

CCHCS LEAN SIX SIGMA GREEN BELT TRAINING

Medication Non-Compliance Reduction Project



March 8th, 2017

Project Team

- **Champion:** [REDACTED], CME
- **Executive Sponsor:** [REDACTED], Ph.D., CCHP
- **Team Members:**
 - [REDACTED], Chief of Mental Health
 - [REDACTED], Director of Nursing
 - [REDACTED], Chief Physician and Surgeon
 - [REDACTED], Pharmacist-In-Charge
 - [REDACTED], Healthcare Captain
 - [REDACTED], Supervising Nurse
 - CCWF QMSU: [REDACTED]
[REDACTED], Health Program
Specialists

Project Charter

Problem Statement

- Prior to EHR, nursing staff was involved in completing notifications to providers when patients met non-compliance criteria.
- Dashboard reports for June of 2016 showed the 3 go-live institutions had over 267,000 scheduled medication administrations with 229,000 completed as scheduled
- CCWF had the highest volume with over 129,000 scheduled administrations and 105,000 of those medications administered and documented in a timely fashion.
- The EHR resolution has yielded a high-volume of patients listed on the daily huddle reports. It is not uncommon for one yard to have over 75 patients listed on a non-compliance report each day

Project Charter

Objective

To improve compliance rates with recommended treatment

Primary Metric

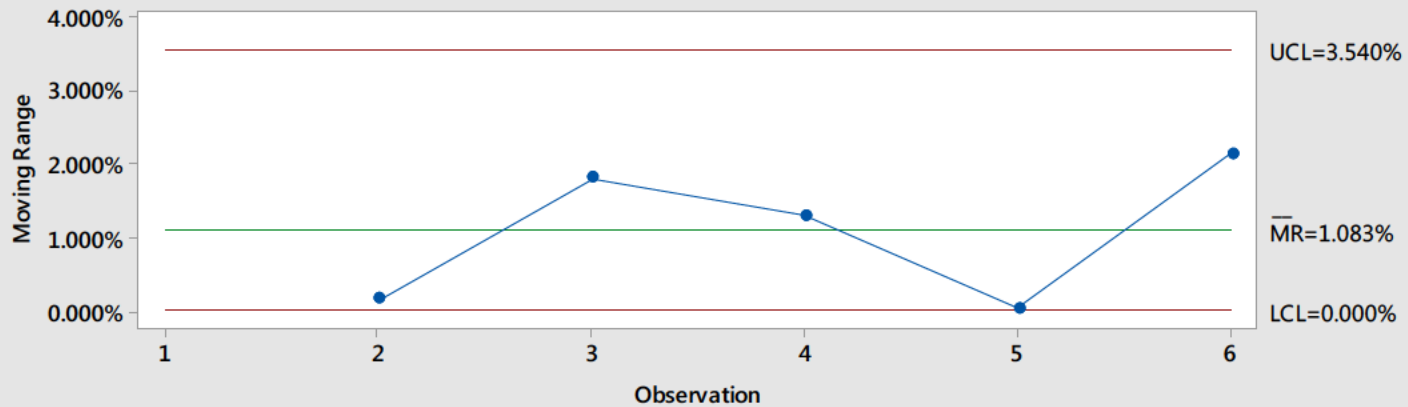
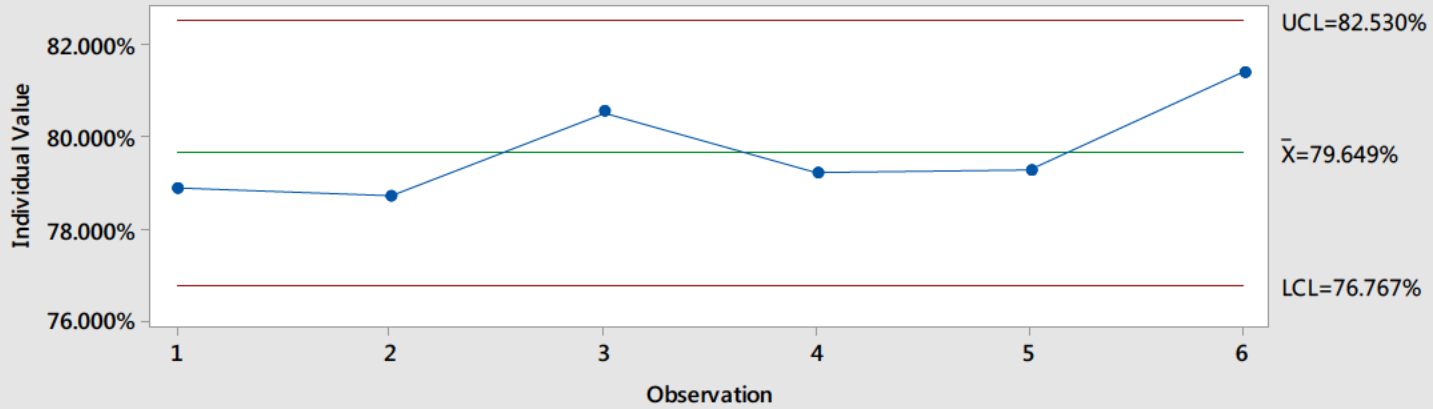
Based on the CCHCS Dashboard, “All Medications Received Timely for NA/DOT”

