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**Date:** Tuesday, October 13, 2015  
**Time:** 2:45 pm – 4:15 pm  
**Location:** Gaylord National Harbor Resort and Convention Center, National Harbor 11  
**Title:** Process and Quality Improvement: How to Improve Your Efficiencies in the LTC World  
ACPE # 207-000-15-136-L04-P · 0.15 CEUs  
ACPE # 207-000-15-136-L04-T  
**Activity Type:** Application-based  
**Speaker:** Mark Prifogle, HFA, LNHA, ICYB, FACHCA, Chief Executive Officer and Group President, GrandView Health Services  
Dixie Leikach, RPh, MBA, FACA, Finksburg Pharmacy  
Glenn Eldridge, RPh, Grandview Pharmacy

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**Pharmacist and Pharmacy Technician Learning Objectives:**

Upon completion of this activity, participants will be able to:

1. Analyze root causes of poor performance in LTC operations.
2. Apply systems for rapid improvement events.
3. Create a Control Plan that keeps problems fixed.

**Disclosures:**

Mark Prifogle declares no conflicts of interest or financial interest in any product or service mentioned in this program, including grants, employment, gifts, stock holdings, and honoraria.

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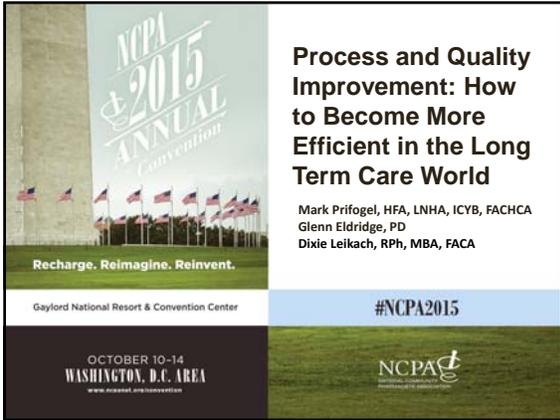
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**Process and Quality Improvement: How to Become More Efficient in the Long Term Care World**

Mark Prifogel, HFA, LNHA, ICYB, FACHCA  
 Glenn Eldridge, PD  
 Dixie Leikach, RPh, MBA, FACA

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### Objectives

1. Analyze root causes of poor performance in LTC operations.
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## LEAN Principles



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## Origins of LEAN

- LEAN principles are based on a management philosophy derived from the **Toyota Production System (TPS)**.
- LEAN is focused on the identification and steady elimination of waste to preserve value with less work.
- This is achieved by getting the right things to the right place at the right time in the right quantity to achieve perfect work flow, while minimizing waste.
- LEAN is widely used in all types of industries, including healthcare.



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## LEAN Thinking

**“LEAN Thinking”**  
creates a culture and practices  
that continually improve  
**all functions by all people**  
at all levels in the organization.



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## Focus of LEAN

LEAN is focused on the  
**constant pursuit of perfection**  
by eliminating **waste** and  
**non-value added** activities to  
improve the **flow of value** to the customer.



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## LEAN Creates Flow

- Flow is the continuous movement of people, materials and supplies through a process.
- Flow ensures that patients have what they need exactly when they need it.
  - No delays or waiting
  - One piece flow (instead of batching)
  - Well organized supplies and work space
  - Alignment of work volume and resources
  - Replenishment of only what is needed



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## Goal of LEAN

The goal is to get the **right things**  
to the **right place** at the **right time**  
to achieve efficient work flow  
and minimize waste.



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## Waste Defined

Waste is **any** activity that consumes **time**, **resources**, or **space** but does not add **value** to the product or service in the eyes of the patient




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## Types of Waste

<b>D</b> efects		Errors, poor quality, failure to meet customer requirements.
<b>O</b> ver Production		Providing unnecessary products, services, or features.
<b>W</b> aiting		Delays, periods of inactivity, bottlenecks, or patient wait time.
<b>N</b> on-utilized Potential		Failure to fully utilize human potential (time and talents of people).
<b>T</b> ravel/Transportation		Unnecessary movement of supplies, equipment, or people.
<b>I</b> nventory/Scrap		Excess inventory/supplies, batch processing, queues, or backlogs of work.
<b>M</b> otion (search time)		Extra steps taken by employees because of inefficient layout, searching, hunting and gathering.
<b>E</b> xcess Processing		Excess activity and processing steps caused by poor process design.




