Reducing Missing Medication for EOP: NA/DOT

CCHCS LEAN SIX SIGMA PROGRAM

GREEN BELT | [redacted], PHARM D, CSP-LAC

Project Background

- Our last institution report was from 7/1/2107 to 9/30/2017. During that time there were 223 Lost KOP, 238 Lost DOT, 210 Lost NA and 1 Lost CTC totaling 672 missing medications. This accounts for 2.40% of our total orders at a medication cost of $41,617.72.
- With the implementation of the Electronic Health Records System (EHRS) our number of missing medication requests at Los Angeles County State Prison has significantly increased from 2.4% institutionally to 14% for medication dispensed to D-Yard (January 2018).
- Missing medication creates waste in multiple ways: physical, time, and financial. It also causes delays in treatment/care and reduces the satisfaction of the inmates/patients.

Project Charter

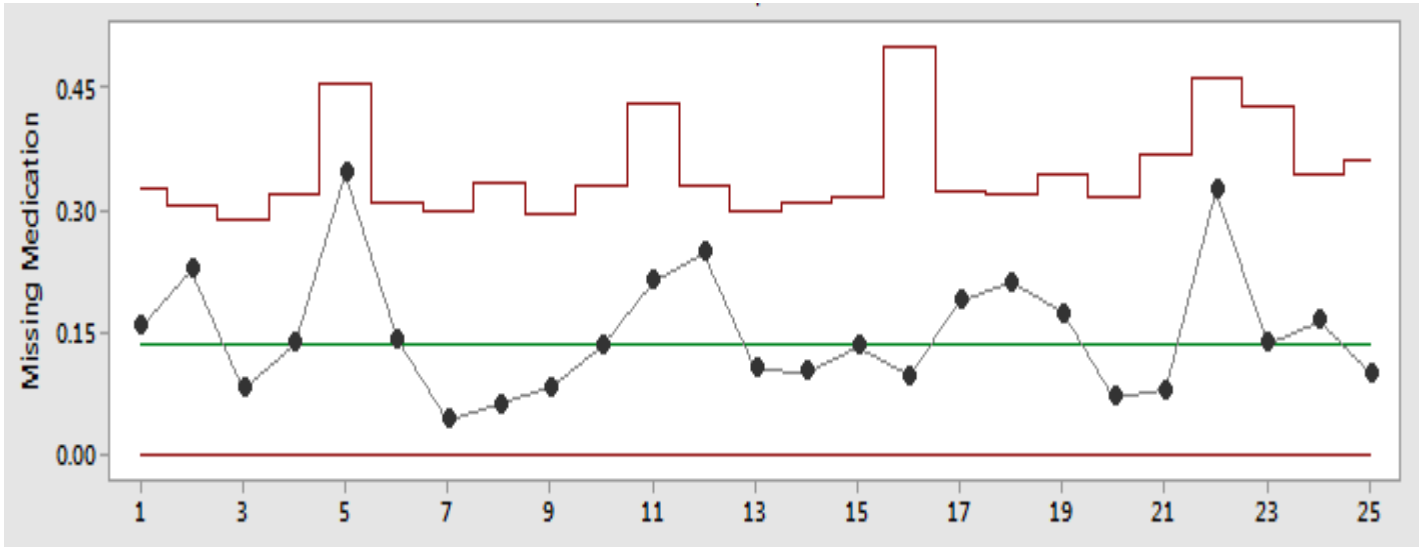
- Problem Statement: This project aims to track the D-Yard EOP missing medications after our implementation of EHRS on 10/31/2017.
- Project Objective: Decrease the number of NA/DOT missing medications to 1%.
- Primary Metric: Reduce the number of missing medications as evidenced by the number of requests sent to the Pharmacy Message Pool.

Team Members

- Champion: [redacted] PIC
- Process Owner: [redacted] SRNII
- Executive Sponsor: [redacted], CEO
- Team Members:
  - [redacted] Black Belt Advisor/QMSU
  - [redacted], QMSU
  - [redacted] QMSU
  - [redacted] Pharmacy Technician
  - [redacted], Psychiatric Technician
  - [redacted], LVN
  - [redacted], Healthcare Captain