Lean Six Sigma Tools Utilized

- Fishbone
- FMEA
- Data Analysis and Hypothesis Testing
 - Pareto Analysis
 - Chi Square
 - ANOVA

Baseline Capability

I-MR Process Capability

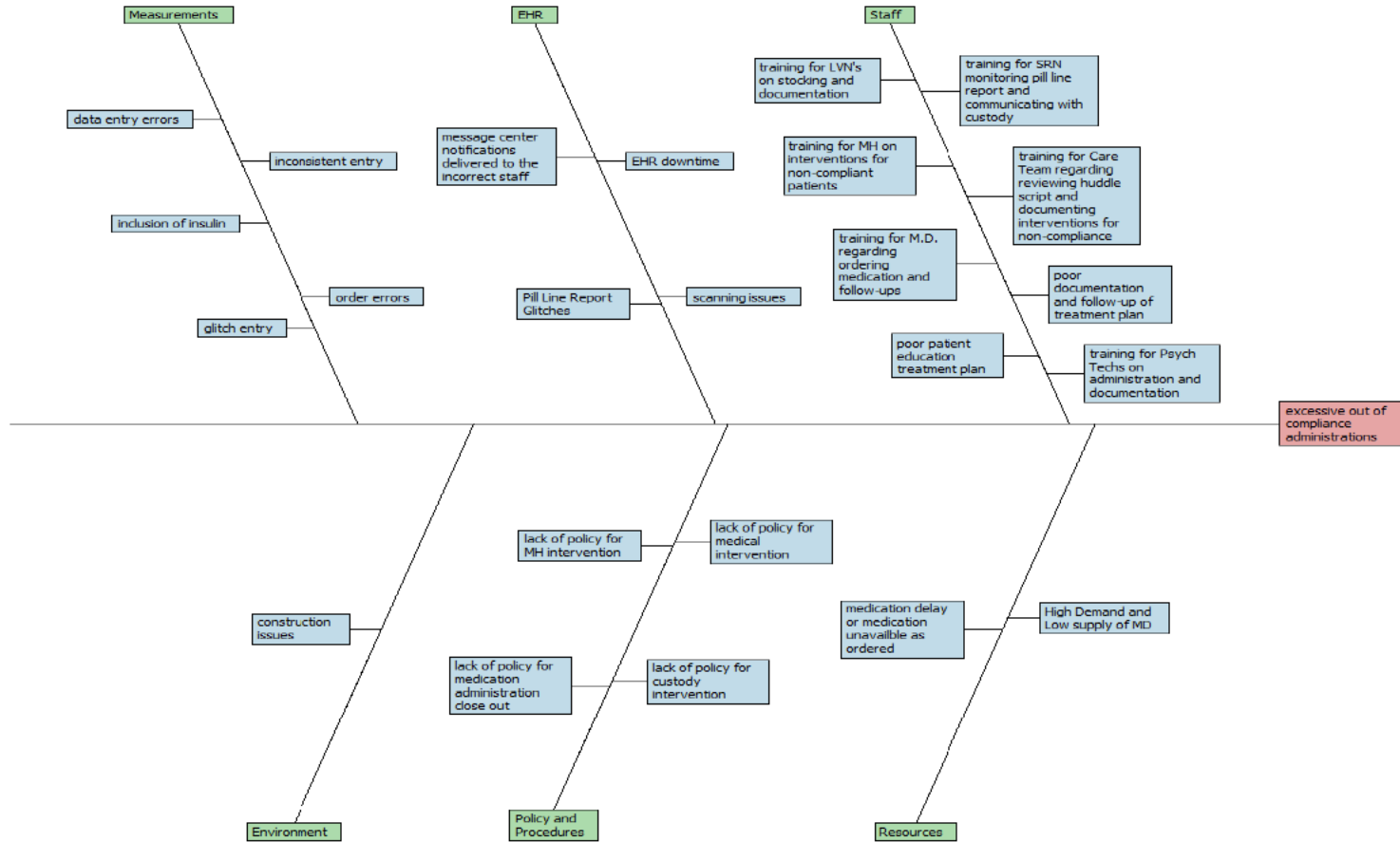


Baseline Capability

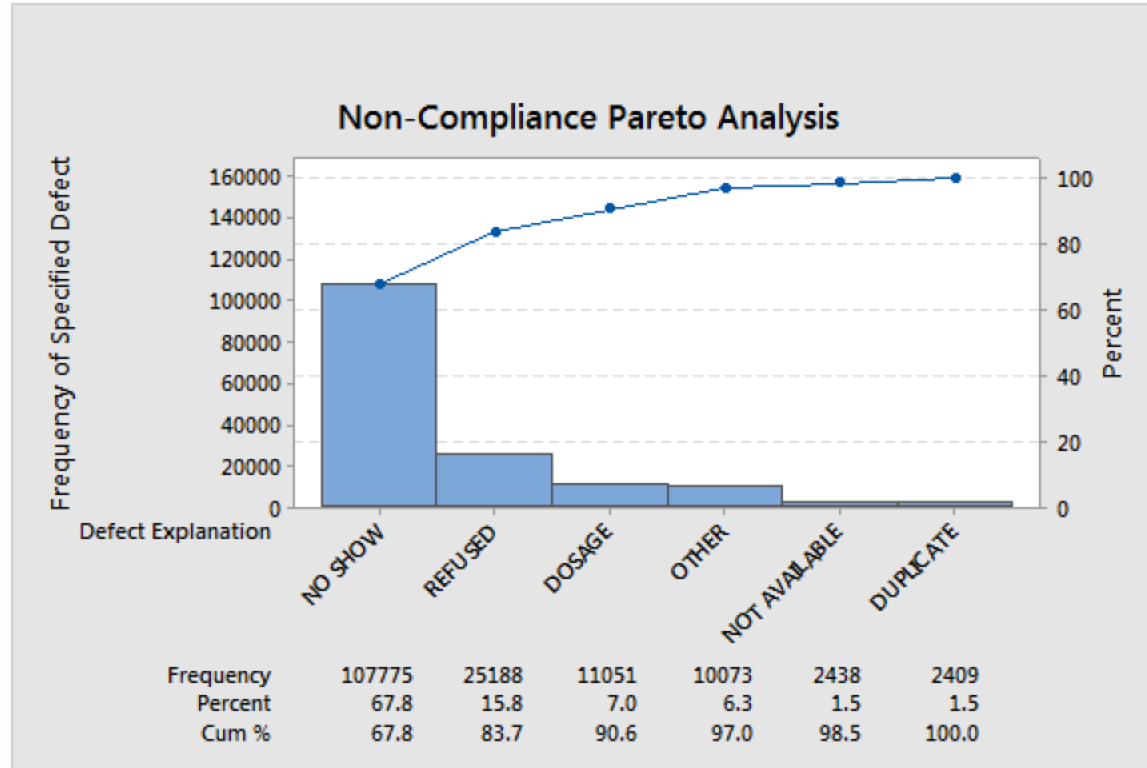
Month	Frequency	Non-Compliant	Total Administrations	Percentage of Total Administrations Completed
MARCH	102565	27483	130048	78.87%
APRIL	98319	26609	124928	78.70%
MAY	104700	25292	129992	80.50%
JUNE	101675	26685	128360	79.21%
JULY	105742	27693	133435	79.25%
AUGUST	109968	25171	135139	81.37%
Grand Total	622969	158933	781902	

