

# The Big “Q” - What Does This Mean?

Six Sigma Wave IV Projects = \$2,557,122 in Revenue Enhancement or Waste Reduction!



President & CEO Scott Whalen (L) is shown with Wave IV team leaders (L-R), Elaine Murtha, Director Medical Imaging; Mike Tretina, Senior Vice President Finance Department; Mikky Franklin, Assistant Director Patient Accounting; Melissa Scott, Nurse Manager; Kenneth Jones, Director Neurosciences/Orthopedics; and Teresa Butts, Manager Care Management, as they received plaques commemorating their teams' participation in the most recent Six Sigma projects at St. Vincent's. Chris Noll, Nurse Manager; Charzetta James, Manager Pharmacy; Rita Driskill, Manager Laboratory Services; and Lorraine Keith, Director Critical Care/Emergency Department, were not available for the photo.

## Congratulations to the nine teams that participated and especially to those who have earned Green, Black or Master Black Belts:

Green Belts  
Teresa Butts  
Crystal Culbertson  
Rita Driskill  
Mikky Franklin  
Kenneth Jones  
Christopher Noll  
Charzetta James

Black Belts  
Lorraine Keith  
Elaine Murtha  
Phil Perry, MD  
Melissa Scott  
Mike Tretina

Master Black Belts  
Barbara Potter  
Beckie Watson

## 100-DAY QUALITY WORKOUT WAVE IV

# 100 Day Summation

**KICK OFF: AUGUST 17, 2007**

**SUMMATION: NOVEMBER 16, 2007**

### THE SIX SIGMA METHODOLOGY



- 100-DAY WORKOUT
- RAPID CYCLE TESTING  
8/13/07 - 10/31/07

### Embracing Six Sigma - Fourth Wave Completed

After the initial kick-off of Six Sigma in August 2006, teams have worked in 100-day Waves to reduce variations and achieve improved quality, better care and enhanced patient experiences here at St. Vincent's Medical Center.

The most recent nine teams took part in Wave IV and were led by Director, Medical Imaging Elaine Murtha; Manager, Care Management Teresa Butts; Nurse Manager Melissa Scott; Nurse Manager Chris Noll; Director, Critical Care/Emergency Department Lorraine Keith; Manager, Laboratory Services Rita Driskill; Senior Vice President, Finance Department Mike Tretina; Assistant Director, Patient Accounting Mikky Franklin and Director, Neurosciences/Orthopedics Kenneth Jones.

This report includes brief summaries of the problems, goals and results of Six Sigma Wave IV that kicked-off at St. Vincent's Medical Center on August 13, 2007.

# Team 1

## Access to Scheduling

Elaine Murtha - Black Belt-in-Training

Barbara Potter - Master Black Belt-in-Training

**Problem:** Callers to the Scheduling Department experience a mean (average) answer wait time of 151 seconds and the abandoned call rate is over 20% per month. Physician access to the Scheduling Department is critical to out-patient growth.

**Goal:** Decrease mean answer wait time from 151 seconds to 90 seconds by November 1, 2007. Reduce the abandoned call rate from 20% to 3% by November 1, 2007.

**Work Out Process Improvements**

Decreased wait time from 151 seconds to 48 seconds in 90 days.

- Redesigned routing of incoming calls to identify specific skill sets (incoming lines)
- Installation of FaxCert technology to convert faxes to PDF files Installation of "Activity button" on agent's phone to identify/monitor various scheduling activities
- Implemented ability to report abandoned calls based on skill set (incoming lines)
- Implemented ability to collect data, develop reports and track agent's activity and productivity
- Increased staffing from 3-6 agents



# Team 2

## Reducing Excess Days

Teresa Butts - Green Belt-in-Training

Beckie Watson - Master Black Belt-in-Training

**Problem:** Admissions that extend beyond the Medicare Geometric Length of Stay (e.g. Excess days) result in additional costs to the hospital, patient dissatisfaction, and increased opportunity for medical errors.

**Goal:** By October 31 2007, reduce excess days by 75% on 4300, 5400 and 5500.

**Work Out Process Improvements**

Reduced Number of Excess Days by 75% on 4300, 5400 and 5500.