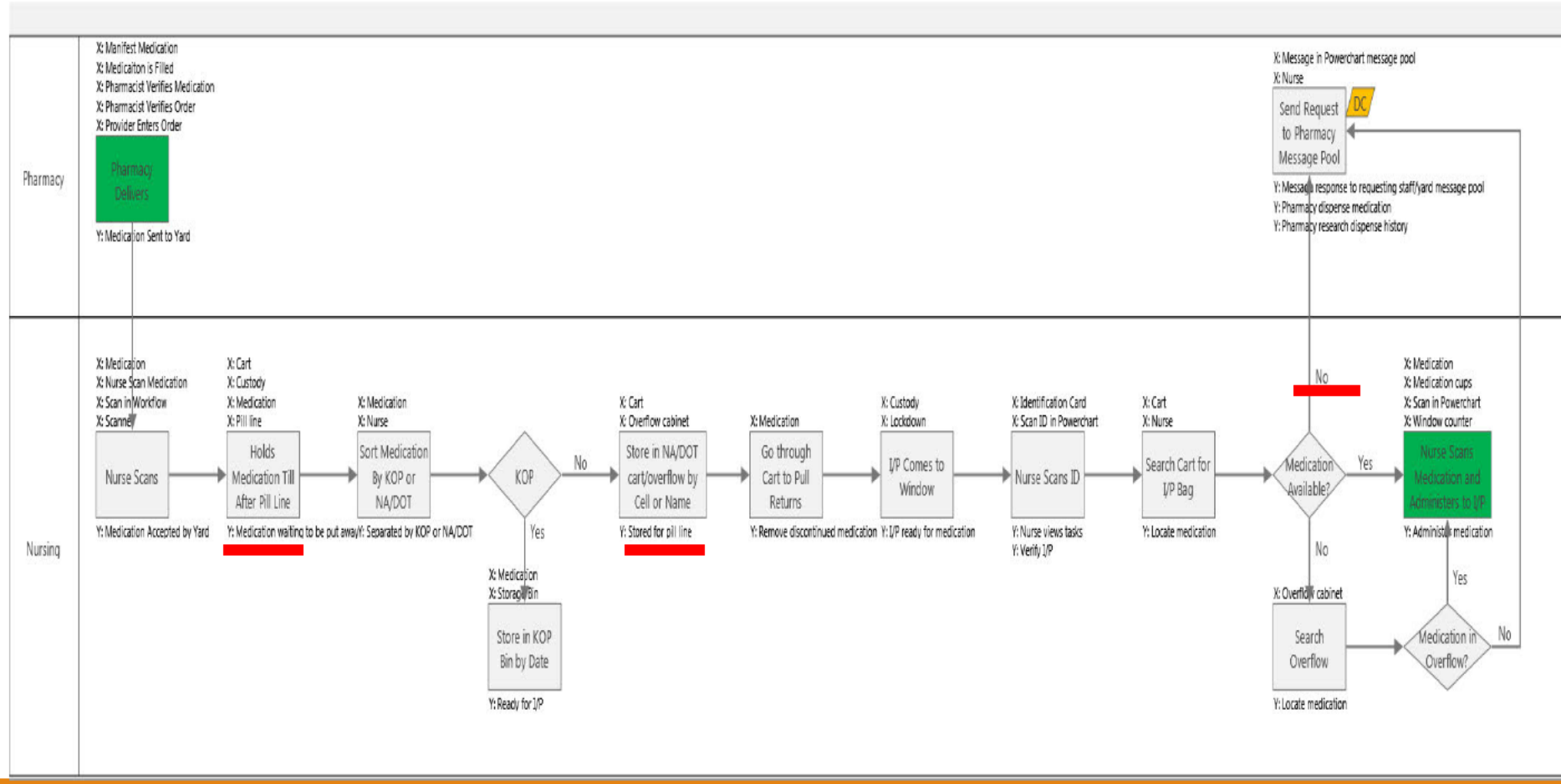
Baseline Capability/Performance

- D-Yard missing medication for January 2018
- Process is stable. Expected variation with no points out of control.
- Percent defective 14%



Initial Process Map

- Variation: when meds are put away, how they are stored, and when requests are sent