Key Findings #1

Non Compliance Intervention Fishbone

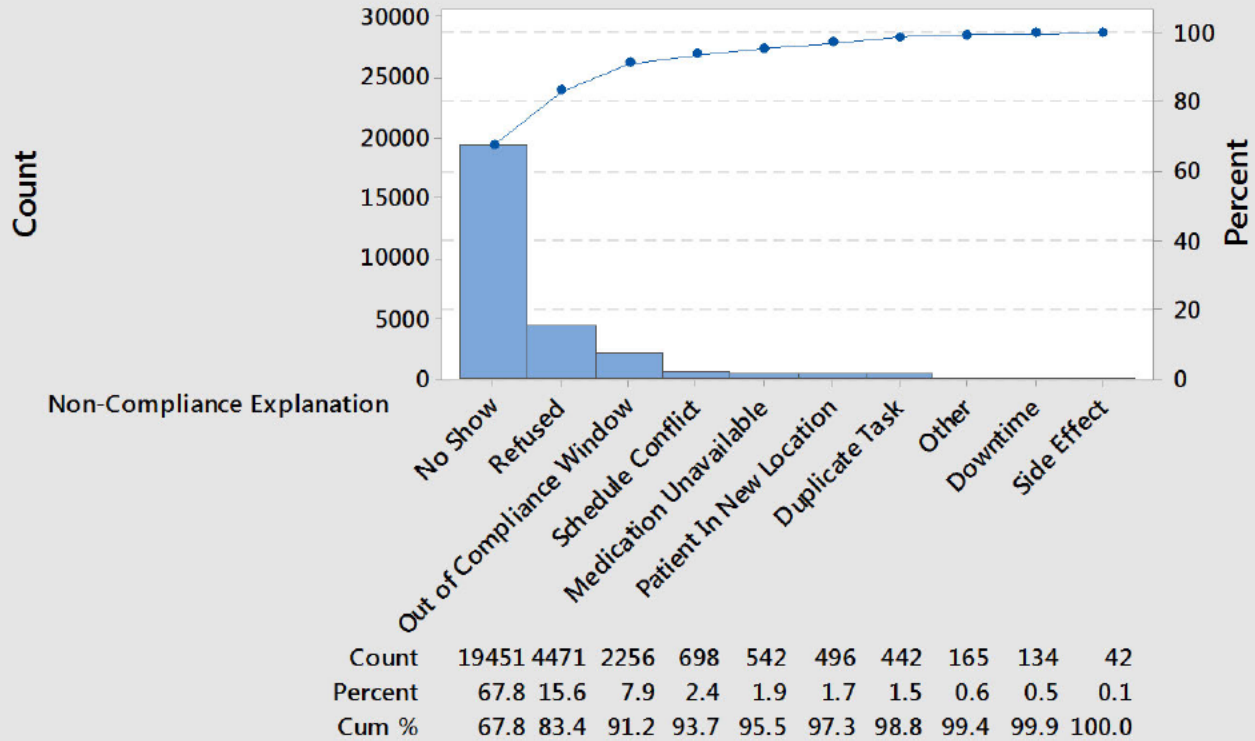


Key Findings #2