- ANM, Care Manager and social worker will meet daily to review the treatment plan for all patients. (first 30 days)
- The Care Manager and Social Worker will update the patient board daily to reflect DRG, expected LOS and planned disposition.
- The primary care nurse began attending the daily meeting giving report, identifying what clinical issues have been addressed and what issues were outstanding. (60 day)
- The primary care nurse will track all consults and ordered procedure to make sure they had been completed and the results had been called to the physician. (90 day)

Unit	Baseline	Summation	GOAL
4 Center	109	35 (68%)	27 (75%)
5 North	88	38 (57%)	22 (75%)
5 West	76	60 (21%)	19 (75%)

# Team 3

## Order to Vacate Time

Melissa Scott - Black Belt-in-Training

Beckie Watson - Master Black Belt-in-Training

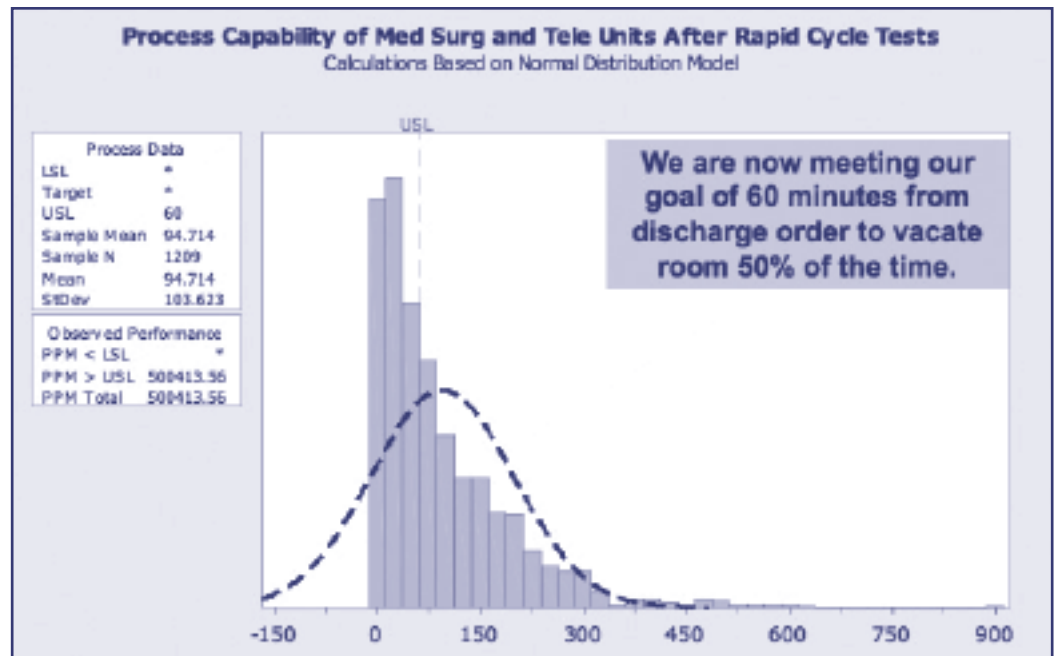
**Problem:** The mean time from discharge order to vacate is 133 minutes. The standard is 60 minutes. Sixty-six percent (66%) of the time we were unable to meet this goal.

**Goal:** By October 31, 2007 patients on the Med-Surg and Tele units will be discharged within 60 minutes of the discharge order being written.

**Work Out Process Improvements**

Reduced mean time from discharge order to vacate from 133 minutes to 95 minutes.

- Patient asked about discharge transportation needs at time of admission
- Direct admits from NFL Oncology come to 3 East with medication reconciliation completed
- Discharge packets with pre-printed instructions used for cath/stent/pacer patients on 4 West
- Red heart discharge signs used on 2 East as visual alert to staff
- Green hearts discharge signs used on 4 East and 4 Center
- Night shift staff on 4 East initiates discharge paperwork on anticipated discharges
- PAT staff will begin transportation discussion with patients at the PAT appointment
- Daily interdisciplinary meetings on 4C, 5W, and 5N



