Standardized
 - Replenished during non-peak times

Action Plan – Process Variation



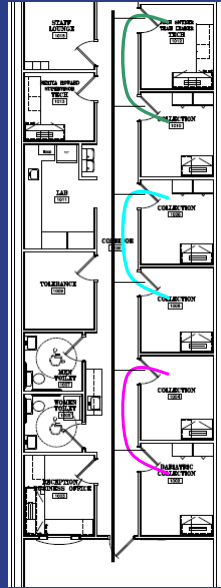
Problem:

- Variation

Solution/Pilot:

- Standard Work for each task
 - Eliminate as much variation as possible
 - Realize variation between the two different facility layouts

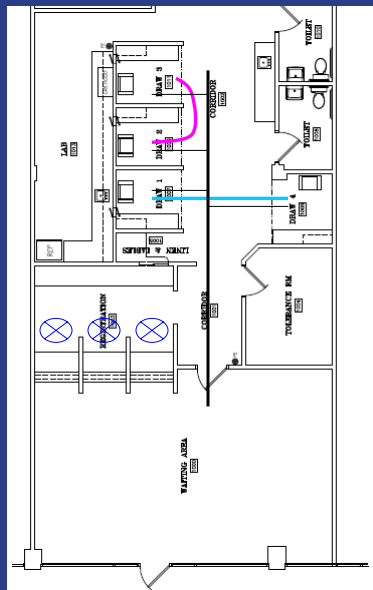
Standard Work – One Step Pilot



Solution/Pilot:

- “Two room concept”
 - Patient expeditor brings patients to rooms
 - Patient asked to gather necessary information while being seated
 - One phlebotomist travels between two rooms to serve patients

Standard Work – Two Step Pilot

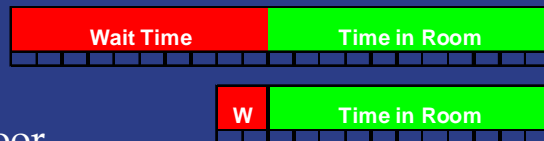


Solution/Pilot:

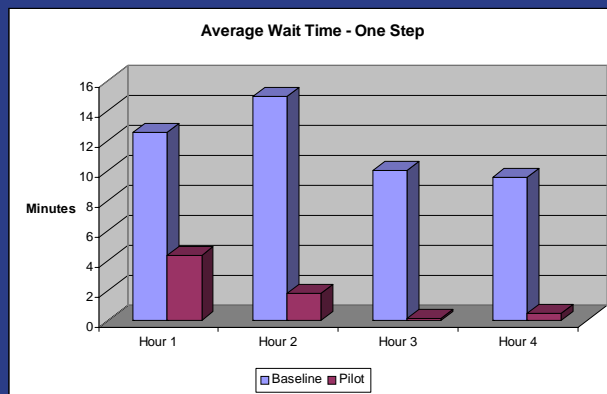
- “Two chair concept”
 - Registration and order entry at window
 - Patient expeditor brings patients to chairs
 - One phlebotomist travels between two collection chairs to serve patients
- Trial – order entry in collection bay

Did it work?

Results - One Step Pilot



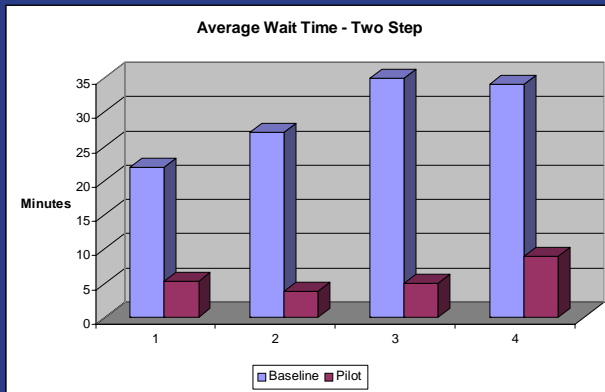
- 38% Door to Door improvement (21 to 13 min)
- 80% Wait time improvement (10 to 2 min)
- One less staff person



Results - Two Step Pilot



- 59% Door to Door improvement (32 to 13 min)
- 75% Wait time improvement (20 to 5 min)