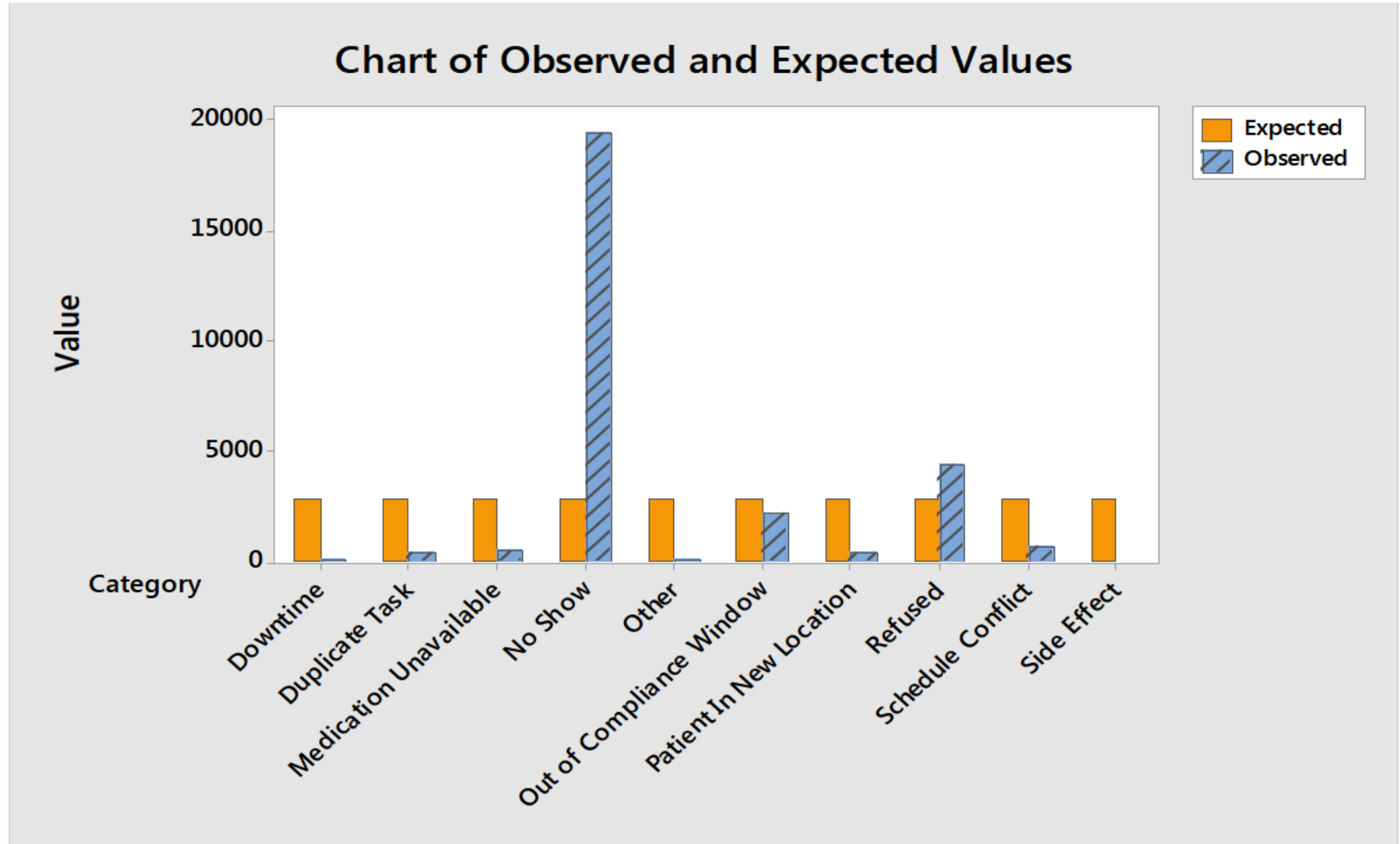


Key Findings #3

Pareto Chart of Non-Compliance Explanation

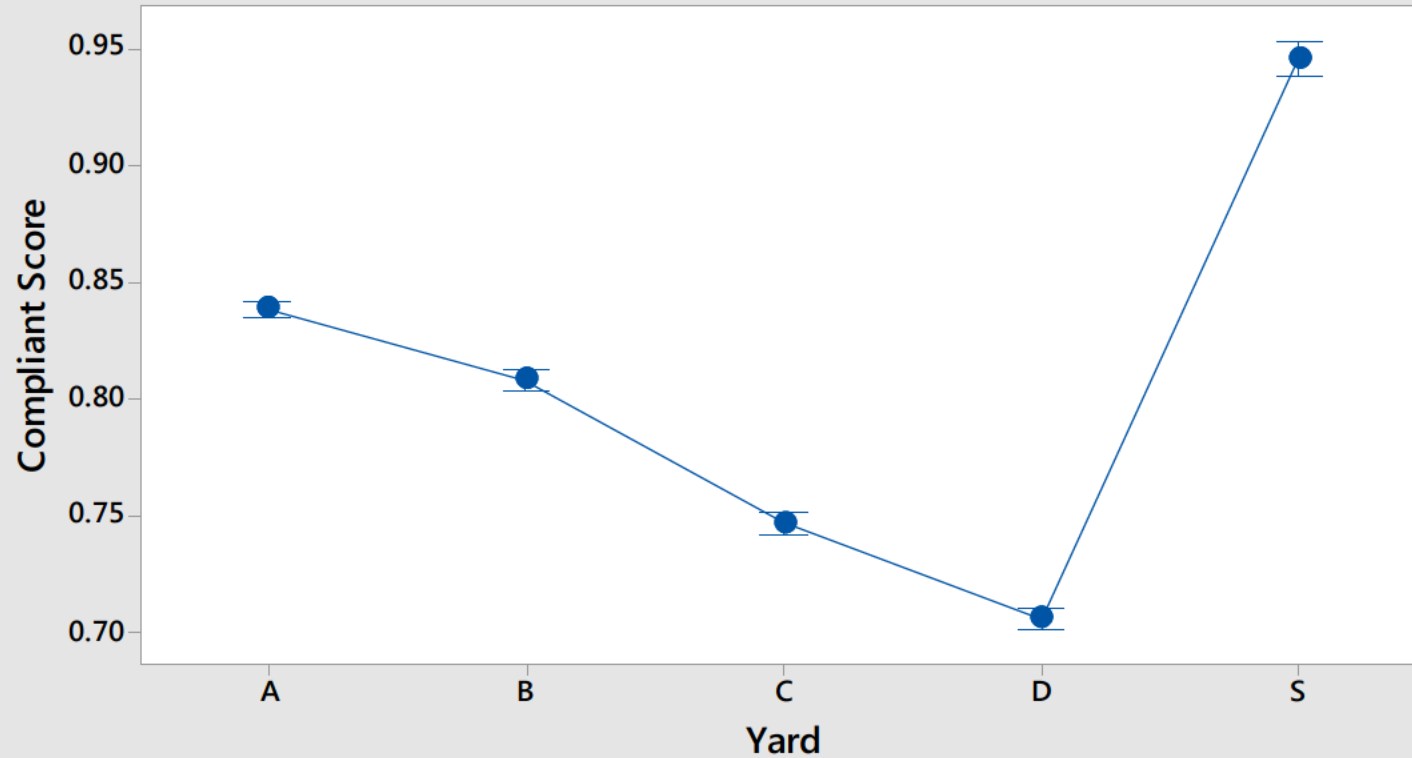