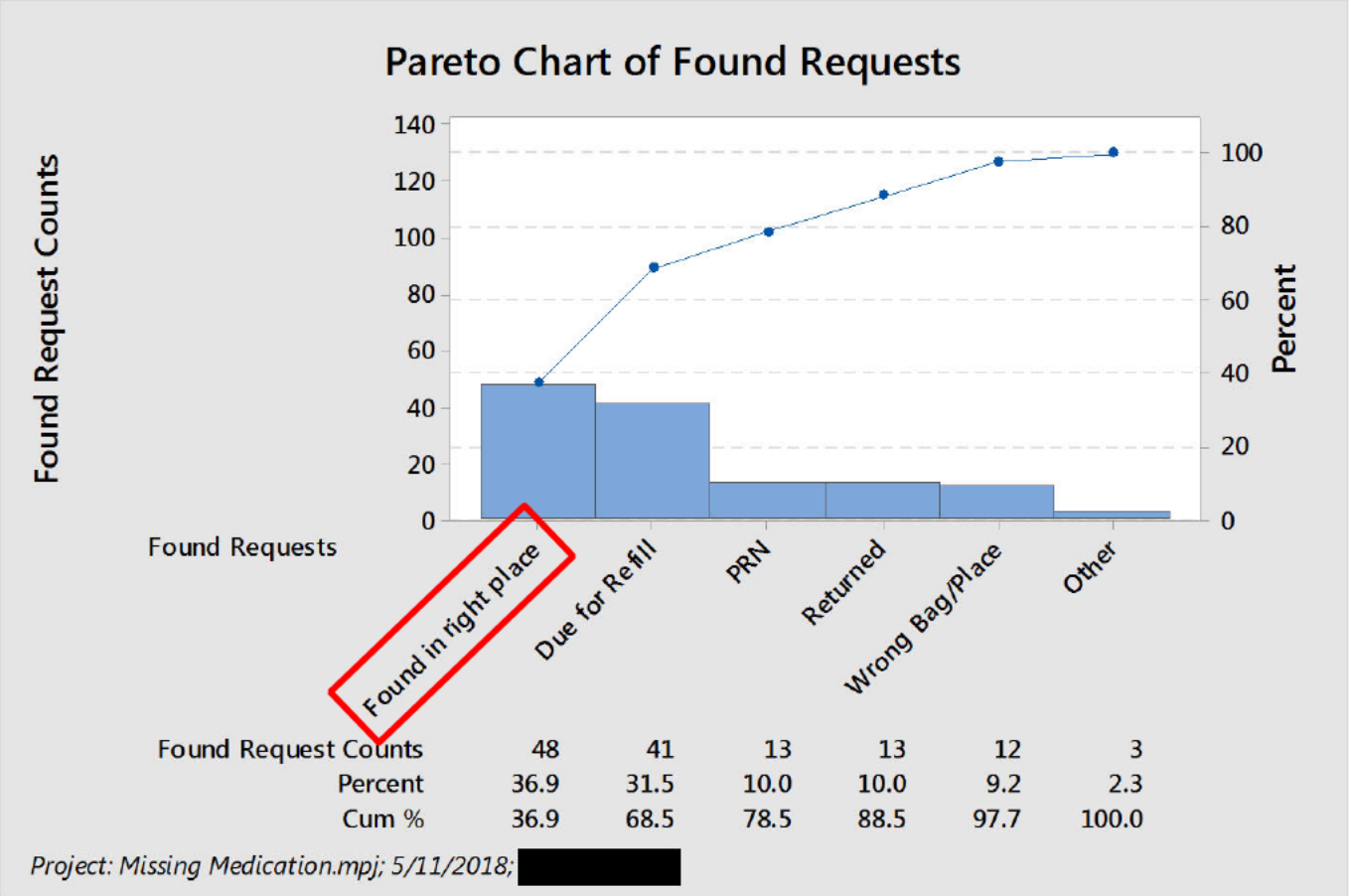
Failure Modes and Effects Analysis (FMEA) Findings

- A major issue after analysis of the failure modes was the storage process

Process Map - Activity	Key Process Input	Potential Failure Mode	Potential Failure Effects	SEV	Potential Causes	OCC	Current Controls	DET	RPN
Detailed Process Map - Store in NA/DOT cart/overflow by Cell or Name	Storage process	store in wrong place	medication not administered	10	human error	7	none	10	700
Detailed Process Map - Store in NA/DOT cart/overflow by Cell or Name	Storage process	store in wrong place	medication not administered	10	no standard	7	none	10	700
Detailed Process Map - Go through Cart to Pull Returns	Return process	few doses medication returned	medication not administered	10	training	6	none	10	600
Detailed Process Map - Nurse Scans Medication and Administers to I/P	Medication	borrowing	medication not administered	10	missing medication	5	policy	10	500
Detailed Process Map - Search Cart for I/P Bag	Medication	transfer inter	medication not administered	10	meds not being sent with I/P	7	R&R, policy	7	490
Detailed Process Map - Send Request to Pharmacy Message Pool	Medication	duplicate dispensing	rework	7	no notice when medication sent	7	none	10	490
Detailed Process Map - Holds Medication Till After Pill Line	Pill line	medication not seen	missing medication	10	not put away	4	none	10	400
Detailed Process Map - Go through Cart to Pull Returns	Return process	full cards medication returned	medication not administered	10	space	4	none	10	400
Detailed Process Map - Nurse Scans Medication and Administers to I/P	Medication cups	wasted	missing medication	10	cup is too small	2	none	10	200
Detailed Process Map - Nurse Scans Medication and Administers to I/P	Window counter	wasted	missing medication	10	wind blows cup on floor	2	none	10	200
Detailed Process Map - Nurse Scans Medication and Administers to I/P	I/P	wasted	missing medication	10	I/P refuses	1	none	10	100

