

# The Lean Experience in The Community Hospital

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## OBJECTIVES

- Describe the LEAN quality management system & application to health care
- Present case studies in the community hospital
- Identify benefits on quality, service and staff morale
- Roadblocks & Learnings

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## What is Lean?

- A way of thinking
- Borrowed from manufacturing - Toyota
- Back to the basics: identify what the customer perceives as value
- Identify waste or "Muda" – any activity which absorbs resources but creates no value
- Single piece flow rather than "batch"

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## The Lean Mission

- Learn to recognize waste
- Courage to call it waste
- Eliminate waste
- Waste generates no corresponding value for us or our customers

***BAD PROCESSES BEAT GOOD PEOPLE!***

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## Examples: Waste in Healthcare

### *Muda*

- Defects – mistakes, redraws, wrong patient
- Overproduction – excess testing
- Waiting – Patients, physicians, nurses
- Transportation – patients, specimens
- Over processing – excessive paperwork (non-value added)
- Inventory – meds, supplies, lab specimens, dictation
- Motion – missing charts, supplies, equipment

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## The Healthcare Product

- Service
- The Patient Experience
- Health Information – tests, films, reports
- Diagnosis
- Procedures
- Heal the Patient
- Maintain Health

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## Lean Principles

1. Directly **observe** work as activities, interconnections & flows
2. **Standardize**: Establish high agreement of both what needs to be done and how
3. Systematic **waste elimination**
4. Systematic **problem solving**

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## Tools

- Process mapping - people, information or material flow
- Videotape or still pictures
- "Go see"
- Organize the workplace - 5S
- Standard work instructions – SWI
- 5 Whys?



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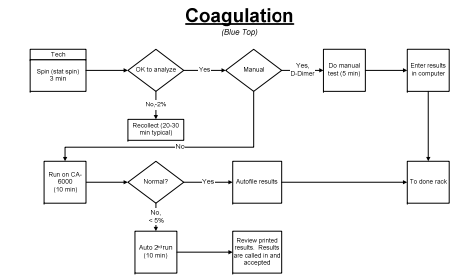
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## Process Flow Documentation



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## Product Process Flow

- Observe the process
- Time the steps
- ID current vs. IDEAL STATE
- Ask the 5 Whys?
- Make improvements
- Develop SWI: communicate to staff
- Begin experimentation: test the new process
- Is it working as expected?

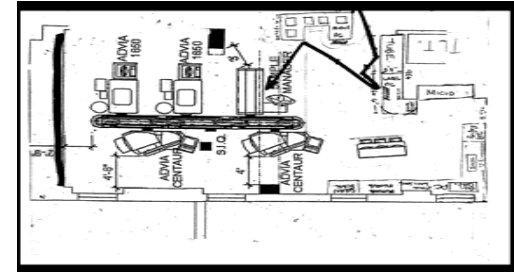
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BEFORE: Typical Walk Pattern  
474 feet



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AFTER: Typical Walk Pattern  
Approximately 12 feet



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## 5S

### Organize the Work Area

**SIFT** – Separate the essential materials from the nonessential

**SWEEP** – Remove the nonessential goods from the work area: Store or discard

**SORT** – Organize the essential materials: label

**SANITIZE** – Clean the work area

**SUSTAIN** – Systematic continuation of 5S.  
Most important and most difficult.

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### Organize the Work Area

■ BEFORE – labels in drawer



■ AFTER – labels organized and easy to see



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## 5S

### Before and After



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## After 5S



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## Case Study: Phlebotomy Trays

- BEFORE: 30+ different trays
- AFTER:  
Standardization  
4 Carts  
2 Trays



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## After

- Standardized and reduced the number of phlebotomy trays from 30 to 6.
- Reduced inventory and waste
- Trays/carts always ready to go



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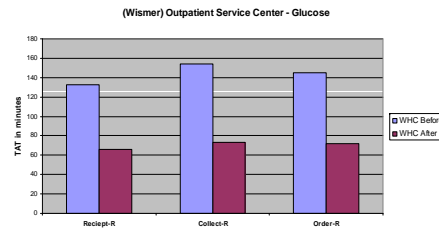
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## One Piece Flow vs. Batch

- Counterintuitive
- Can improve cycle times
- Case studies in a medium-sized community hospital
- Change in how work is done

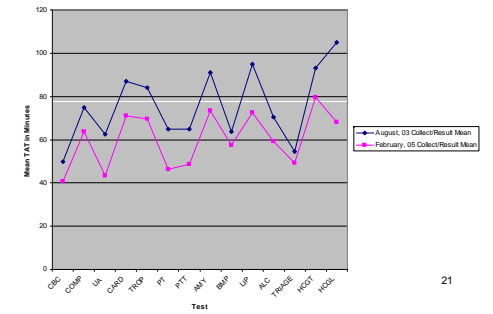
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## Outcome of One Piece Flow Experiment on TAT's



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## ER TAT's Before & After



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## Customer Satisfaction Outpatient Service Times