Key Findings #4



Key Findings #5

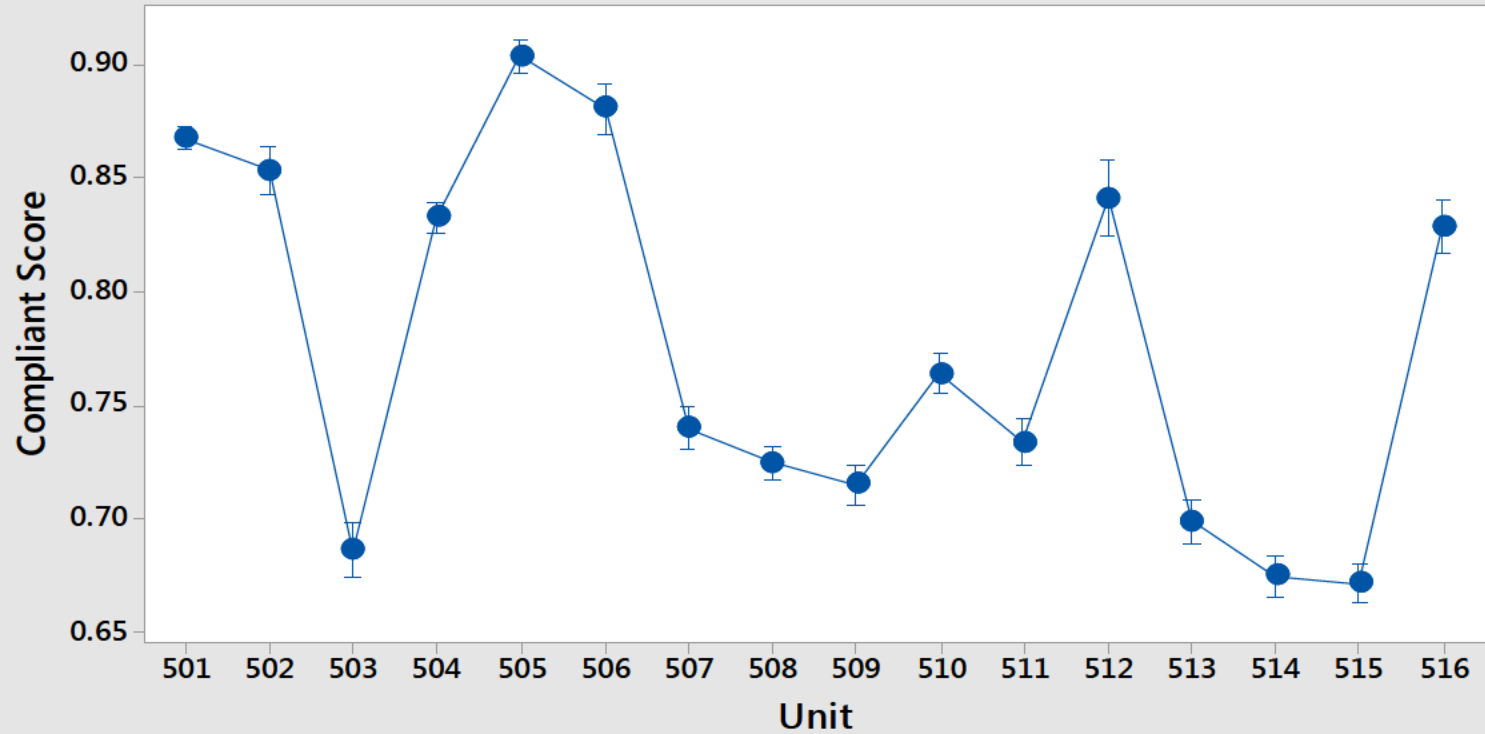
Interval Plot of Compliant Score vs Yard
95% CI for the Mean