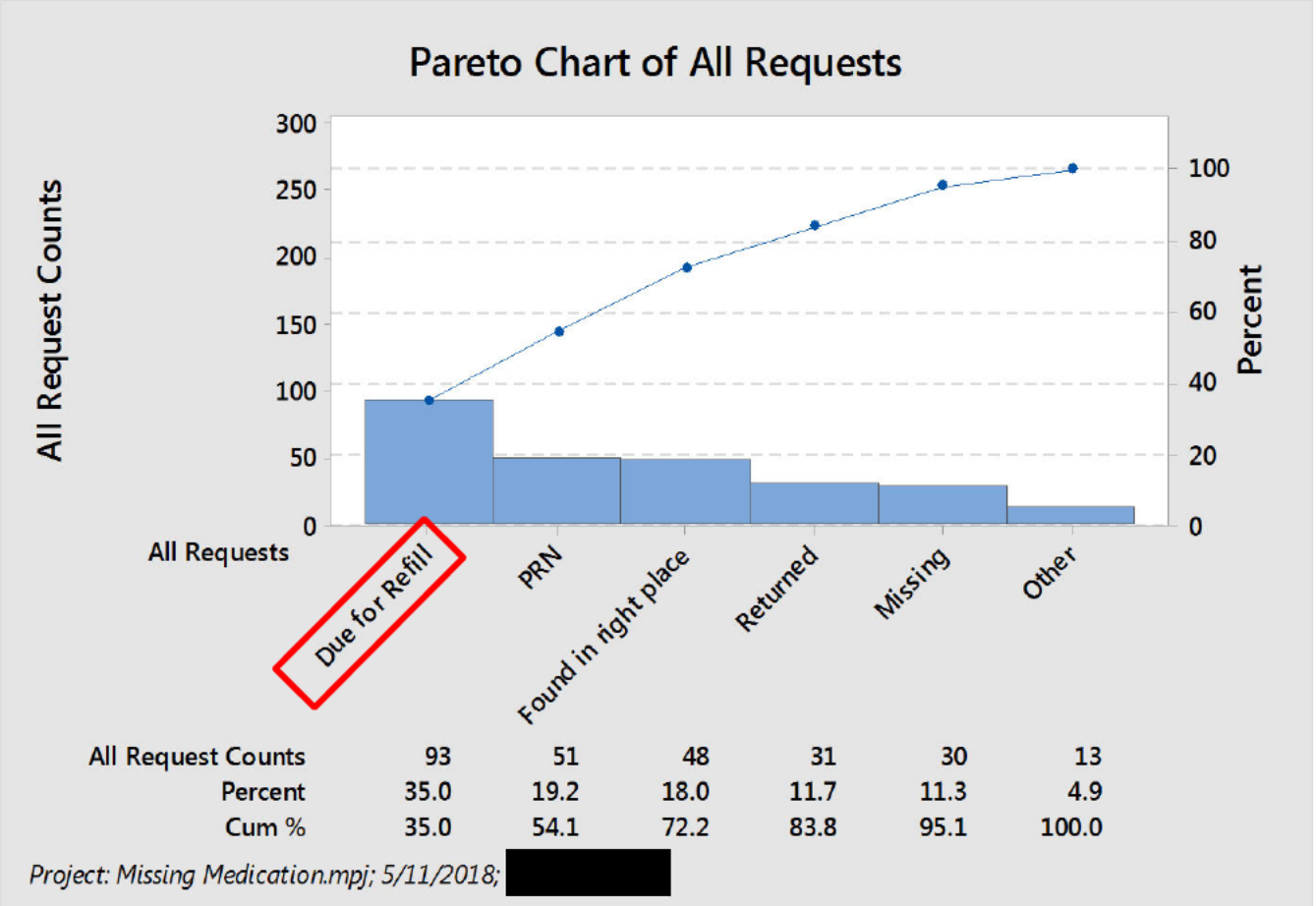
Key Findings 1

- Of the missing medication requests that we found they were in the right place.
- The storage process and pill room organization needs to be standardized.
- Method/tool: Fishbone Diagram, FMEA, 5 Whys and Pareto Chart



