



# Discovering CAH Operational Improvements

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# Learning Objectives

- Hear the stories of state Flex Programs who have successfully partnered with CAHs on operational improvement initiatives
- Establish pathways for partnering with CAHs on performance excellence initiative through Flex



# Where to Start?

What are we trying to improve and why?

Reduce the  
*COST* of  
Care!

Improve  
Reliability  
& *SAFETY*

Increase the  
*QUALITY* of  
Care!



# Why a Lean Culture for Rural Hospitals?

Because in Rural Hospitals, we can lead in:

- Quality of Care and Patient Safety
- High Value Customer Service
- Cost Effectiveness and Efficiency



# What is Lean?

- An organizational culture characterized by the endless pursuit of the elimination of waste.
- An effective methodology for improving patient safety, quality and cost while preventing delays, bridging “silos” and improving employee satisfaction.





# Why Lean?

“It provides a way to do more with less – less human effort, less equipment, less time and less space – while coming closer and closer to providing customers with exactly what they want.”

– James Womack

Author, “Lean Thinking” 1996



# Lean Success is...



...Not found in the tools, it's the culture!



# Ultimate Goal is building the culture

## **To Establish a Lean Culture:**

- Looking for opportunities
- Establish systems
- Recognize and eliminate constraints
- Managers and Directors learn to help their staff





# Hospital Goals

- Patient Safety
- Patient Satisfaction
- Employee, Staff Satisfaction
- Employee Engagement
- Low Turnover
- Productivity
- Space Utilization



# We don't have time for one more thing!

- What if I told you that 35 to 40 percent of what you are doing now doesn't add value to your patients!



# Lean Thinking Principles for Healthcare

Principle	Lean Hospitals Must:
Value	Specify value from the standpoint of the end customer (the patient).
Value Stream	Identify all the value-added steps across department boundaries (the value stream), eliminating steps that do not create value.
Flow	Keep the process flowing smoothly by eliminating causes of delay, such as batches and quality problems.
Pull	Avoid pushing work on the next process or department; let work and supplies be pulled, as needed.
Perfection	Pursue perfection through continuous improvement



# Do we really have waste in healthcare?

Anything that adds cost or time without adding value as defined by the primary customer is waste.



# The 8 Deadly Wastes

**Transportation**

**Inventory**

**Motion**

**Waiting**

**Overproduction**

**Over-Processing**

**Defects**

**Unused Talent**





“That’s just the way  
work is done  
around here.”

Waste  
becomes  
accepted



# Nebraska CAH Lean Collaborative

## Mission:

To develop an active partnership model spreading lean culture transformation across rural healthcare organizations in Nebraska.

## Goal:

To achieve successful lean culture transformations in early adopting CAHs and to be recognized nationally



# Nebraska CAH Lean Collaborative

- Utilized FLEX funding  
(However, ROI is clearly advantageous)
- Technical Assistance Available
- Provided Lean tools and Resources
- Collaboration between facilities – sharing of ideas and best practices





# The Journey...

2011

- Contracting with Midwest Health Consultants (MWHC) to work with 10 CAHs (2 pilot groups).
- Utilized 10 hospitals within one of the networks
- Each hospital formed an internal, multidisciplinary team to learn and apply the concepts of Lean to a performance improvement issue.
- Each hospital implemented at least one Lean project.



# Nebraska CAH Lean Collaborative

## Phase 1:

A Pilot a Rural Hospital Lean Transformation  
Collaborative engaging five rural hospitals in CAH Link:

- Jefferson Community Health Center
- Fillmore County Hospital
- St. Mary's Hospital
- Avera St. Anthony Hospital
- Thayer County Hospital





# Nebraska CAH Lean Collaborative

## Phase II:

- Box Butte General Hospital
- Nemaha County Hospital
- Chase County Hospital
- Tri-Valley Health System
- Brown County Hospital
- Brodstone Memorial Hospital



# Six Sigma Greenbelt Certification Program

- 4 day course
- 30 hrs. classroom instruction
- 30 hrs. practical experience
- Pass the final exam
- Complete a Lean project over the next 120 days
  - Focus on improving efficiency by lowering costs
  - Improving quality
  - Increase patient and/or employee satisfaction



# Results

- **Year 1**      Total savings of \$445,685 in either increased revenue or decreased cost to the hospital.
- **Year 2**      \$264,109 savings

Non-economic projects resulted in 15% reduction in one of the quality indicators

- Total in 2 yrs.
- Over 30 CAHs
  - More than 100 people trained
  - Approximately \$710,000 saved



# Lessons Learned...

- Lean can provide the significant positive results, but it is not easy or a quick fix.
- Lean must also be implemented correctly, consistently, and be given sufficient time.
- Everyone in the organization must commit to becoming Lean and it requires both cultural change and systems thinking.
- Not sufficient to train 3-4 people within the hospital to champion and direct Lean implementation.