The pooled standard deviation is used to calculate the intervals.

Key Findings #6

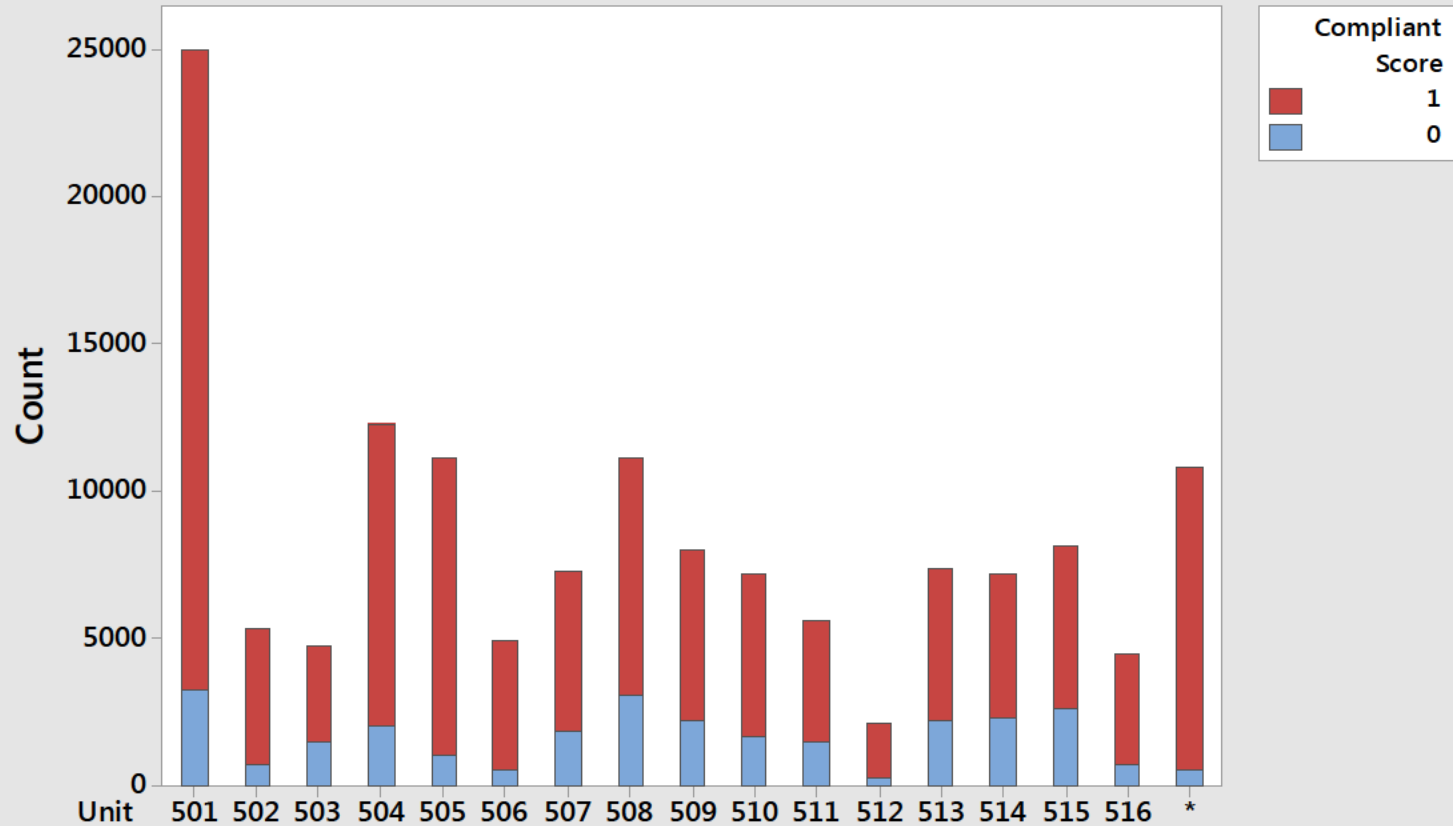
Interval Plot of Compliant Score vs Unit
95% CI for the Mean



The pooled standard deviation is used to calculate the intervals.