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## Checklist for Waste Removal

- Simplify** the process to remove unnecessary or redundant steps.
- Standardize** equipment, supply locations, and stocking procedures.
- Optimize** each step by designing the work area to create uninterrupted flow.
- Develop** and document standard work and provide appropriate education.
- Modify** the sequence of activities to increase efficiency.
- Identify** and remove bottlenecks and constraints.
- Clarify** roles and responsibilities for each process step.
- Introduce** new deliverables and/or accountability standards.
- Verify** that clear expectations have been communicated to everyone who plays a role in the process, including external areas.




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## Origin of Six Sigma

- Six Sigma was originally developed for Motorola in 1986.
- Motorola set a goal of "Six Sigma" or 99.99966% perfect for all of its manufacturing operations, and this goal became a byword for the methods used to achieve it. S
- Six Sigma seeks to improve the quality of process outputs by identifying and removing the causes of defects (errors) and minimizing variation.
- Reducing variation in a process is the key to reducing errors waste, which increases reliability.
- Increased reliability results in consistently safe, high quality care.



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## Focus of Six Sigma

Six Sigma is focused on **identifying and correcting errors** (defects) to minimize **variation** and **increase accuracy**



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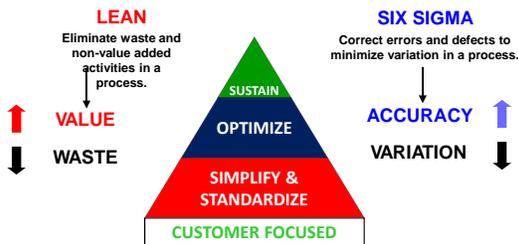
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## LEAN Six Sigma Model



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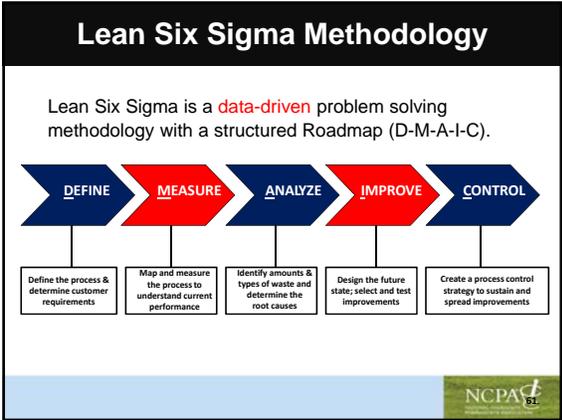
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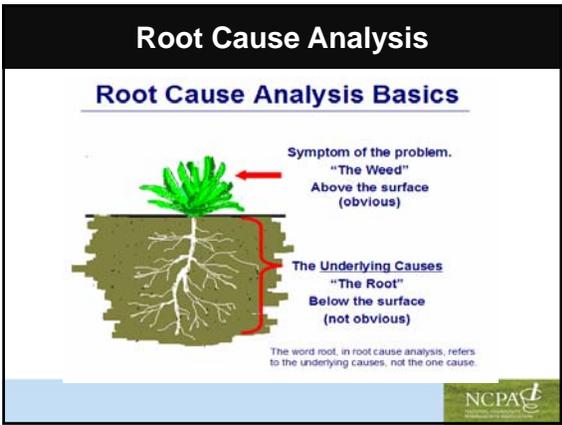
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## Root Cause Analysis Defined

- A Root Cause Analysis (RCA) is standardized method to identify the REAL cause(s) of a problem, rather than the superficial, easily identified cause.
- Ask "Why" no less than 5 times when looking for the REAL cause of a situation.
- Brainstorm solutions and corrective actions.
- Discuss and analyze the pros and cons of each potential solution.
- After the "5 Whys" exercise, ask yourself the following:
  - Why wasn't the error prevented by our current system?
  - Why do our tools, rules, or procedures allow the problem to occur?
  - Why didn't our system immediately catch the problem?
  - Why wasn't it obvious how to fix the problem?