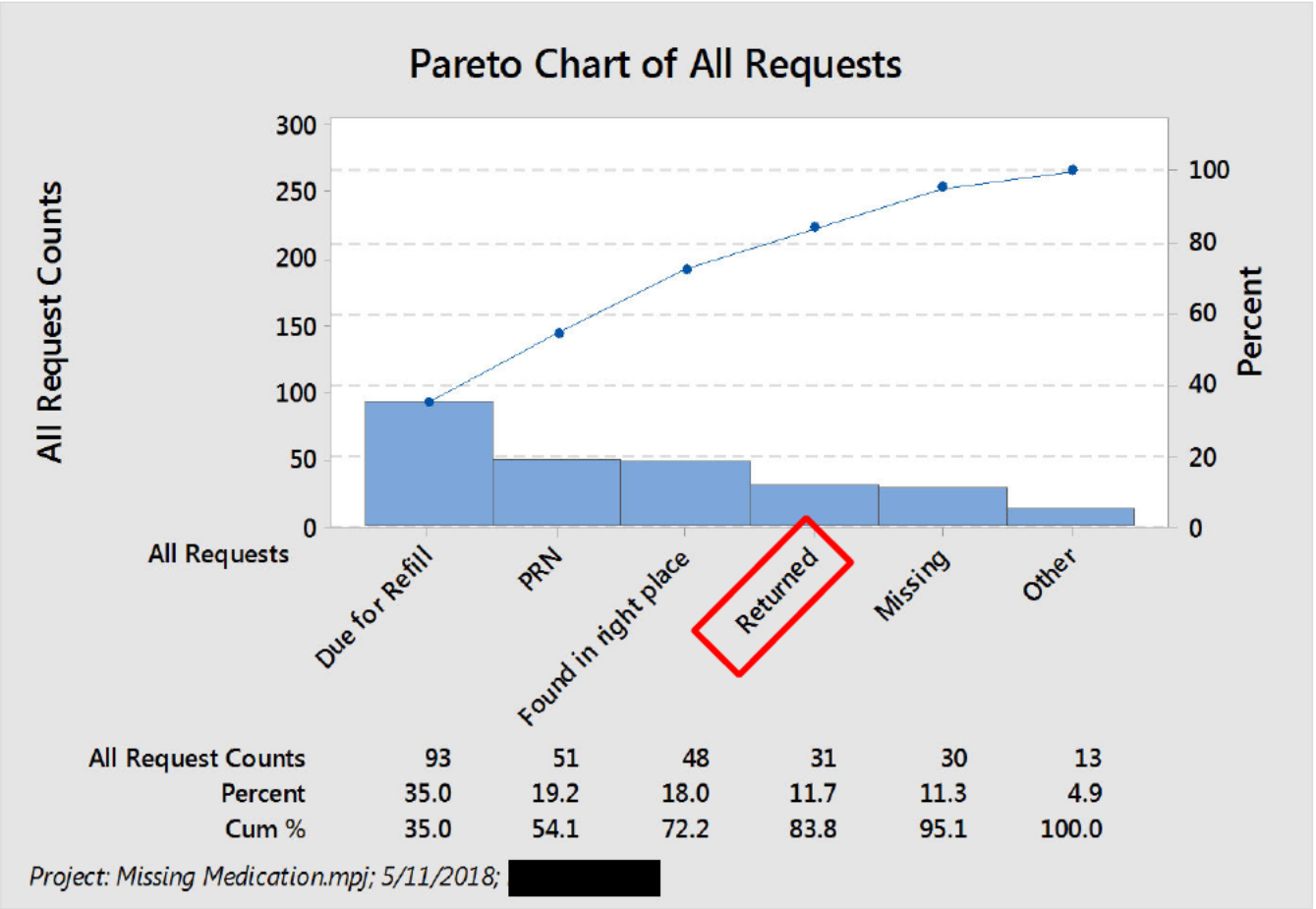
Key Findings 2

- The majority of requests were orders due for refill. RN's had a couple doses left or were short doses.
- RN's not aware of next refill date, borrowing/wasted meds not accounted for.
- Method/tool: Fishbone Diagram, FMEA, and Pareto Chart



Key Findings 3

- Active orders were being returned: partials or full cards.
- The return process and pill room organization needs to be standardized. Space is an issue especially on D5 Yard.
- Method/tool: Fishbone Diagram, FMEA, 5 Whys and Pareto Chart