# Team 4

## 2 p.m. Discharges

Chris Noll - Six Sigma Green Belt

Beckie Watson - Master Black Belt-in-Training

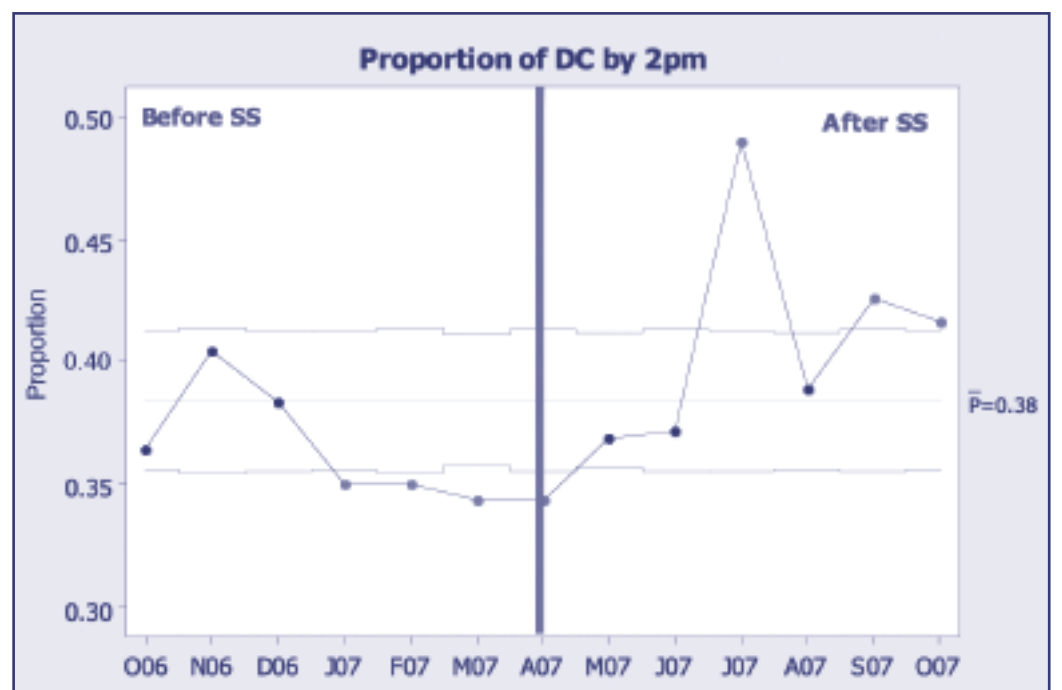
**Problem:** Only 37% of discharged patients are discharged before 2 p.m. This impacts availability of beds for ED patients during peak ED hours (11 a.m. - 7 p.m.) and impedes patient flow.

**Goal:** By October 31, 2007 increase to 80% the number of discharged patients discharged before 2 p.m.

**Work Out Process Improvements**

Increased the percentage of patients discharged before 2 p.m. from 37% to 42%.

- 2E - Post discharge (D/C) sheet in patient room with 11 a.m. discharge goal and anticipated date of discharge; post 'red hearts' on the chart/clipboard of patients who have met all conditions of discharge and are ready to roll out the door.
- 2W - Physical Therapy (PT) will begin at 7 a.m. instead of 9 a.m. and Nursing will pre-medicate PT patients between 6 and 7 a.m. when appropriate instead of pre-medicating after day shift arrives; Total Joint patients (Knee/Hip) who are going home will have breakfast and Physical Therapy on discharge day, then go home.
- 3E - Office of NE FL Hematology/Oncology completing medication reconciliation form on direct admits
- 3C - ANM will discuss anticipated discharge date with patient and family on or near admission; post anticipated discharge date on patient's whiteboard.
- 3W - ANM will discuss anticipated discharge date with patient and family on or near admission; post anticipated discharge date on patient's whiteboard.
- 4E - Night shift RN to initiate discharge paperwork for patients with anticipated discharge; place green discharge heart on the room door once discharge order received, visual cue to staff that the 60 minute window has begun.
- 4C - Place green discharge heart on the room door once discharge order received, visual cue to staff that the 60 minute window has begun; place green discharge plan sheet on each chart to communicate discharge placement to MD.
- 4W - D/C packets with pre-written dc instructions for post cath/stent/ pacer patients.
- 5C - D/C sign in each room, RN's to elaborate discharge plan on admission and inquire about transportation home.
- 5N/5W - Staff RN will join care management meeting daily to discuss her/his patients; staff RN will post times that patients are discharged for all staff to view; ANM will discuss anticipated discharge date with patient and family on or near admission and will post anticipated discharge date on patient's whiteboard.
- Implement D/C order form with one of our Hospitalist groups.