Key Findings #7

Chart of Unit, Compliant Score



Critical X's

- No-Show's
- Refusals
- Housing Yard
- Housing Unit

Improvement Techniques

- Reviewed Currently Local Operating Procedures
- Reviewed IMSP&P
- Explored Current Practices
- Developed New Local Process
- Created BETA Test
- Reviewed Project with Local Governing Body for Approval
- Consulted with Interdisciplinary Leadership after Identifying Barriers

Improvement Techniques

B. Medication No-Shows for Pill Lines (Medication Administration)

1. At the conclusion of each medication line, licensed nursing staff shall review the MARs to identify patients who did not present to the pill window to receive their routine medications (no-shows) and/or other medication administration problems.
 - a. Every attempt shall be made to ensure timely medication administration.

January 2016

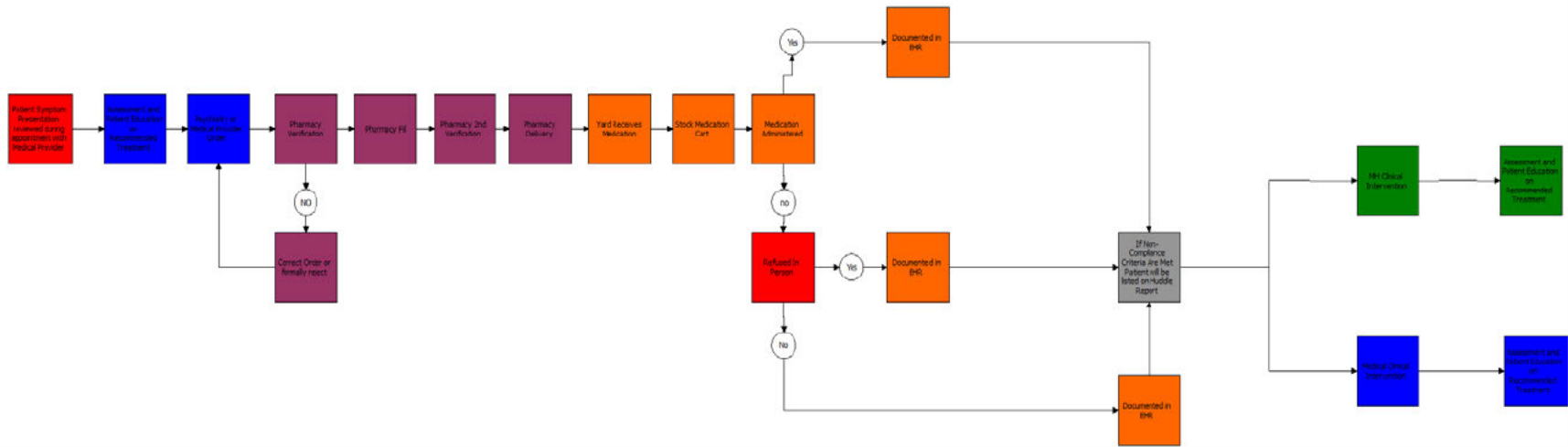
Volume 4, Chapter 11.5

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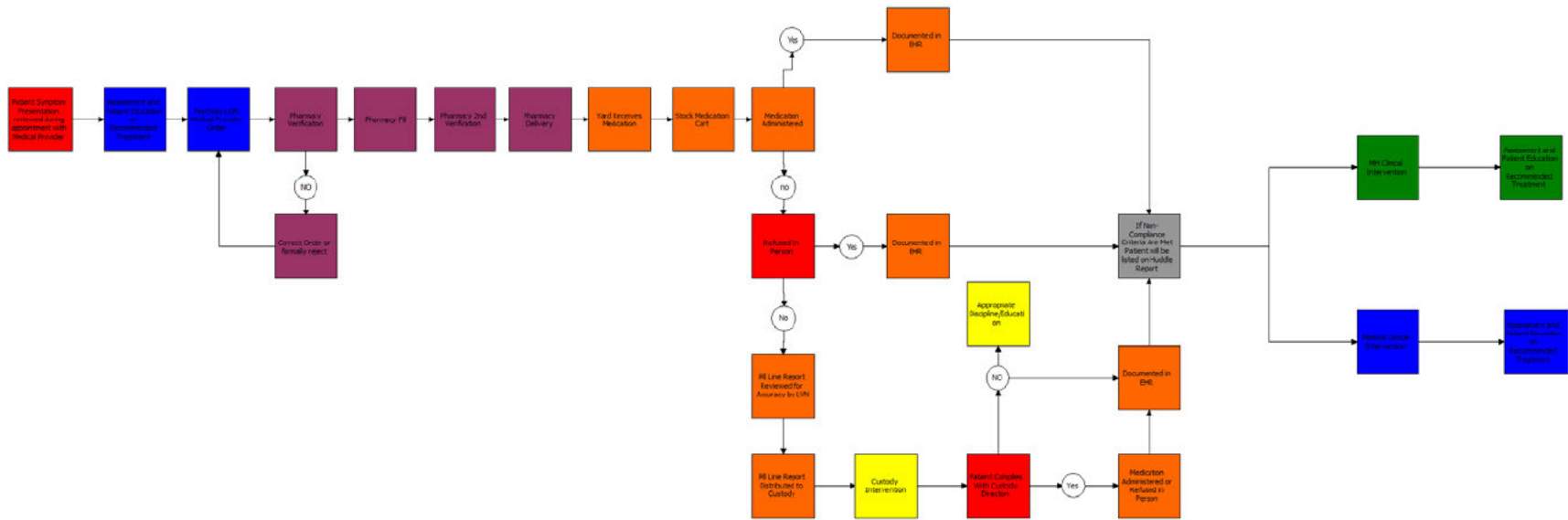
MEDICATION ADHERENCE PROCEDURE