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## Case Study – NCPA Member

Five year old female patient, Emily, admitted to the hospital for scheduled cardiothoracic surgery - a simple valve repair. Hospital contracted with local retail/infusion pharmacy to provide IV products. Infusion pharmacy had mixed the cardioplegic incorrectly, which was unknown to nursing or physicians. Emily's heart stopped due to excessive dose and was unable to be restarted.

Superficial analysis would indicate the pharmacist(s) and sterile compounding technician(s) simply made a mistake in their calculations and should be held accountable.



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## Root Cause Analysis Exercise

Enter example here: Patient's heart stopped and was unable to be restarted due to excessive dose of cardioplegic in IV product prepared incorrectly by infusion pharmacy.

1<sup>st</sup> Question Why:  
Answer:

2<sup>nd</sup> Question Why:  
Answer:

3<sup>rd</sup> Question Why:  
Answer:

4<sup>th</sup> Question Why:  
Answer:

5<sup>th</sup> Question Why:  
Answer:



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## Root Cause Analysis Results

A Root Cause Analysis concentrates on

**PROCESS** not at **PEOPLE**

1. Batch processing performed on Saturdays for all the surgeries for the week, with smallest staff and least competent staff – all in this batch were incorrect, not just Emily's
2. No written formula
3. Batch was completed over two shifts - with a handoff
4. Cardioplegic compounding performed along with a variety of other IVs
5. No QA processes in place to test final product
6. No standardization of formulas or concentrations of cardioplegics. Hospital had 6 cardiothoracic surgeons and each one wanted his/her own formula. No clinical reason - just physician preference.



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## LEAN 5-S Defined

5-S is a workplace organization tool used to eliminate waste and improve flow

- Eliminates the need for searching
- Reduces probability of error
- Increases quality
- Improves productivity
- Expedites response time
- Improves staff morale
- Enhances professional image of an area
- Increases efficiency of the supply replenishment process by using visual cues such as a Kanban system
  - Kanban aligns inventory and consumption levels; a visual signal is sent to deliver additional inventory when current supplies are consumed using supply bins and tags.



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## LEAN 5-S

- 5-S produces a workplace that is clean, uncluttered, and safe.
- 5-S environments have "a place for everything & everything in its place".
- 5-S uses visual controls to make every item easy to locate and return.



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## LEAN 5-S Applied



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## LEAN 5-S Applied

- Key Principle: Make it easy to see, use, and return.
- Equipment, supplies/information should be available within 30 seconds.



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## LEAN 5-S Benefit

- Increased pride in the workplace and supports team development.
- Unnecessary items are removed that congest the work area.
- Sorting retains only the needed items, which allows for a smaller work area resulting in reduced effort (walking, reaching, etc.) to do the work.
- Items have a designated home location that is labeled and easily found.
- Clean equipment allows everyone to notice problems quickly.
- Reduced changeover times result from being organized and minimizing travel and search time.
- Increased safety by ensuring rapid access to supplies and equipment needed for patient care.



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## Keys to LEAN 5-S Implementation

- Get *everyone* involved.
- Integrate 5-S principles into daily work requirements.
- Communicate the need for 5-S, roles of all participants, and how it is implemented.
- Be consistent in following 5-S principles in all areas.
- Periodic senior management involvement is absolutely required.
- Follow through and finish what is started, 5-S takes effort and persistence.
- Link 5-S activities with all other improvement initiatives.
- Commitment to the process; a few individuals cannot undermine the efforts of the entire team.



