Implementing a Single Quality Management System Across Multiple Hospitals of the Henry Ford Health System: Combining ISO 15189 with Lean to Deliver More Value

Lab Quality Confab Process Improvement Institute

New Orleans, LA

John Waugh
11/3/2015
HENRY FORD HEALTH SYSTEM
Pathology & Laboratory Medicine
Service Line of Integrated Labs
Hub & Spoke Delivery Model

11 million tests/yr
700 staff supporting
- 5 Acute care hospitals
- 9 ERs
- 30 Clinics
Integration

ONE leadership group
Shared Information Systems
Integrated Product Line HR
Core Laboratory / Rapid Response
Standardized Test Methods
Shared Capital Process
Purchase & acquisitions
ONE Quality Management Plan
  Safety, education & competency

Henry Ford Production System
At Henry Ford Health System we are Value Creators who happen to have a Laboratory.

Data => Information => Value
Henry Ford Production System

World Class Laboratories

Culture of Relentless Improvement

Staff Taught and Empowered to use Lean
Chemistry

Color Coded Bins
## Blood Bank 5S Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Task</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
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<td>SS</td>
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<td>SW</td>
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<td>Linda</td>
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Chemistry
Henry Ford Laboratories Lean Progression

- Lean Specialist
- Mandatory 8 hr Lean Education
- 2 Day Lean Training

Years:
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012

Henry Ford Hospital
Hospital core and specialty laboratories

- Surgical
- Core Labs
- Lab support
- 26 Med Cntrs
- Immuno
- Cytology
- Microbiology
- Blood Bank

Henry Ford Production System
Lean Tool Box

5 S Workspace,
Visual Controls
Capture Defects, Quick Fixes, PDCA, A3s
Standard Work
Value Stream Mapping
Single Piece, Unidirectional Flow
Kanbans
Eliminating Waste
Create ORGANIZATION CHART for Continuous Improvement

How is change authorized and made?

Find Your Role

Group Leader

Team Leader

Shared members

Workcell 1

Workcell 2

Workcell 3

Workcell 4

Workcell 5

Silo 1

Silo 2

Silo 3

Work Product

Customer-Supplier Interaction

Customer-Supplier Interaction

Shared members

Group Leader

Team Leader

Team Leader

Team Leader

Team Leader

Henry Ford Production System
Building the Culture

Improvement on Meeting Agendas
Grand Rounds Jeffrey Liker, PhD
Share the Gain, Recognition
Part of Performance Management Plans
Two Lean Champions
New Target ➔ ISO 15189

Accelerators and Brakes
Champions, Baldrige Award, Merger

ISO Gap Analysis
“You’re Ready . . . See You in 6 Months”
Do I really have to do this?

Why, Why, Why, Why, Why
Lean/ISO Quality Systems

*New Tools to Get to the Next Level*…

Electronic document control
Daily Management system
KPI Tracking
Internal audit system (peer inspections)
Deviation management system
  – feeds kaizen and burn down plan
Controlling Posted Documents

- Clean/organize workstation at the end of shift:
  - Clean/Disinfect Workstation Benches, Instrument surfaces, Pluggo
  - Restock workstation Supplies i.e. caps, tubes, pipets, biohazard wipes, kimwipes, gloves etc.
  - Empty wastes: Biohazard, tip, cuvette, tip trays
  - Each shift must complete and sign daily maintenance and sustain logs and shift report.
Document Control
Out of Service
“If you always do what you always did, you always get what you always got”
Q T I P S

Quality
Timeliness
Inventory
Productivity
Safety
The Elimination of Yellow
Target Setting

Is 90% a good TARGET?
Critical Value Call Target
TAT  30 min / 35 min
TAT on Thurs/Fri ??
Management Review

Deviation Management
$1,000,000,000,000,000
Mis-ID in DC
$1,000,000,000,000,000

“Never waste a Crisis”
No results for “defective orders”

No results for “preanytic errors”

No results for “unhappy customers”
Top Concern: Reimbursement

What do our Customers Want?

Quality
Safety
Engaged Physicians
Healthy Patients
The Politics

Protecting Access to Medicare Act 2014

• Clin Lab Fee Schedule Re-pricing
  • 2017 10%  2020 15%
  • 2018 10%  2021 15%
  • 2019 10%  2022 15%  75% total
From Data to Information

Evidence Based Medicine, HEDIS, MU

Decision Driver: Admit, Discharge, Transfer, Take to Surgery, Imaging, Prescribe, Change dose

70-80 % of Decisions Based on Lab Data

….at about 3.5% of the of US HC Spend
What if we shut down ALL Laboratories?
WASHINGTON: In an unprecedented move today all USA laboratories agreed to close to drive down a jailbreak in US healthcare spending. The change spells an end to all clinical and anatomic pathology testing as we’ve known it. This will further simplify claims management. Lab Week will be celebrated only one more time and then the party will truly be over. Experts predict that medical records will become much easier to read without the abundance of data and text. If the grand experiment fails, it is unlikely all Laboratories could re-open within a week or two.

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Waugh: “You turn off Laboratories and you turn off Healthcare”
Value of the Laboratory

How can we take what we uniquely know and create so much VALUE that our organizations could not possibly function without us?

Our customers become our greatest advocates.
Pre-analytic ➔ Analytic ➔ VALUE
Value of the Laboratory

The good news…Pathology & Lab Uniquely positioned to drive value…game changers.

Molecular diagnostics: STDs, Resp, IHC stains
NGS: Oncology, Pharma Costs, Patient Outcomes
MALDI-TOF: LOS, Pharma, Isolation Rooms bed mgt.
Antimicrobial Resistance, Blood Stream Infections
Blood Product Utilization, Whole slide imaging (Tumor Boards)
Medical Laboratory Formularies, Eval of Boutique Tests
Automation, Informatics, Lean Methods, Defect Capture
90% of ED Stats from 60 min => 30-35 min

95% of Troponin from 70 min => 35 min

90% of Inpatient STATS 90 min => 45 min
Optimize MALDI-TOF Workflow

Bacterial IDs  2.2 day => 1 day
Yeast IDs  4 days => 1.4 days

33% decrease LOS for Sepsis patients
24/7 Blood Culture monitor w/ Gram Stain
Faster Out Pt Lab Test Result Times since 2008

OP TAT from 50% same day Midnight to 90%

98% of testing reported by next 6am
(excludes cultures and sendouts)
Lab Outreach Growth in 24 Months

$2,045,542 Net Revenue Growth
Error Reduction in First 6 Months (2014)
Four Acute Care Hospitals evaluated
Three Inspection Cycles
Mock Peer Inspection Teams
Wait times
Hours of Operation (access)
Call Backs / Re-Collects
Lessons Learned

Did Well:
Locals developed huddle boards
Great lessons inside and outside of HC

Not so Well:
Quick fixes may not be the right fixes
Data Capture Tool for Deviation Mgt