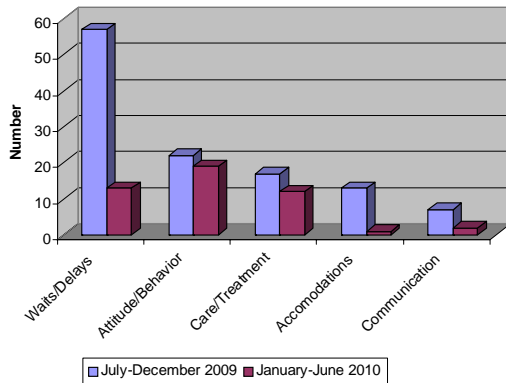
Have the Patients noticed?

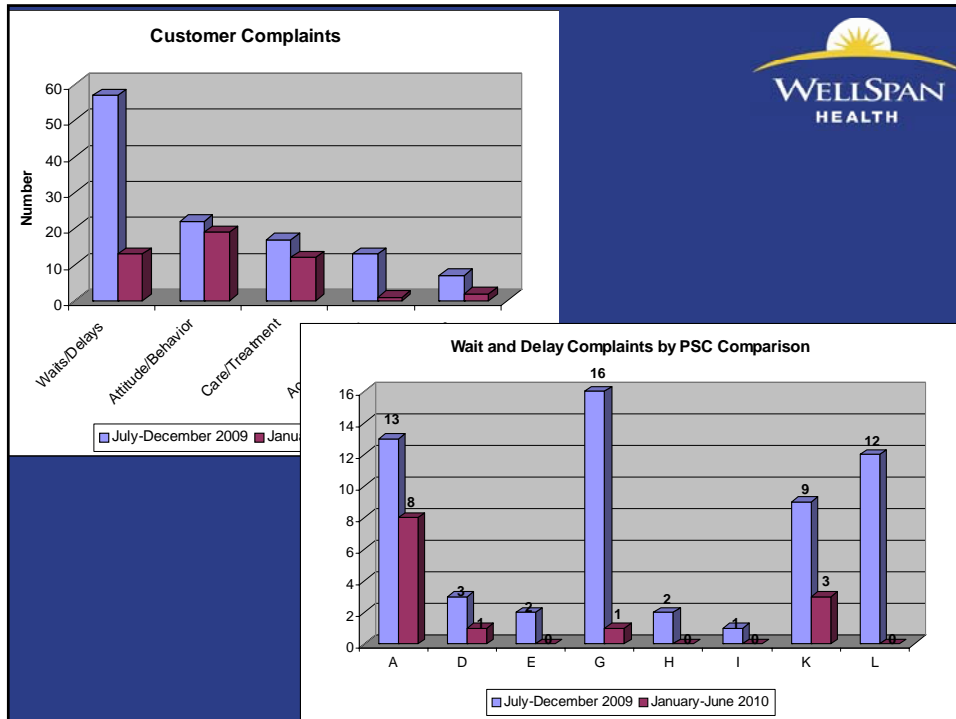


Dimension of Care

| Department | Dimension of Care | | | | | | | | | Would Definitely Recommend | Overall Rating 9 or 10 |
|-----------------------------|-------------------|------|--------------|------------------|---------|-------------------|-------|--------|----------------------|----------------------------|------------------------|
| | Access | Info | Coordination | Physical Comfort | Respect | Emotional Support | Staff | Family | Caring Communication | | |
| Anti-Coagulation Clinic | 88% | 84% | 79% | 100% | 98% | 98% | 91% | 97% | 98% | 98% | 94% |
| Cardiology | 88% | 84% | 89% | 96% | 96% | 99% | 90% | 96% | 97% | 100% | 79% |
| Diabetes Services | 87% | 84% | 87% | 95% | 93% | 95% | 89% | 92% | 94% | 93% | 82% |
| Dialysis | 84% | 79% | 71% | 77% | 92% | 89% | 89% | 92% | 91% | 85% | 74% |
| Gastroenterology | 82% | 89% | 97% | 93% | 94% | 95% | 95% | 95% | 95% | 94% | 78% |
| Imaging | 87% | 85% | 85% | 96% | 95% | 95% | 90% | 95% | 94% | 97% | 86% |
| Lab | 85% | 72% | 70% | 96% | 90% | 96% | 91% | 97% | 93% | 97% | 81% |
| Oncology Infusion Services | 94% | 88% | 88% | 94% | 99% | 100% | 100% | 100% | 99% | 100% | 92% |
| Pain Management | 81% | 86% | 95% | 93% | 96% | 97% | 88% | 90% | 96% | 94% | 80% |
| Pulmonary | 84% | 80% | 88% | 94% | 95% | 99% | 95% | 92% | 97% | 94% | 80% |
| Rehab Medicine | 90% | 87% | 89% | 96% | 95% | 93% | 88% | 93% | 94% | 100% | 93% |
| Specialty Clinics | 77% | 82% | 83% | 93% | 92% | 91% | 84% | 93% | 91% | 92% | 61% |
| Women's Infusion Services | 84% | 85% | 92% | 95% | 98% | 99% | 94% | 94% | 98% | 100% | 86% |
| Wound Clinic | 77% | 79% | 94% | 97% | 98% | 97% | 96% | 95% | 98% | 100% | 60% |
| Center for Mind Body Health | 91% | 91% | 84% | 96% | 97% | 99% | 87% | 100% | 97% | 100% | 83% |
