Lean in Health Care

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INSTITUTE FOR HEALTHCARE IMPROVEMENT

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2.8 Trillion dollars

spent on

healthcare annually

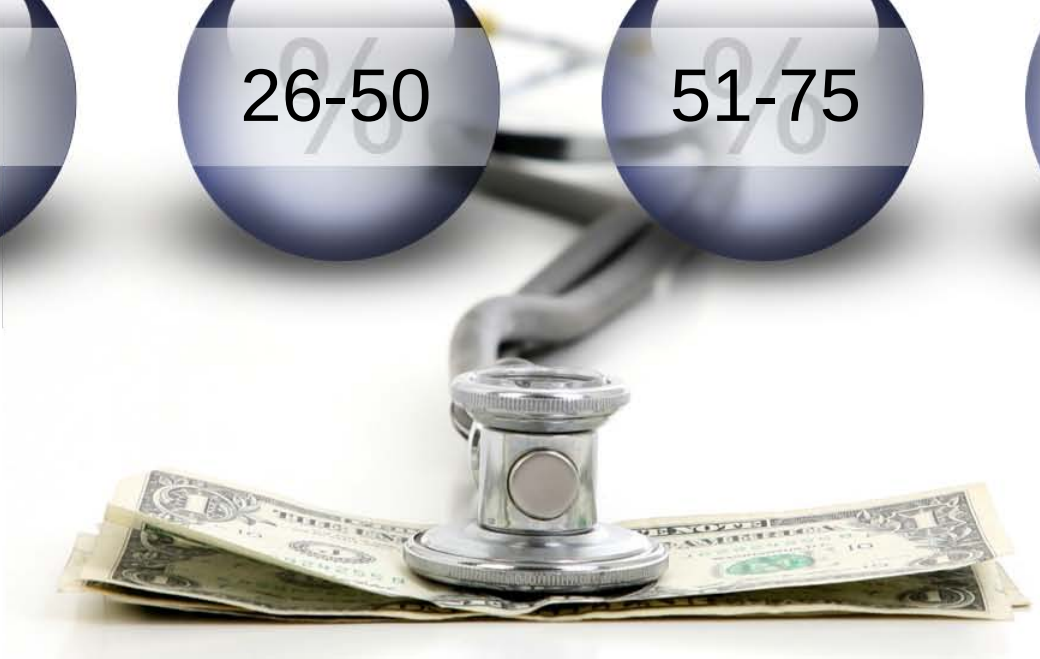
What percentage of it do you think actually goes to improving the health of the patients we serve?

0-25

26-50

51-75

76-100



The Total Cost of Healthcare

The cost of value added activities + The cost of non-value added activities = The total cost of healthcare

Cost includes the space and materials necessary to perform activities

Value added Vs Non value added work

- **Value added work = any work or service that the customer is willing to pay for.**
- **Non value added work = activities that do not contribute to the product or service and should be eliminated.**
- **Non value added but necessary work = activities that do not contribute to the product or the process, but are necessary to keep the value added work going.**

Value added activities

- Appropriate diagnostic tests
- Delivering therapies that reduce pain and/or improve the health of the patient
- History and physical for a patient suffering from an acute illness or injury
- Therapies or education that prevent illness or injury
- Educating patients about their illness
- Acute hospitalizations that could not have been prevented
- What else?

"All the right care, but only the right care"

Brent James

What Percentage of Your Clinical Day is Spent Doing Value Added Work?