# Team 5

## ED Labs - Order to Receipt

Lorraine Keith – Black Belt-in-Training

Beckie Watson - Master Black Belt-in-Training

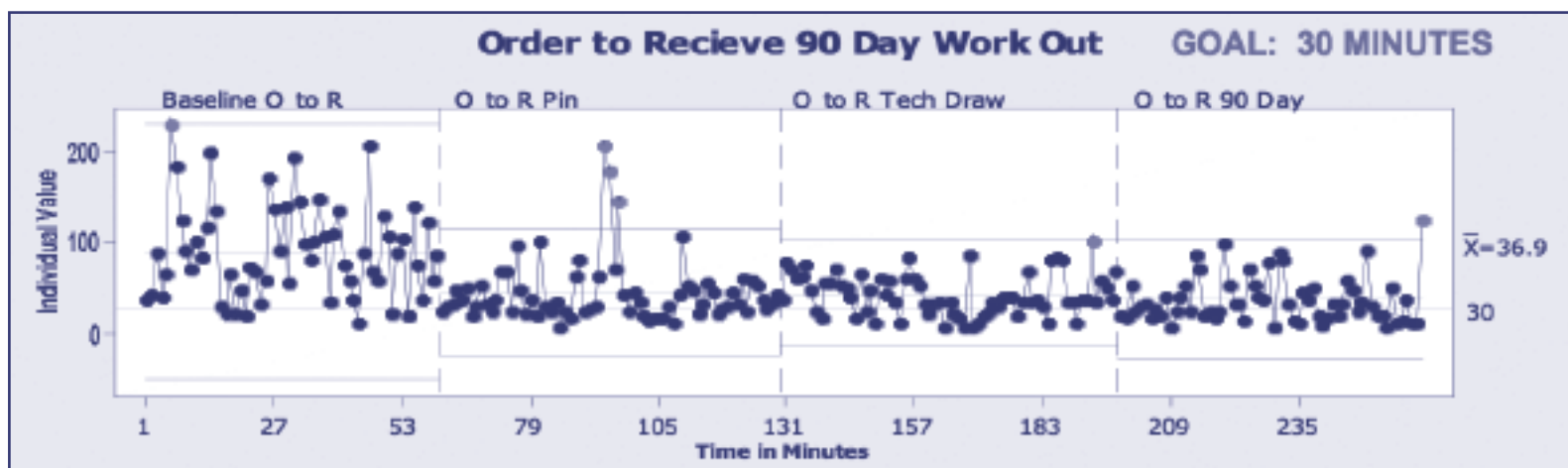
Problem: Delays in the time it takes from when blood tests are ordered to the time they are received in the Laboratory can be lengthy, causing the total time in the ED to be prolonged, which may potentially increase the number of patients who leave without being seen. The current time from lab ordered to receipt of the specimen in the lab is 89.9 minutes. (Acute and Critical)

Goal: By October 31, 2007 the time from the blood tests being ordered to the time it is received in the lab will be 30 minutes or less.

### Work Out Process Improvements

The amount of time from blood tests being ordered to time received in lab was decreased from 89.9 minutes to 36.9 minutes.

- Changed the location of the chart that had orders for lab draws from the “to be seen” rack to the nurse order rack.
- Charts with lab orders were flagged. Charts that had lab orders entered into the computer were flagged with a red clothespin.
- ED techs had their assignments changed, where one would be available to draw blood and the other to transport patients.
- A “virtual bin” was developed. Laboratory labels, (in addition to the orders written) were placed in a “virtual bin” that was specific to the nurse who had the patients. This was another visual cue that blood needed to be drawn.
- Stopped labels from stacking up on the printer. The clerks placed the labels in the “virtual bin” rather than having them stack up on the label printer.
- Stopped batching blood. When more than one patient needed blood drawn, the techs only drew two at a time so the blood would not be batched.



# Team 6

## ED Labs - Receive to Verify

Rita Driskill - Six Sigma Green Belt

Beckie Watson - Master Black Belt-in-Training

Problem: There is a delay in the process of receipt of the lab specimen from the ED and when the results are available (verified).

For Hematology tests: Mean is 20.6 minutes

For Chemistry tests: Mean is 39.5 minutes

Goal: By October 31, 2007 reduce the time from receive to verify for ED lab tests to:

