

LEAN Organizational Tools To Maximize A Pharmacy Buyer's Time

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Debra Carlson, Strategic Purchasing & Inventory Analyst

- ◆ Oversee all pharmaceutical purchasing for St. Charles Health System (4 inpatient hospitals, Oncology/infusion clinics, Community pharmacy)
- ◆ Maintain central distribution of all inpatient pharmacies
- ◆ Drug shortage management
- ◆ Manage contract compliance and solicit potential new contract opportunities
- ◆ Member of the system Pharmacy & Therapeutics Committee, Value Analysis Committee, 340b Steering Committee, and Chair of the Health Future Buyer's Committee
- ◆ Report to the Chief Pharmacy Officer

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LEARNING OBJECTIVES

- ◆ Define LEAN methodology
- ◆ Outline the basic LEAN principles
- ◆ Describe a GEMBA walk of the pharmacy
- ◆ Identify 3 potential LEAN opportunities

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AUDIENCE SURVEY # 1

How many people here
are familiar with LEAN?

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Possibly The Briefest History Of LEAN

- ◆ An American Industrialist named Henry Ford is believed to be first person to implement a functional automobile assembly line that he called 'Flow Production' in 1913.
This was the first time that auto parts could be manufactured and assembled in a continuous line with production driven by demand.
- ◆ Kiichiro Toyoda later expanded on the 'Flow Production' concept by challenging the existing constraints and the need for variety in production of automobiles and with these ideas, the **Toyota Production System** was created.
- ◆ By the end of the 1990's several books are written about Flow Production and the Toyota Production System; then other industries begin to take notice.

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Definitions Of LEAN

- ◆ GEMBA: Where the work occurs
- ◆ GEMBA WALK: An observation of the work occurring
- ◆ MUDA: Waste or Non-value add
- ◆ KAIZEN: Continuous Improvement
- ◆ STANDARD WORK: efficiently structured reoccurring work or process
- ◆ DAILY MANAGEMENT SYSTEM (DMS): Reporting structure focused on process owners and value
- ◆ A3 TOOL: Structured problem-solving tool

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The 8 Wastes

- 1) Defects
- 2) Overproduction
- 3) Waiting
- 4) Not utilizing talent
- 5) Transportation
- 6) Inventory Excess
- 7) Motion Waste
- 8) Excess Processing

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Principles of LEAN

- ◆ Elimination of WASTE
- ◆ Continuous Improvement
- ◆ Respect the Human Aspect
- ◆ Quality
- ◆ Error Reduction

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LEAN Has Evolved Over Time

1910-
1960's

- LEAN concepts initially designed to streamline the automobile manufacturing industry.

1990-
2000

- LEAN concepts become popular in other manufacturing industries

2005-
present

- Several large health systems start to adopt LEAN principles and create continuous improvement
- Present- LEAN principles are standard in almost every 'C-Suite'

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Why Healthcare Has Embraced LEAN

The Healthcare Industry has some of the highest potential:

- **WASTE:** Expired Medications
- **OVERPRODUCTION**
 - Unused prepared medications
 - Spikes in staffing demands leading overtime
 - Inefficient care models
- **DEFECTS:** Medication errors, procedural errors, patient HARM

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Documented Results of One Health System's LEAN Journey

Figure 1. The Impact of Lean Principles in Industry

Validated Industry Averages*

Direct Labor/Productivity Improved	45–75%
Cost Reduced	25–55%
Throughput/Flow Increased	60–90%
Quality (Defects/Scrap) Reduced	50–90%
Inventory Reduced	60–90%
Space Reduced	35–50%
Lead Time Reduced	50–90%

*Summarized results, subsequent to a five-year evaluation, from numerous companies (more than 15 aerospace-related). Companies ranged from 1 to >7 years in lean principles application/execution.

Source: Virginia Mason Medical Center

Results published by Institute for Healthcare Improvement, Provided by Virginia Mason Medical Center

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AUDIENCE SURVEY # 2

How many of you currently have defined Standard Work?

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Standard Work = The Best Way We Know How