# Since the Pilots...

2013	<b>Established the Nebraska CAH Lean Six Sigma Greenbelt Certification Process</b>
August 2013	<ul style="list-style-type: none"> <li>• 22 Students from 8 CAHs in Nebraska</li> <li>• Two on-site certification completed in two CAHs. 12 participants in each CAH</li> </ul>
January 2014	<ul style="list-style-type: none"> <li>• Second course offered</li> <li>• Ten participants from 3 CAHs</li> </ul>
March 2014	<ul style="list-style-type: none"> <li>• Lean Healthcare Yellow Belt training (5-hour course This course can be taken by the Certified Greenbelts to teach the principles of Lean Thinking in their facility.</li> </ul>
January 2015	<ul style="list-style-type: none"> <li>• Development of On-line course Delayed due to formatting</li> </ul>
May 2015	<ul style="list-style-type: none"> <li>• Greenbelt Certification Course</li> <li>• 4 CAHs, 12 students</li> </ul>





# Where are we going from here?

## Next Phase:

- Website course access
- More Yellow Belt Courses
- Continue Green Belt Instruction
- More on-site training



# Flex Grant Goal

- Have 6-8 Greenbelts in each of the 64 CAHs
- 25-50 students in Green belt
  - 2 courses/yr.
- 25-50 students in Yellow belt
- 25-50 students to participate online
  - Take at their own pace/any time of year
- Present projects at the Annual Nebraska Quality Improvement Conference



# Stories from the Field...



# Stories

- A Revenue cycle maximization project led to a reduction in direct labor and outside consulting costs. This project also reduced days in accounts receivable by 22% over 90 days.
- A pre-operative patient visit project reduced patient waiting times by 29% and decreased the total time for a pre-operation evaluation by 22%. The direct labor cost saved annually was \$24,694.
- A respiratory therapy project increased revenue by \$63,000, improved nursing staff satisfaction by 24%, and increased respiratory therapists' satisfaction by 72%.
- A patient registration improvement project decreased the registration process by 80% and resulted in over \$15,000 in direct labor costs annually.





# More Stories

- One facility cut the transportation of inpatients to and from imaging services by 60 %.
- One facility improved the turnaround time for its top five laboratory tests ordered by 35%
- Another facility cut the time patients waited in the emergency room to begin treatment to 28 minutes from 48 minutes
- Two facilities cut the amount of time for discharging a patient (on average) to 45 minutes from 90 minutes. The improvement allowed the hospitals to admit patients sooner, boosting patient days and increasing net revenue.
- A business office looked at their process for the pre-certification of patients. They used the Lean tool of value stream mapping to determine the current path and process for pre-certification. The net result was a 36% decrease in the number of denials.



# More Stories

- A surgical department in one facility changed the process of how surgical kits were put assembled and improved their gross revenue by \$28,000 while at the same time reducing their expenses by 18%.
- A hospital used the value stream mapping process on how respiratory therapy patients flowed through the facility from admission to discharge. With modifications in the process, they identified services that were being given to patients but were not being charged for. They discovered nearly \$13,000 a month in unbilled services.



# More Stories

## Organization of storage space using the Lean 5S tool.

Staff members were entering the storeroom at least 5 times per day for an average time of 10 minutes for each entry or 50 minutes per day at a cost of \$23 per hour. The cost was \$6,935 per year. That has now been decreased to 1 minute per entry with a decrease to \$695 per year. The less time the nurses are looking for things, the more time they can spend with patients. The storeroom also has more space.

Annual reduction in direct labor costs:

\$ 6,100

Square footage gained (annualized):

\$ 4,500

Reduction in staff time looking for needed equipment and supplies in the hospitals storage areas.

90%



# More Stories

## Capturing Respiratory Therapy Charges

It was the practice of this facility to have nurses administer scheduled Respiratory Therapy (RT) treatments to patients on the weekends. The nurses also would occasionally ‘fill in’ for RT during the week when RT was busy. By regulation, a hospital is not allowed to charge for RT treatments performed by nursing staff. It appeared that the revenue lost by nursing administering RT treatments over the weekends would support a FTE in RT. The goal of this project was to analyze, redesign and improve the current work process so as to capture that revenue missed by the nurses treating RT patients on the weekends. Consequently the RT process change improved nursing and RT satisfaction rates as well as value to the patient care plan.

Revenue generated from this project in capturing RT treatment charges in a 3 month time period:

\$63,000

Improvement of nursing staff satisfaction:

24%

Improvement of RT staff satisfaction:

72%





# More Stories

## Establishment of a Nurse/Patient Server Supply System

Travel time, poor access to needed supplies, increased cost of maintaining a “central supply”, poor stocking practices resulting in supplies being absent when needed. This project has virtually eliminated these concerns by having 80% of the most frequently used items at the patient’s bedside vs. a central storage area. Translated into costs, over the course of a years’ time the dollar amount of this travel time is significant (\$1,709.76) per RN per year. With 15 RN’s on staff that’s \$25,646.40 spent on travel time. In terms of supply cost, the hospital had found and destroyed nearly \$5,000.00 dollars’ worth of expired supplies that were “shoved” to the back of shelving units.

Decreased supply/  
inventory costs:

21%

Annualized savings:

\$40,800

Increase in staff  
satisfaction:

47%



# Applications for other FLEX Programs

- Can be utilized in other states utilizing FLEX funds or SHIP funds
- Start with a group of hospitals
- Find hospitals that want to change their culture



# Questions?

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