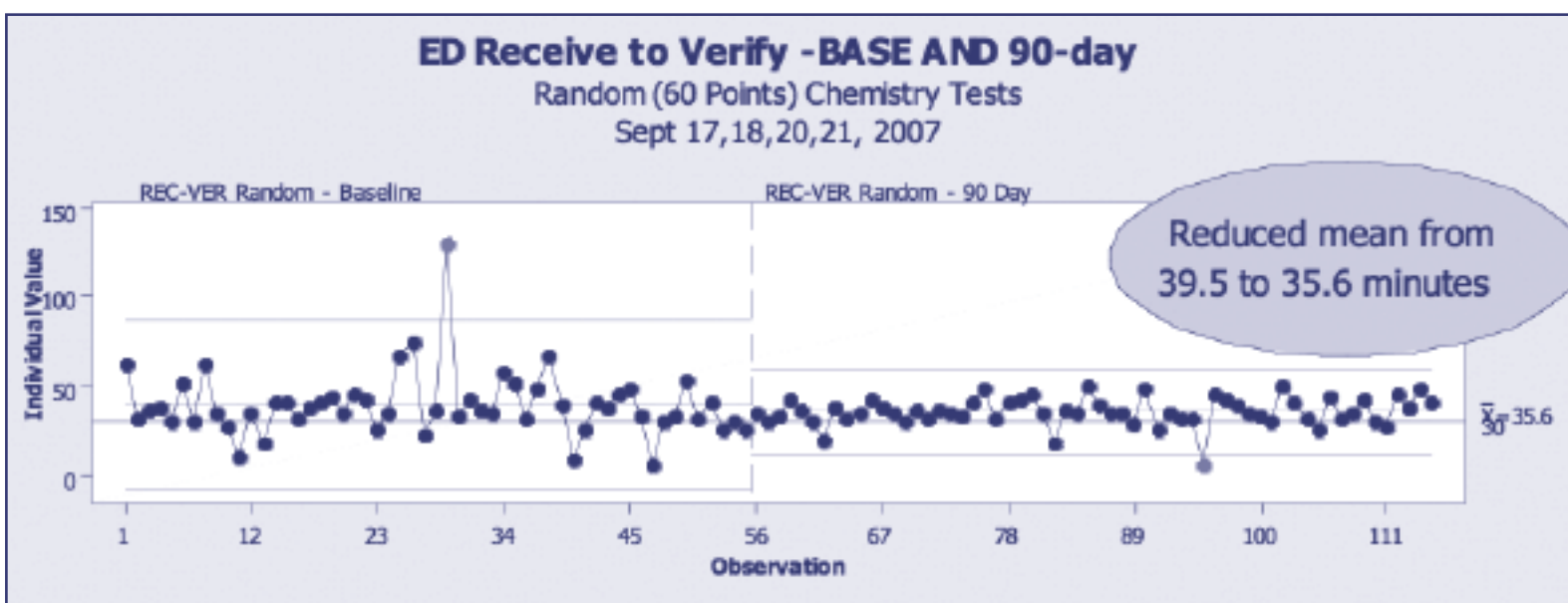
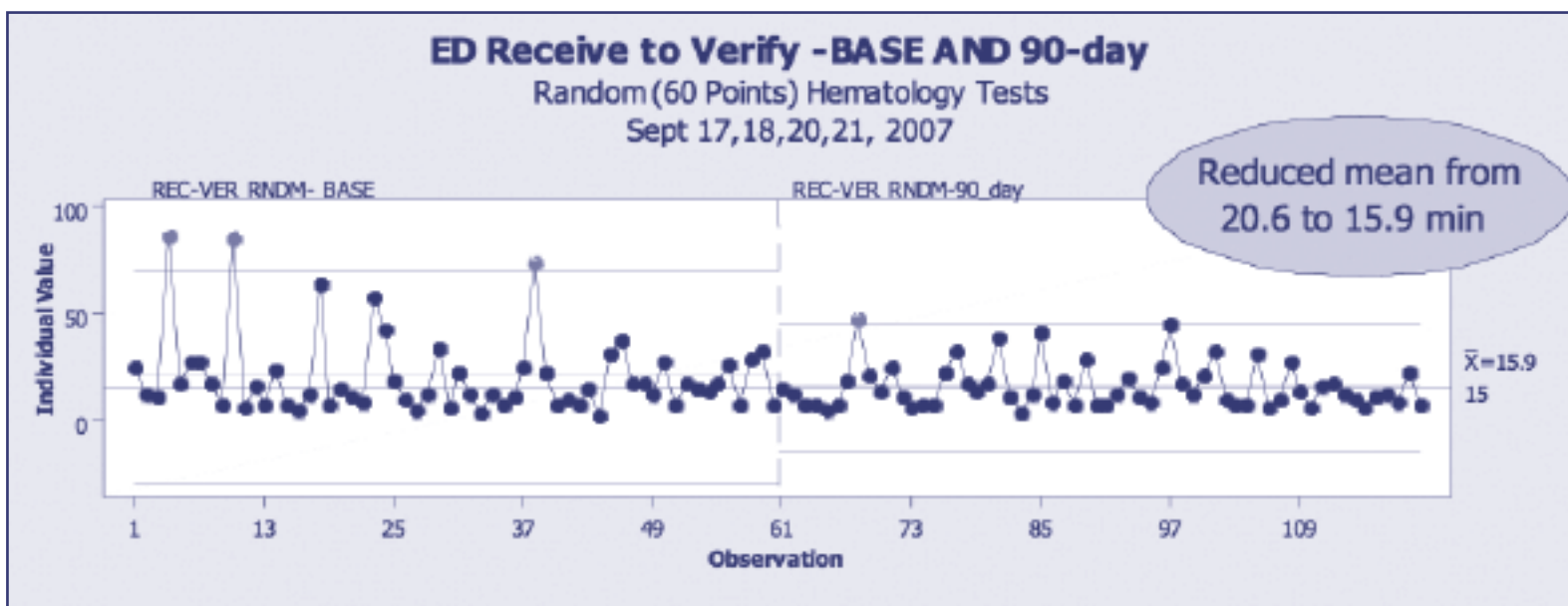
For Hematology tests: Mean of 15 minutes

For Chemistry tests: Mean of 30 minutes

### Work Out Process Improvements

Reduced mean time from receive to verify for ED lab tests from 20.6 minutes to 15.9 minutes for Hematology tests; reduced from 39.5 minutes to 35.6 minutes for Chemistry tests.