| WellSpan Pharmacy | 76% | 84% | 86% | 92% | 79% | 89% | 84% | --- | 83% | 90% | 65% |
| WorkFirst | 81% | 80% | 89% | 98% | 91% | 91% | 92% | 77% | 91% | 87% | 71% |
| HealthConnect | 75% | 74% | 72% | 87% | 95% | 98% | 90% | 88% | 96% | 100% | 54% |
| ReadyCare | 80% | 72% | 84% | 92% | 87% | 91% | 86% | 97% | 88% | 87% | 47% |
| WellSpan Imaging | 94% | 84% | 83% | 94% | 96% | 94% | 93% | 97% | 96% | 98% | 81% |
| Outpatient Surgeries | 87% | 91% | 96% | 93% | 96% | 97% | 95% | 98% | 97% | 98% | 90% |
| Total WellSpan | 85% | 81% | 79% | 95% | 91% | 95% | 90% | 95% | 92% | 96% | 80% |

Customer Complaints





Patient Satisfaction Survey



99.6% liked being escorted to the collection room
 81% felt that wait times have decreased

Comments:

"Like changes. More useable."

"Greeter was very nice and helpful"

"New lab is great!"

"Opening the doors early is a nice thing."

"I always heard this place was the slowest, but its not"



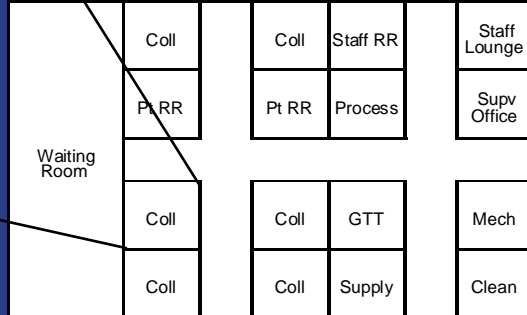
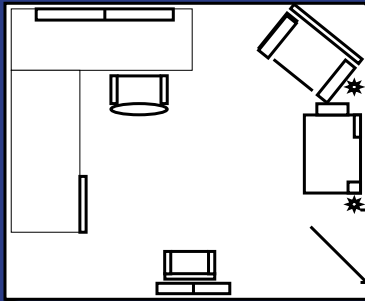
Where Do We Want To Be Tomorrow...

Ideal PSC Workflow and Layout



- Standard Process
 - Roll-out to two sites at a time over next year
 - Four sites currently "live"
 - Other sites have made some process changes
- Support and encourage Lean thinking
 - Informal Lean training for PSC Supervisors
 - Routinely discuss at meetings
- Develop PSC facility strategy

Standard Design "Privacy Model"



Standard facility design requirements is projected to save 6-8 weeks of planning time and expense



Lessons Learned

Lessons Learned



- Understand the process – see, hear, do
- Don't give up on the short term
- Change takes time
- Acceptance takes longer
 - Shift of control
- Front-line champion
 - Don't stifle the enthusiasm, direct it
- Support of senior leadership
- Identify and overcome barriers to progress
- Long term monitoring – Kiosk check-in



Questions?

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