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CASE STUDY:  
Deckerville Community Hospital

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## Identify Customer Expectations

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- Patient Survey
- Other Patient Feedback, i.e. Complaints
- Discussions with Physicians
- Feedback from Physician Office Staff

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## Customer Expectations

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- Patients do not like to wait more than 20 minutes for a lab draw
- Patients & physician offices do not like to be turned away after hours
- Walk-in hours are confusing to patients:
  - Some days: **7am**-9:30am
  - Other days: **7:30am**-9:30am

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## Current State - Baseline

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- Processes tend to be staff driven rather than customer driven
  - Walk-in hours are not adequate
  - Baseline Wait Times
    - Mean: 31 minutes
    - 90%ile: 48 minutes
- Do **Not** meet patient expectations

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## Barriers

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- Staff scheduling
- Extensive paperwork causes delays
- Admitting staff must ask Lab staff for technical information, again causing delays
- Lack of customer focus

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## Solutions

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- **Expand Service Hours**
  - **Walk-in hours expanded:**
    - Mon – Fri: 7am-4pm
    - Sat: 8am-11am
- **Streamline process**
  - Transfer test ordering paperwork to Laboratory
  - Consolidate & remove unnecessary paperwork
  - Update send-out ordering system

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## Additional Solutions

- o **Focus on the patient – Develop service standards**
  - Never turn a patient away
  - Offer an alternative if unable to draw when a patient arrives after hours
  - Employee work schedules meet customer needs
  - Telephone etiquette – Cheerfully accept walk-in patients referred from physician offices
  - Measure patient wait times

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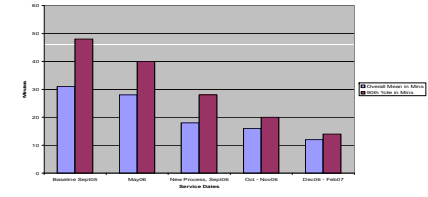
## Results

- Improved patient wait times
  - % improvement from baseline to current:**
    - Overall Mean: **258%**
    - 90<sup>th</sup> %ile: **343%**
  - Time of arrival to time of draw:**

	Mean	90 <sup>th</sup> %ile
Baseline	31mins	48mins
Current	12mins	14mins

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## Outpatient Service Times



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## Outcomes

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- Positive patient feedback
- Improved customer service: Patient & Physician offices
- Improved process supports rapid service times & capacity for growth
- Improved employee morale
- No additional staff

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# \$ The Revenue Cycle

**CASE STUDY**  
**Deckerville Community Hospital**

## Multidisciplinary Team

### Management & Staff

- Admitting
- Business Office
- Medical Records
- Information Systems
- Pharmacy
- Hospital-owned OP Clinic
- Facilitator
- Nursing

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## Problem

1. **Billing processes are confusing, complex & not fully understood, leading to errors, extra work & denials**
2. **This is a threat to our business & causes employee frustration**

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## Ground Rules

- **Team members have equal say**
- **Required behaviors:**
  - **Cooperation & respect**
  - **Open & honest communication**
  - **Safe environment: blame the process, not the people**
  - **Disagree within the Team: once a decision has been made, support the decision**
  - **On time for meetings & assignments**

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## Principles

- **Eliminate “Waste”**
- **Everyone is responsible, not just one department**
- **Standardize processes; insist on compliance**
- **Test the process**
- **Suggestions & new ideas are welcome**

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**Billing Project Outcomes**

- A forum for billing issues & problems
- Improvement in communication helped to pinpoint the issues
- Uncovered internal process errors
- Standard work & training
- Improved customer service
- Reduction in denials by 10-15%
- Reduction in up front documentation errors by approximately 20%
- A process in place for continuous improvement

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**Billing Project:  
Additional Benefits**

- A Team trained for future projects
- Intangibles:
  - Improved staff empowerment & accountability
  - “Aha Moments” encourage commitment
  - Employee morale

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**Billing Project-Current Status**

- Meet twice/month
- Measurement: Monthly Reports
- Continued change in Medicare & other insurance requirements bring new challenges

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## Lean Outcomes & Benefits

- Reduced incidence of errors
- Reduced patient wait times
- Improved patient education
- Improved clinical outcomes
- Increased productivity
- Reduced clinic & management costs
- Improved employee satisfaction

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## Roadblocks to Success

- The old adage "Rules are made to be broken" should be changed to:

**"Standards are made to be followed and then improved"**

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## Roadblocks

- Fear of the unknown & job loss
- Resistance to change: What's in it for me? Having some control is important
- Lack of senior management buy-in & support
- Lack of accountability

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## Learnings

- Bad processes beat good people!
- Communicate, communicate, communicate...
- Lean is a change in the way we think
- Don't take it personal; keep your sense of humor
- Your job will change

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## More Learnings

- Get help from a lean expert, then grow your own
- Pick your best people, informal leaders
- Keep it simple
- Lean is consistent with all other improvement methods
- You will never be done....

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## QUESTIONS?

We have begun, there is no end...until we reach perfection...

Thank you



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