

# Application of Lean to Reduce Medication Return Errors in Health Care

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Alex Kachler and Thembela Shabangu

# Cape Fear Valley Medical Center

- Opened in 1956
- Specializes in heart care, cancer treatment, and surgical services
- Quality and Patient Safety (QPS) department undergoes projects based on improving customer experience.



# Problem Statement



Patients at the Cape Fear Valley Hospital are being discharged without their medications being returned.



This leads to increased holding costs, increased lost belongings claims, and additional medication errors.



The CFV Hospital has no standardized process for documenting and returning medication.

# Project Overview

- Create and document a set of steps that will standardize how home medications are recorded, kept, and returned to patients.
- This process will locate the causes of these errors, and include preventative action against them.
- A test period will be included after our solutions are recommended before any long term decisions are made.

# Lean Six Sigma

- First used in the 1980s by Motorola to reduce defects in their manufacturing process.
- Combination of Lean Manufacturing and Six Sigma principles.
- Goal is to reduce waste, or errors in the process being examined.
- Uses a variety of tools including DMAIC, Kaizen, Value Stream Mapping, and Cause and Effect Analysis.

# DMAIC

- Our team followed the DMAIC method to solve this problem
- D – Define
- M – Measure
- A – Analyze
- I – Improve
- C - Control

# Define

- Discussion of the problem at hand (VOC)
- Map out the project timeline (Gantt Chart)
- Defining measurable goals
  1. Standardize process for accepting home medication
  2. Develop an indicator of failures in the process
  3. Involve pharmacy
  4. Document consistency of process

# Measure

- Interview nurses in different departments to gain perspective on the issue
- Visit medication room to visualize where meds are being taken
- Collect data on home medications
- Map out current state