- b. If the patient is a “no-show” for an NA/DOT medication, licensed nursing staff shall coordinate with custody to locate the patient and ensure the patient reports to the medication line for:
 - 1) Medication administration.
 - 2) Documentation of refusal of the medication and the reason for refusal.
 - 3) Documentation of barriers that prevented the patient from presenting to the medication line (i.e., lockdowns or transfers to another area or institution).

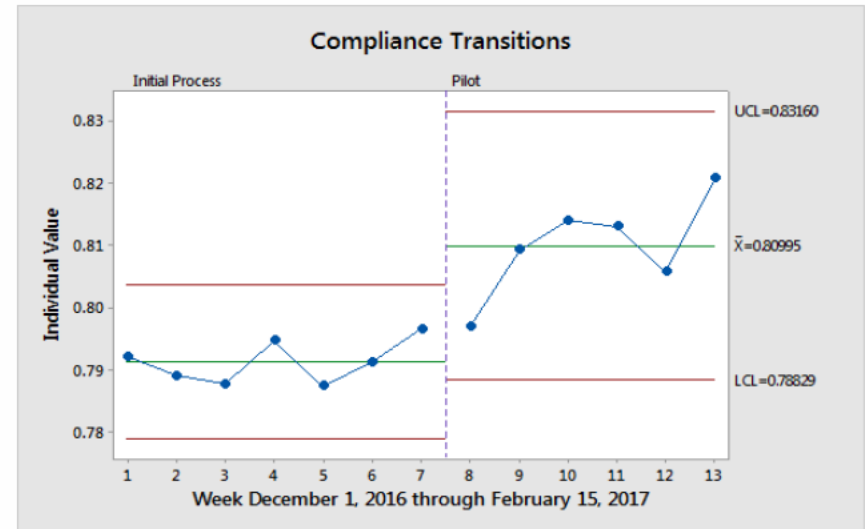
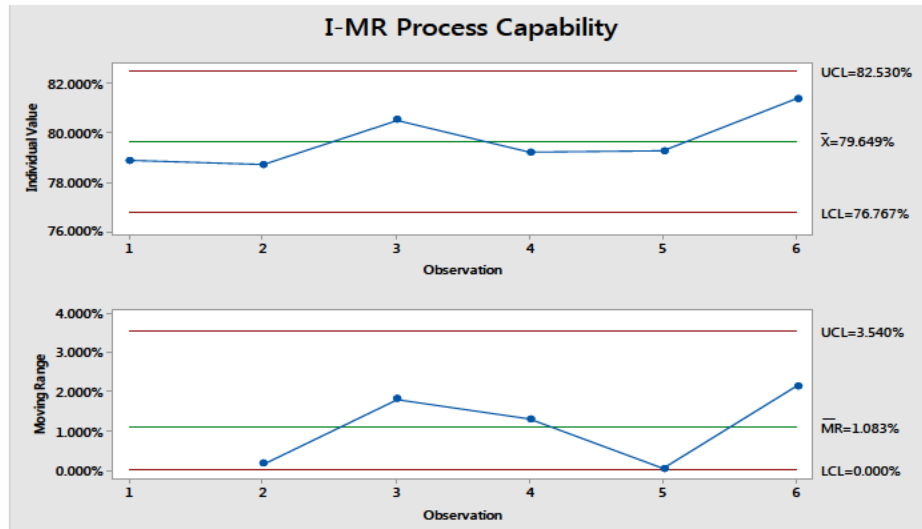
Initial Process Map



New Process Map



New Capability Analysis



Process Stability
March 2016- August 2016

Process Improvement Pilot Beginning
January 3, 2017
One Way Anova: $p = .000$

Control Plan

- Update Current LOP that reflects consistency with Statewide Policy
- Training for Staff Regarding Changes and Process Improvements
- Target Institution Rollout
- Monitor For Unforeseen Issues
- Track Progress and Success

Additional Benefits

- Slow or Steady Disease Progression
- Remission of Symptoms
- Identifying Side Effects
- Improved Safety and Security
- Rapid Identification of Medical Emergency Relapse
- Rapid Identification of Mental Health Emergency Relapse
- Reduce Costs
- Reduced Errors

Contact Information

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