- Changed station assignments and tech breaks so that the Datalink and Aqueduct stations were never left unattended. These computers hold up results that require tech review before releasing to the floor.
- ED samples with multiple labels and directed staff to process only one patient at a time to avoid processing errors.
- Trained clerical staff on 3-11 to place ED specimens on the Automation Line.



# Team 7

## Reduction in Accounts Receivable Days

Mike Tretina - Black Belt-in-Training

Barbara Potter - Master Black Belt-in-Training

**Problem:** A national benchmark for Accounts Receivable (A/R) days is 50. St. Vincent's HealthCare A/R days were at 67 days for year-end June 30, 2006. This results in a decrease of cash on hand by \$18M annually due to problems within operations and the components of the revenue cycle.

**Goal:** By October 31, 2007, reduce A/R days by one (1) per month for the next 100 days as measured by the month-end ratio. The ultimate goal is to go from 69 to 50 over the next 19 months but we are focusing on Blue Cross for Rapid Cycle Testing.

**Work Out Process Improvements**

Reduced A/R days for Blue Cross from 69 days to 67.

- Implemented standardized new tool to identify Blue Cross co-pay deductible and co-insurance to collect before or at time of service.
- Hired outside consulting service to assist in identifying proper patient status at time
- Medical Records process changed for Medicare patients from retrospective coding to concurrent coding (2 FTE's reallocated to this project)

- Simplified medical record request from a five-step process to three-step, which reduced duplication and turnaround time.
- Automated ED and Breast Health insurance verification process to eliminate unnecessary verification for specific payors, which resulted in more timely billing and decrease in status 5 edits.
- Redesigned underpayment and denial process from multiple people calling same payor about different claims to one person, one payor, one call with multiple claims.
- Created a prioritization process for both Patient Access Services (PAS) and Health Information Management (HIM) to clear higher risk/value claims to ensure greater impact on A/R days.
- Implemented standardized procedure for interim billing for patients with extended LOS and large balances
- Changed from a manual to an electronic bill for Medicare/Medicaid HMO products
- Reallocated designated staff to collect for Medicare/Medicaid HMO products

# Team 8

## ED Charge Capture

Mikky Franklin - Green Belt-in-Training

Barbara Potter - Master Black Belt-in-Training

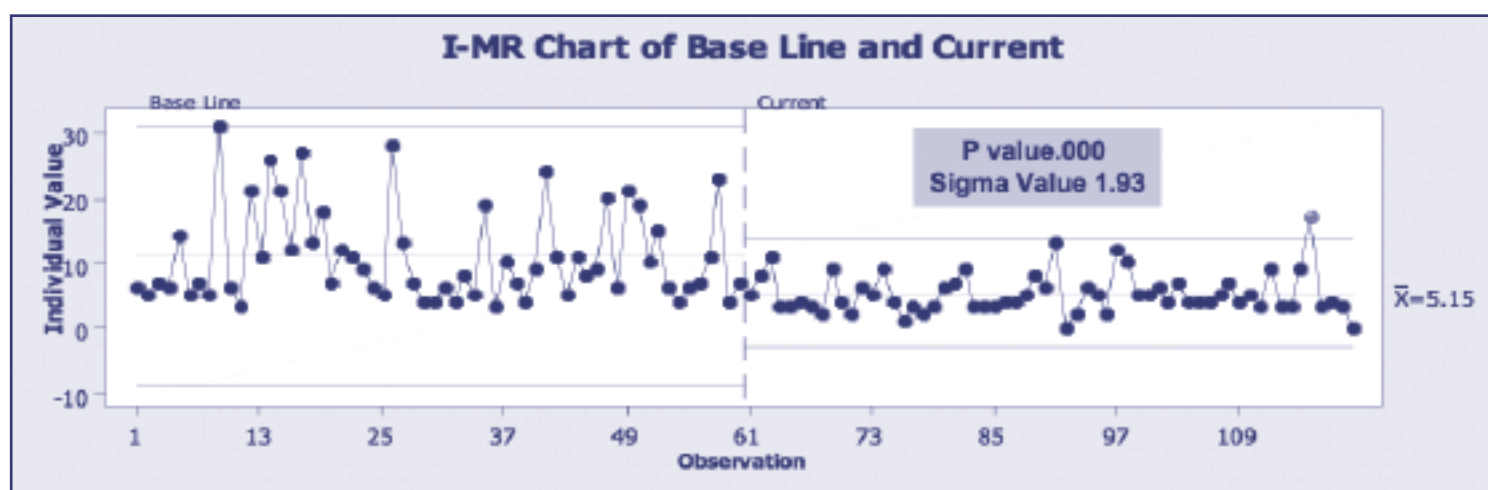
**Problem:** St. Vincent's Emergency Dept charges that are posted > than four days is 10.7%. This percent of charges equals \$2,361,949 in gross revenue. The industry standard for charge entry is four days from the service date.