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## LEAN 5-S Event

To prepare for the Lean 5-S event:

- Select an area for the 5-S improvements
- Identify a date for the 5-S event
- Identify a Team Leader and team members
  - Team members should be selected from the area that is targeted for improvement



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## What needs 5-S?

Ask the pharmacy staff if any of the areas of the pharmacy:

- We often have to search for (equipment, supplies, information, people):
  
- We often have to transport (equipment, supplies, etc.):
  
- We often have to walk/travel a long way (or frequent short trips) to obtain:
  
- Some areas are cluttered, unorganized, and/or need a good cleaning:



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## Healthcare Ethics

### 4 Major Principles in Healthcare Ethics

**Autonomy:** People have the right to make their own informed decisions about their healthcare, and these decisions have to be respected, even if they aren't in the best interest of the patient.

**Beneficence:** Healthcare providers must strive to do the most good for every patient in every unique situation.

**Nonmaleficence:** "First, do no harm" is the foundation of medical ethics. It is also important to be aware of double effect, where a treatment intended for good unintentionally causes harm.

**Justice:** Healthcare providers should be fair and consistent in decisions for every patients in treatment decisions and allocation of scarce resources. You should be able to justify your actions.



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## Business Ethics

Six Pillars of Character	12 Ethical Principles For Business Executives
<b>Trustworthiness</b>	Promise-Keeping & Trustworthiness Accountability Honesty Reputation & Morale Integrity
<b>Responsibility</b>	Commitment to Excellence Leadership Loyalty
<b>Citizenship</b>	Law Abiding
<b>Fairness</b>	Fairness
<b>Caring</b>	Concern for Others
<b>Respect</b>	Respect for Others





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## Vendor and Product Selection

**Beneficence:** Do the most good

**Nonmaleficence:** "First, do no harm"

**Accountability**

**Reputation**

**Commitment to Excellence**

**Concern for Others**




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## Scenario

You receive a phone call from a new wholesaler/vendor that you have never purchased from before.

They say they are approved with your GPO.

What do you do?




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**Scenario**

A) Sign Right Up!

B) Hang up

C) Call GPO to verify

D) Ask additional questions about company/product

What are you looking for?




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**Patient Safety/Error Reporting**

ALL Principles covered

Accidents and mistakes happen – Document Safely, Transparency

Errors or Carelessness or Worse?

1938 Food Drug and Cosmetic Act



2012 NECC




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**Scenario**

You are a staff pharmacist for a pharmacy that provides LTC services. You provide dispensing and consulting services for your facilities. During a routine consulting appointment, you discover late in the month that a dispensing error occurred but none of the nursing staff noticed the mistake. You have checked the patient's chart and there has not been any change in patient's condition, demeanor or labs.

What do you do?




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**Scenario**

A) Make no changes at the home site, report to the owner when you return to the pharmacy and double check the next month's batch that hasn't left the pharmacy yet.

B) Notify the director/nurse on staff at the home, take the medication back with you to the pharmacy and fix/have redelivered. Don't tell anyone because you don't want anyone to get fired.

C) Notify the director/nurse on staff at the home, take the medication back with you and redeliver correct, document incident according to your pharmacy's policy and procedures.

D) Other?




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**Return Policies**

**Justice:** Be fair and consistent. Protect scarce resources.

Promise-Keeping & Trustworthiness  
 Accountability  
 Honesty  
 Reputation & Morale  
 Integrity

Know your procedure and follow it – every time?




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**Scenario**

Your pharmacy's policy is that if less than a full card of medication is returned by the LTC facility, that you do not give any credit for the return and you automatically properly dispose of the medication. Your pharmacy also services retail patients as well as LTC.

A patient just passed away, there is a balance on the house charge, the family isn't answering your calls, and you just received a partial card of brand Abilify® from the home.




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**Scenario**

What do you do?

Does your answer change if the medication is...

Furosemide?

Harvoni®?



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**Process and Quality Improvement**

No matter your type of pharmacy – it is your ethical responsibility to have the best process and quality in place to honor the trust your patients have given to you.



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**Contact Information**

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