Critical X's

- Cart and overflow organization – the pill rooms are unorganized and there is no standard process for the storage of medication.
  - Interventions: 5S and visual management
- Medication delivery notification – RN's are not aware of when an order will be refilled.
  - Interventions: add last filled date to PowerChart or check medication label
- Borrowing and wasted medication – RN's using other I/P meds due to it being missing. Medication being wasted is not tracked.
  - Interventions: law states borrowing is illegal, standardized messages to Pharmacy Message Pool
- Return process – active medications are returned to pharmacy, partials when new refill arrives or full cards that take up space.
  - Interventions: visual management and pill room organization

Improvements

- Organize, clean and standardize using 5S.
- Create flowcharts and checklists for visual management.
- Train staff on return and message pool request processes.
- Add delivery date in PowerChart or check last fill on label.

Improvements

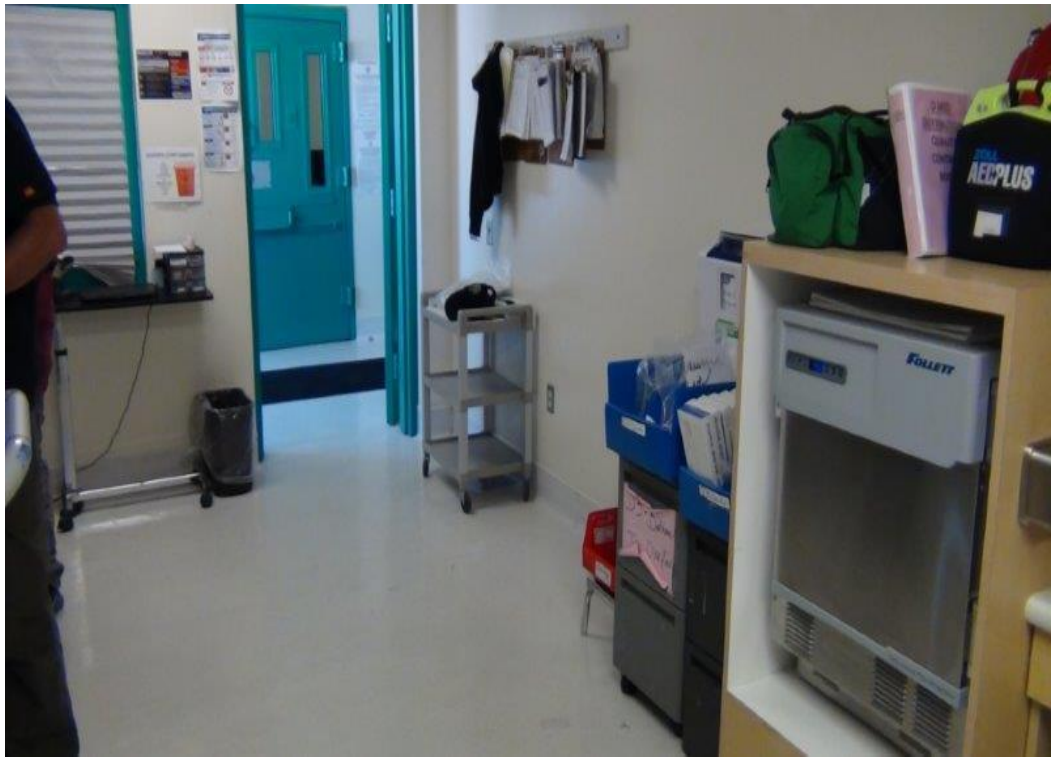
Before

After

Improvements

Before

After



Improvements

Before

After

Improvements

Guidelines for Medication Return to Pharmacy

DO RETURN:	DO NOT RETURN:
D/C Medication(s)	Medications without dose/instruction changes for I/P who arrived from other CDCR prisons *(Use med until Pharmacy delivers new meds)*
Expired Order(s)	
Medications for Parcled I/P	Medications for I/P transferred to another LAC Yard *(Forward medication to I/P's new Pill Line)*
Refused KOP and / or KOPs not picked up within 4 Days	

Instructions for Other Items:		RETURN to Pharmacy	Do NOT Return to Pharmacy
Liquid Medication:	If opened, place in pharmaceutical waste bin		✓
Loose Tablets:	Place in pharmaceutical waste bin		✓
Expired Medication:	Place in pharmaceutical waste bin		✓
Refrigerated drugs:	Keep refrigerated, and return in person.	✓	
Humira / Pegasys:	Must be **returned to stock** with accompanying needles	✓	
Needles: (Other than Humira/ Pegasys):	Dispose of all other needles in sharps container.		✓

Improvements

Pharmacy Tools - Tip Sheets

MEDICATION CART CLEANLINESS

DAILY CHECKLIST

After each med pass:

- ☐ Check for loose pills at the bottom of each bin in the medication cart.
- ☐ Check carts for missed placed medication cards and assure medications are in alphabetical order.
- ☐ Check for expired medications and send expired medications back to pharmacy.
- ☐ Clean medication cart by removing medication bins and wiping the cart down.