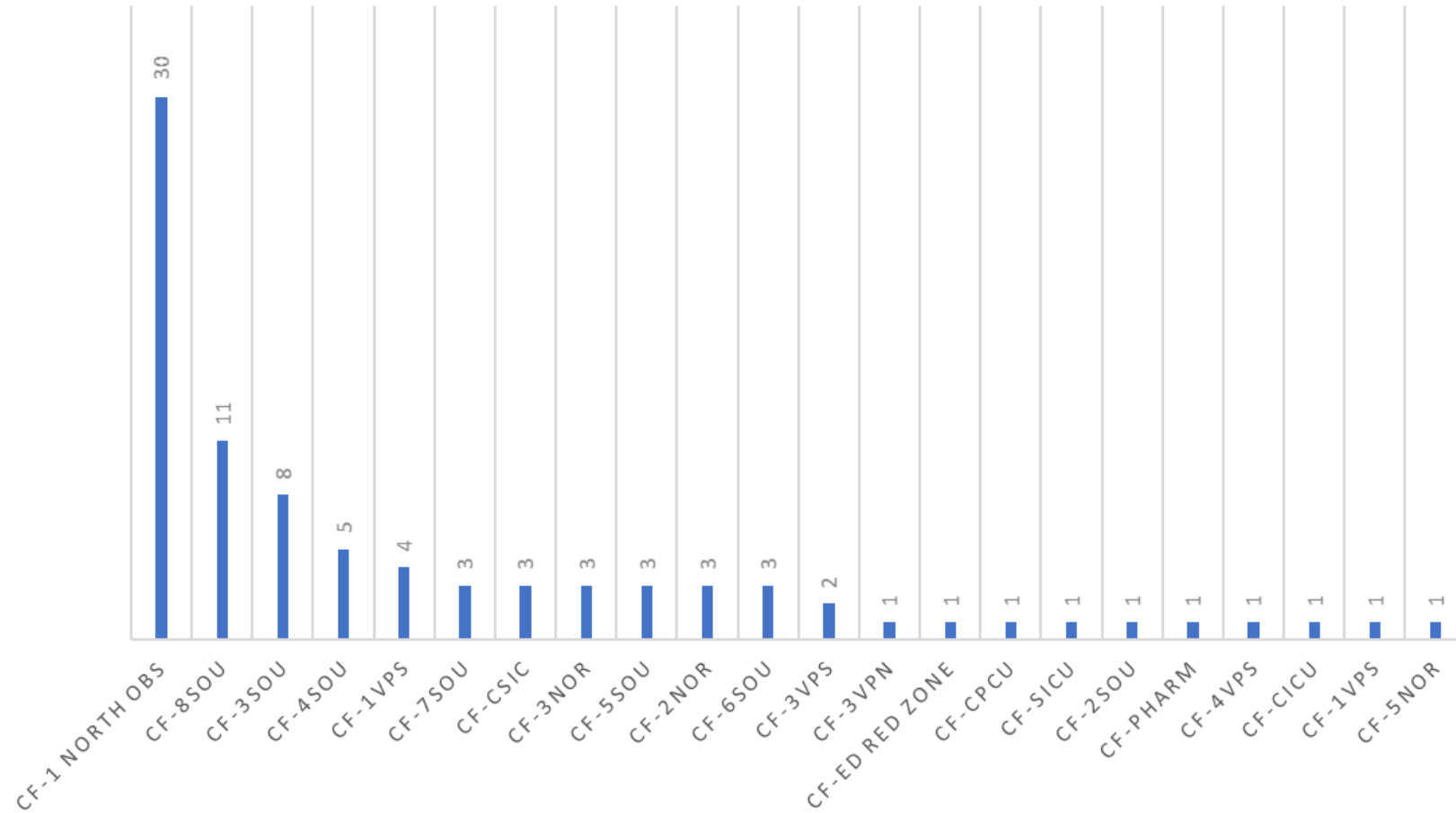


# Current State

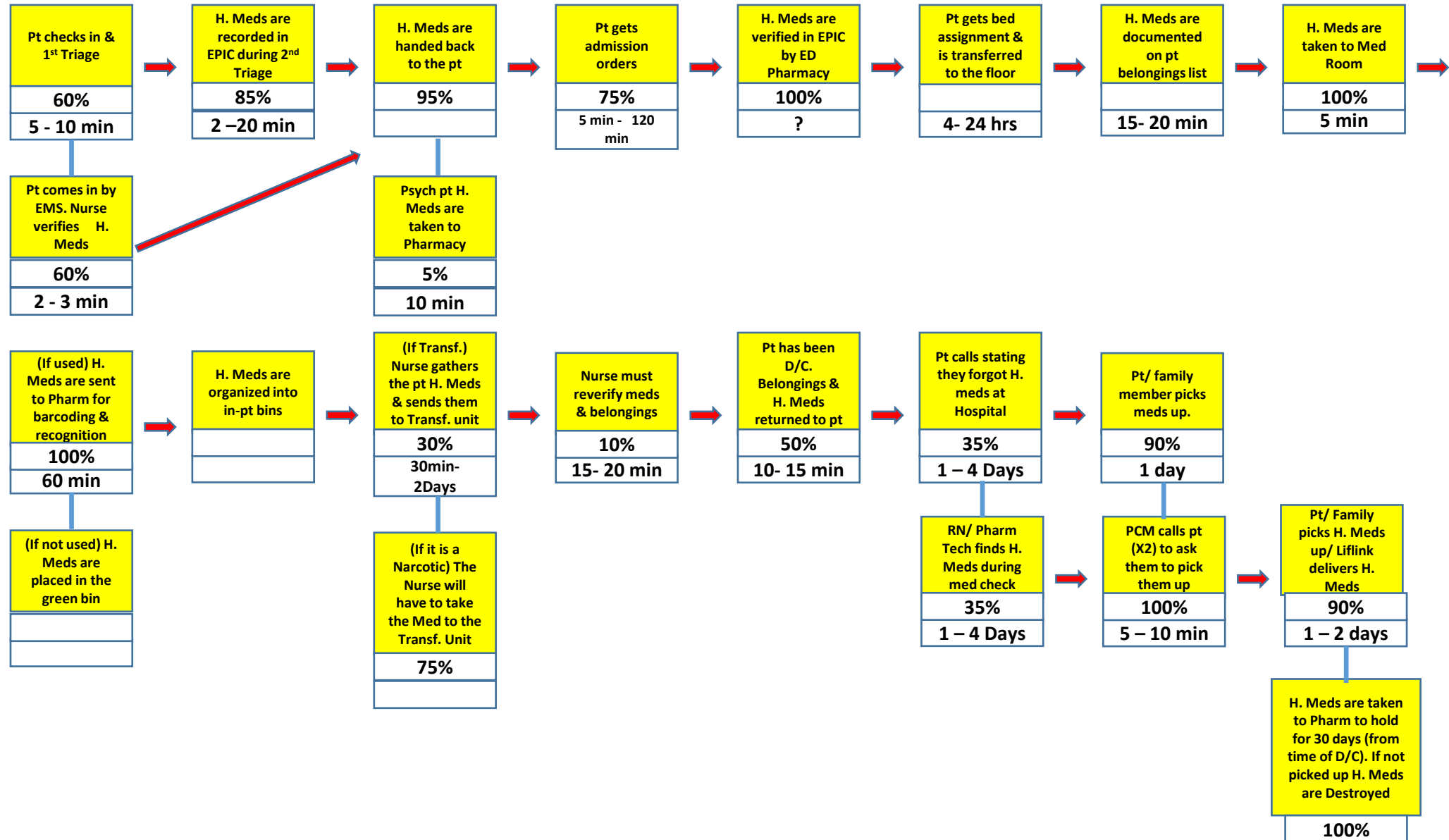
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**PATIENT BELONGINGS FT SIRS BY ROLLED UP INCIDENT  
TYPE: MEDICATION BY LOCATION  
JAN 2019-JAN 2020**



# Value Map for Home Medications - current state



# Analyze

- Root cause analysis for each step
- Analyze and compare data
- Compare processes throughout hospital

# Analyze

- Areas of examination: ED, floor, transfers, discharge
- Common Problems:
  - Lack of time
  - No process
  - Lack of accountability
  - No verification in EPIC
  - No reminders in EPIC
  - Confusion in EPIC

# Improve

- Include YES/NO check on IPASS for Home Meds
- Orange arm band for patients to wear to remind nurses about their Home Meds
- Include reminder banner in EPIC when filling out discharge forms
- 5S of Med Room
- Implementing Med Room check sheet and adding 5S checkoff

5S

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Sort

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Set (in order)

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Shine

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Standardize

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Sustain

# 5S

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Month: Feb.

## Home Meds Checkoff

x5	2/1/2020	Jason Kelly	Jan Matthews, RN	x5
x3	2/2/2020	Jason Kelly	Jan Matthews, RN	x3
x1	2/2/2020	John Doe, RN	Linda Kelley, RN	x1

[illegible]

# Control

- Write process and set of standards out for hospital
- Communicate with clinical educators to see what they are struggling with
- Encourage culture that wants to improve and can handle change
- Encourage culture that embraces data collection

# Future Research

- Due to COVID-19, we were unable to test our solution, but have provide our findings to the QPS department for their future research
- Expanding this to all lost patient belongings can save the hospital thousands in damaged or lost property claims.
- Communicating with the pharmacy ways to improve data collection