

Somebody to Lean On: How Lean Principles Promote Exemplary Professional Practice.

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Systems for Partners in Performance Improvement (SPPI)

- Identify and eliminate waste and repetition to operate at maximum efficiency to deliver the highest quality care
- Apply lean tools and concepts to improve the processes of Lehigh Valley Health Network (LVHN)

8 Wastes in Healthcare:

- **Unused Human Potential:** Untapped creativity/talent/injuries
- **Waiting:** patients/providers/material
- **Inventory:** stacks of work/piles of supplies
- **Transportation:** transporting people, paperwork
- **Defects:** wrong information/re-work
- **Motion:** finding information/double entry/searching
- **Overproduction:** duplication/extra information
- **Processing:** extra steps/checks/workarounds



Lean Tools for Identifying Waste

- Process map
- Spaghetti diagram
- Communication circle
- 6S / visual controls
- Standard work
- Tight connections / pull
- One piece flow
- Rapid Improvement Event

Rapid Improvement Event (RIE)

- **DAY 1**
 - Understand the “current state”
 - Identify waste and non-value added steps
- **DAY 2**
 - Create the target/future state
 - Identify solutions/countermeasures to eliminate waste
 - Design experiments to “try & examine” the solutions
- **DAY 3 - TAKE ACTION!**
 - Conduct the experiments
 - Tweak & improve the experiments as needed
- **DAY 4**
 - Continue to run and debug the experiments
 - Finalize and create the standardized work documents
 - Create appropriate metrics to measure the progress
- **DAY 5**
 - Report to the organization and celebrate!
 - Identify waste and non-value added steps

Feed Forward

- Continue monitoring the changes
 - 30/60/90 day report-outs
 - Make changes as needed
- PDCA: Plan-Do-Check-Act
 - Target state becomes the new current state!

RIE #4 Physical Discharge

Current State

- Lack of standard discharge process
- 75% of discharges occurring after 1 PM

Target State

- A standardized collaborative discharge process
- Reduce the average “order to discharge” time by 30%
- Increase patient satisfaction
- Involvement of multidisciplinary team at bedside for better utilization of ancillary services
- Discharge process to involve all shifts

Metrics

- Average length of stay 5.7 days
- 5% of discharges leave prior to 1100
- Average “order to discharge” was 3.05 hours

Countermeasures

- Checklist of standard work
- Tight communication with daily rounding at 1000
- Load leveling

Outcomes

- Decrease in length of stay
- Increase in patient satisfaction
- Decrease in ED diversions



Lessons Learned

- Clarify problems/scope prior to initiating an RIE (what metric do we want to improve?)
- Value of having staff in room to tell us what is wrong with process - but sometimes experiment doesn’t connect with reality
- Needed standard work related to SPPI earlier in process