Yard and Watch _____ Sign and Date _____

MEDICATION REQUESTS

Before sending a Medication Refill Request to pharmacy follow the steps below:

1) **Check the order** – Is the order expired?
   (Do not send Request Refills to the pharmacy for expired medication)
2) **Check the history and/or prescription label**
   (The history can give you valuable information)
3) **Check the cart for misplaced medication**
   (Sometimes medication are misfiled)
4) **Check the overflow**
   (Overflow is different on each yard, be sure to look in med cart or the overflow carts)

When you are sure you **do not have the medication**, send a request to the Pharmacy Message Pool:

- Request only the missing / refill medication that is needed!
- Note in the comment section the details of the information to communicate to pharmacy…

Please provide enough information to help you with your request, such as:

- a. the number of doses that are left
- b. that you have checked the overflow areas and are still unable to find them

Please note:

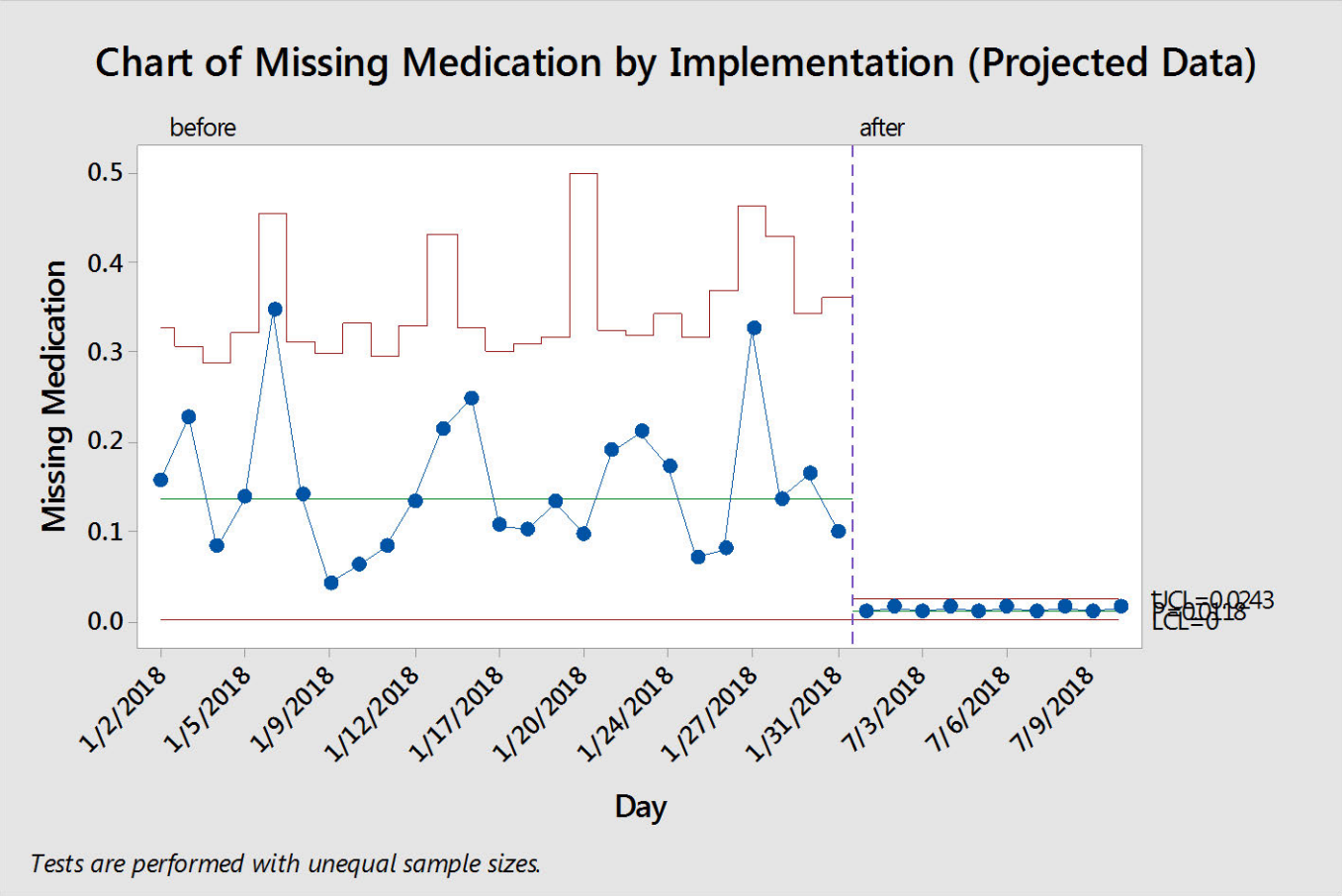
If it is after hours and you do not have the medication, use the **OMNI Cell**.