**Goal:** By October 31, 2007, 100% of charges from Emergency Department will be posted within four days of service.

**Work Out Process Improvements**

Reduced Days from Service Date to Post Date from 10.86 to 5.15.

- Revised process for requesting Medical Records
- AWOL charts now go to the Clinical Nurse Auditor first for charge entry.
- The Reconciliation reports now populate three days from discharge, instead of day five.
- For missing inpatient records, the triage is printed from First Net, if available, instead of waiting for a copy of the chart.
- A weekly report is created listing the missing charts.
- The frequency of Medical Record retrieval was increased; however, the change was not effective.
- Charts are reconciled with Census by ED associates



# Team 9

## Reducing PACU LOS (Length of Stay)

Kenneth Jones - Green Belt-in-Training

Barbara Potter - Master Black Belt-in-Training

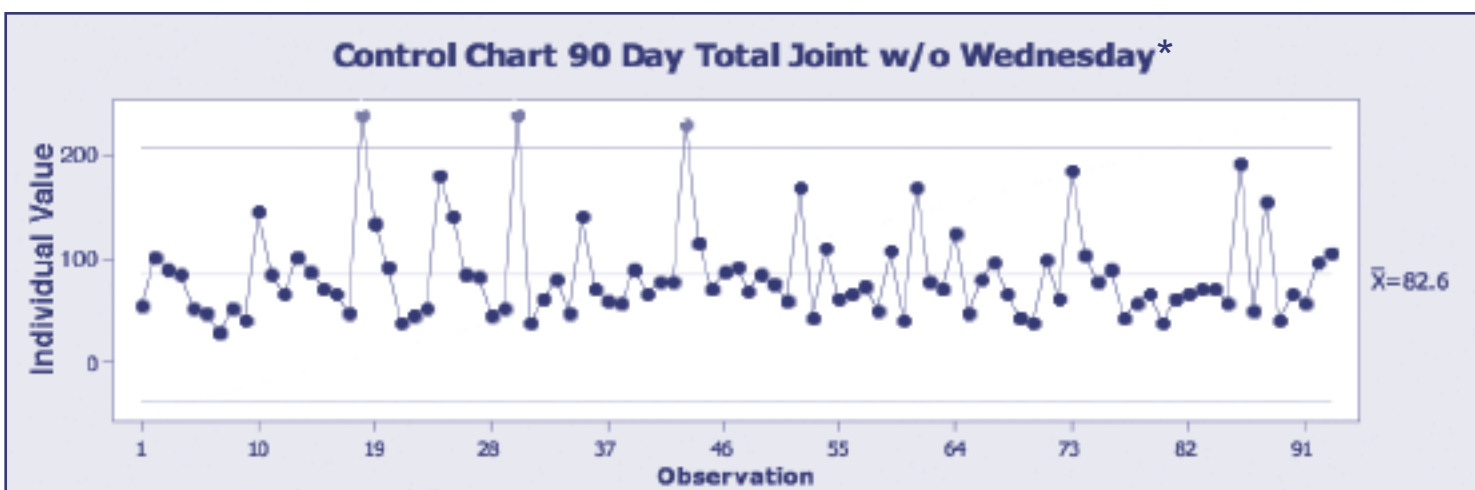
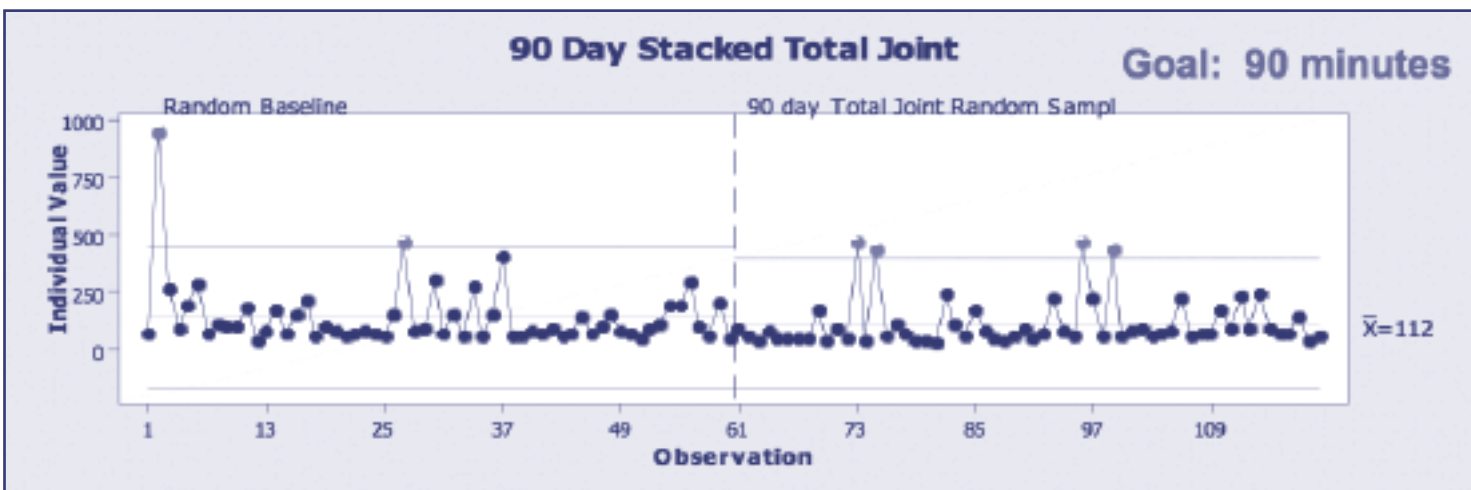
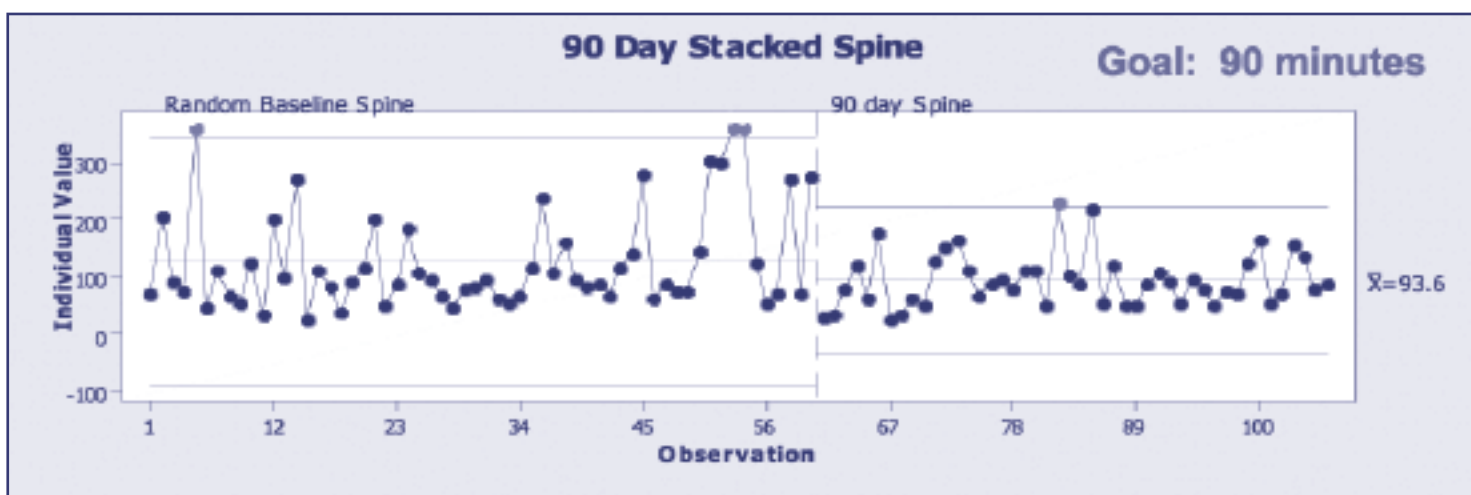
**Problem:** Currently, there is variability in the time it takes to discharge a patient from the PACU after discharge criteria has been met. Industry norm is 90 minutes while our mean time is 127 minutes for spine cases and 138 minutes for total joints (hip and knee).

**Goal:** Reduce time to discharge patient from PACU, once discharge criteria has been met, to 90 minutes or less.

### Work Out Process Improvements

Reduced PACU LOS for spine cases from 127 minutes to 94 minutes; for total joint cases from 138 minutes to 112 minutes.

- Requested Ortho and Spine beds earlier in process
- Created standardized home assessment for total joint patients
- Changed bed allocation process to hold beds for patient on Monday and Wednesday
- Developed four pain protocol options for orthopedic surgeons to trial
- Piloted orthopedic swing room in OR to increase surgical volume per day coordinated with patient, bedboard, anesthesia, to implement
- Changed process for admission to 2W to automatically send patient up after fax report and phone call to unit



\* Beds not available