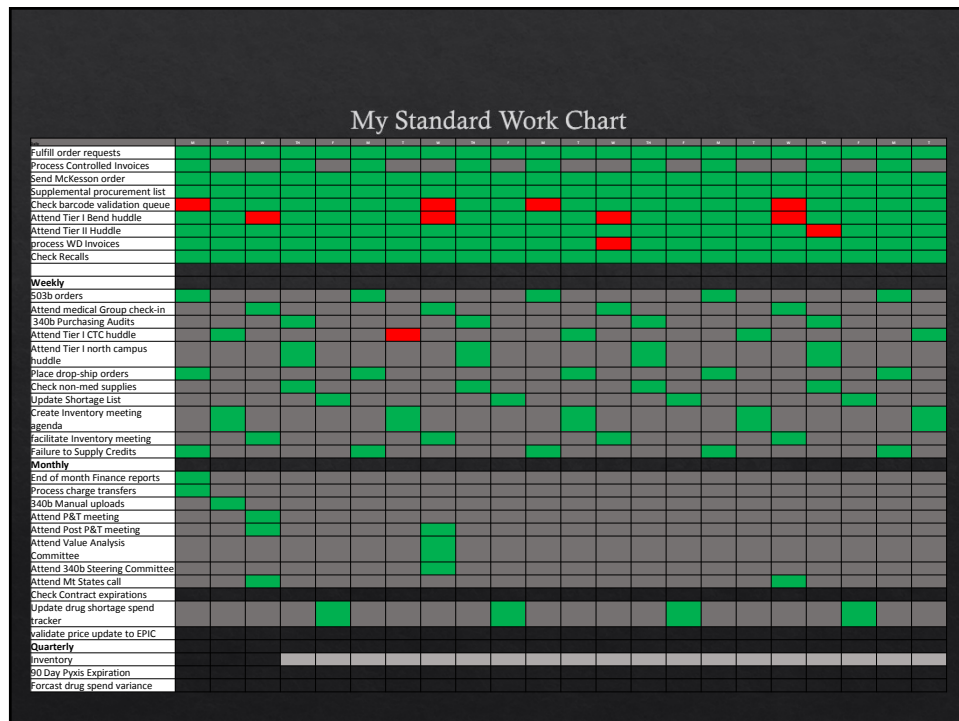
What Standard Work is:

- A commitment to continuous improvement of the work that needs to occur
- The most SAFE and EFFICIENT way to complete the work that needs to occur

What Standard work is NOT:

- Your boss dictating everything that you must do at a specific time or day

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My Experience With Standard Work

Intended:

- Reduction in total weekly hours worked by >6 hours
- Less worry that I will forget to complete a task
- Visual representation of demand by day

Unintended:

- Predictable Inventory trends in our Central Pharmacy.
- Increased ability to 'de-select' requests.

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GANTT- Another Tool To Consider

A Gantt chart can be a helpful in visualizing upcoming projects and workload

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My Low Maintenance Gantt Chart

April	May	June	July	August	September
Retail Rx Safe Decommission HRSA Data Collection V2B Go-live Tower Pyxis stations arrive Epic WAM training	Tower Opens GSK contract conversion Willow Amb Go-Live HRSA AUDIT 5/29-5/30	Q2 Inventory Willow Inventory Build Willow Inventory Training STRATA finance project	Willow Inventory Go-Live North Campus 340b external audit Pharmacy Value Stream NPPA Slides due Med take-back planning	NPPA 8/20-8/23 EPIC UGM 8/26-8/29 Anavip roll out Purchasing compliance matrix due Health Future Meeting	Q3 Inventory Pharmacy Week planning Clinic supply integration

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Daily Management System (DMS)

The Daily Management System is a communication structure used to effectively share information or value from those closest to the work all the way to the top of an organization.

It can be adapted to fit any organization/reporting structure.

May also be referred to as “Tiered Accountability”.

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Daily Management at St Charles Health System

- **Tier I huddle** – Each SCHS Pharmacy location has a huddle every day at designated time. 100% staff involvement encouraged.
- **Tier II** – Pharmacy Leadership attends a second huddle; which is an opportunity to identify items that need to be escalated from T1.
- **Tier III** – Director & Executive Leadership attend T3 huddle. Information can again be escalated from T1&2 AND/OR information can be disseminated back to T1&2.
- **Tier IV** – President and Health System Board attend a weekly huddle

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Our Tier II Huddle Board



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Our Daily Management Outcomes

- Less time spent engaging pharmacy and nursing stakeholders
- Elimination of re-work related to pharmacy supply process changes
- **Increased medication safety practices**
- Decreased time spent on individual communications (calls & emails)
- **More strategic planning of pharmacy projects and forecasting**
- Reduction in meeting requests related to pharmacy supplies and processes

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LEAN Projects at St Charles Health System

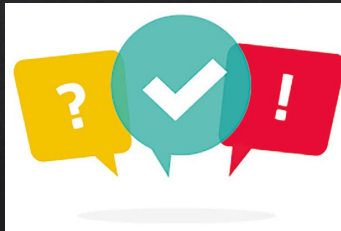
- 2P Complete Redesign of our Bend Inpatient Pharmacy with a focus on how medications move through the space – 2016
- 5S of Pharmacy supply storage (Sort, Set, Shine, Standardize, Sustain) 2017
- 5S of Community Pharmacy Storage 2019
- RIE (Rapid Improvement Events)
- Pharmacy delivery workflow 2016
- Medication Reconciliation process in Emergency Department 2017
- Hazardous Compounding 2018
- Pharmacist staffing 2019

Upcoming Events:

- Medication Administration Event (goal is 100% barcode scanning prior to administration)

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QUIZ TIME!



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QUESTION #1

What is MUDA?

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ANSWER (To Question #1)

Waste!

Also called a “non value-add”

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QUESTION #2

What is GEMBA?

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ANSWER (To Question # 2)

Where the
work occurs!

Also described as “where the value is created”

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QUESTION #3

What is KAIZEN?

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ANSWER (To Question #3)

Continuous Improvement!

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PAIR & SHARE

Discuss examples of how you are
using LEAN at your facility

OR...

How you could implement a process,
and what the outcome might be

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Questions & Comments

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