Updated Process Map

- No removal of steps
- Reduce variation of steps by standardizing the process:
  - Pill room carts organized by alphabet across all yards
  - Workflow with outlined process aided by visual management
  - Include basic information in Pharmacy Message Pool request to communicate effectively

Updated Capability/Performance Analysis

- Projected data after completion of improvement process
- Goal of 1%
- Process is stable with expected variation



Control Plan

- Daily checklist for staff
- Standardized workflow
- Monthly audits to ensure improvements
- Monthly Continuous Improvement Team meetings
- Implement visual management, update and train staff, EHRS fill date

A3

A3 Performance Tracker

General Information:

Project Title: Reducing Missing Medications for EOP: NA/DOT
Agency/Department: California State Prison
Division/District/Office: Los Angeles County
Champion/Process Owner: [redacted]
Green Belt: [redacted]
Executive Sponsor: [redacted]
Date: 6/15/18

Problem Statement:

With the implementation of the Electronic Health Records System (EHRS) our number of missing medication requests at Los Angeles County State Prison has significantly increased from 2.4% institutionally (September 2017) to 14% for medication dispensed to D-Yard (January 2018).

Primary Metric:

Reduce the number of NA/DOT missing medication requests (as evidenced by the Pharmacy Message Pool)

Goal:

Decrease the number of missing medications to 1%

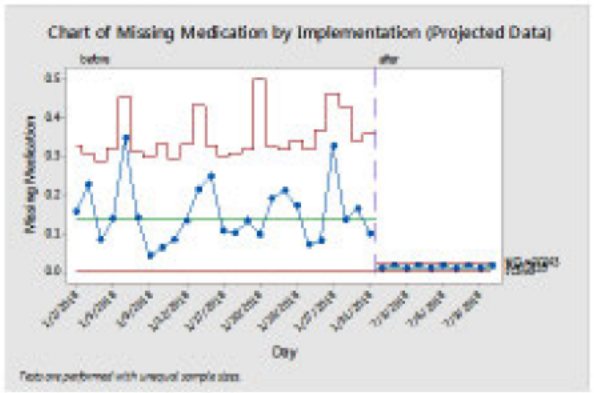
Root Causes (Critical X's):

- Cart and overflow organization
- Medication delivery notification
- Return process
- Borrowing and wasted medication

Solution Implementation Tracking:

item	status
Project presentation to D-yard staff	implemented
5S for D-Yard Building 3 and 4	implemented
5S for D-Yard Building 1, 2, and 5	implemented
Return process and message pool training	target 7/11/18
Visual management postings	target 7/13/18
EHRS next fill date	target 8/1/18

Updated Control Chart:



Baseline Average: 14%
Current Average: 1% (projected)

A3 Performance Tracker

Project Impacts

- Medication Costs
  - Baseline (September 2017) ~ $14,000/month Institution
  - After EHRS (Jan – March 2018) ~ $57,000/month D-Yard only
  - Projected (December 2018) ~ $2,000/month Institution
- Staff rework ~ $15 or 23 minutes/lost medication
  - January $10,875 or 278 hours
  - February $7,740 or 198 hours
  - March $9,720 or 248 hours

Project Impacts

- Reduced staff time spent on rework
- Reduced defects
- Improved patient safety and healthcare delivery
- Increased staff morale and accountability
- Improved organization and inventory practices

Project Summary and Lessons Learned

- The Missing Medication Project is in the beginning stages of the Improvement process but has achieved positive feedback from the staff working in the pill rooms.
- The project team has implemented a 5S program to organize, clean, and standardize each pill room on D-Yard.
- This project relied on staff from multiple classifications and job duties. Working with an interdisciplinary team allowed us to have a better understanding of healthcare delivery and uncover specific insights that greatly improved our outcomes.

Green Belt Contact Information

- Name: [redacted]
- Title: Pharmacist I
- Phone number: [redacted]
- Email address: [redacted]