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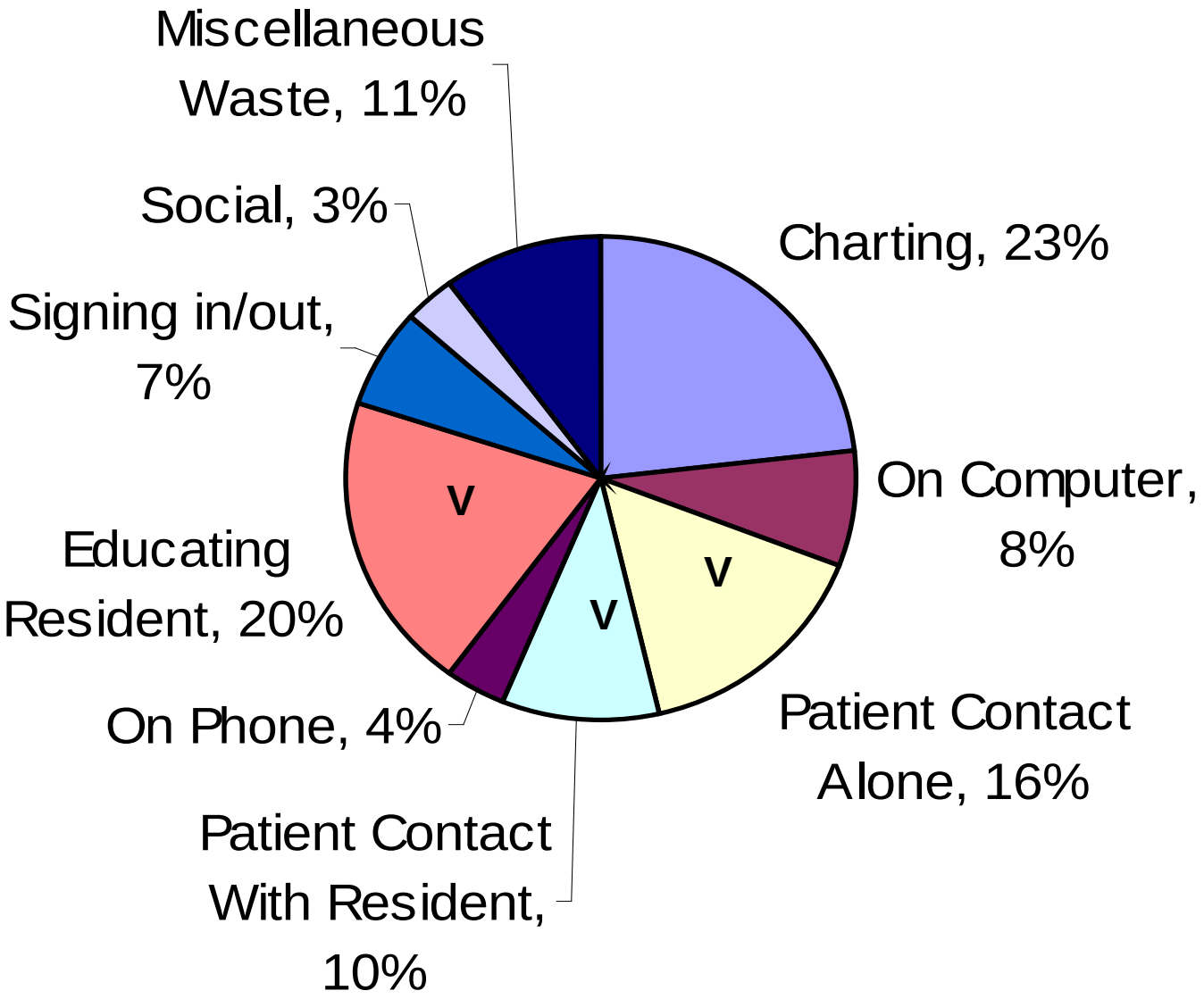
An Average Day for an Attending Physician at UMMMC



Relationship Between Job Satisfaction and Performing Value Added Activities

Activity	Satisfaction 0-10	Percent of Time on Activity
Patient Contact Without Resident	8.9	16%
Patient Contact With Resident	8.8	10%
Educating Resident	8.6	20%
Social	6.7	3%
Sign-out	5.3	7%
Time on Computer	3.7	8%
Phone Time	2.7	4%
Charting	2.6	23%
Looking For Things and Miscellaneous Waste	1.2	9%

Typical Waste in Healthcare

- Quality defects including hospital acquired infections and avoidable medical errors
- Time spent looking for things
- Time spent filling out forms
- Extra instruments on a surgical trays
- Any kind of rework
- Excessive administrative expenses
- Underutilized staff
- Underutilized space
- Use of a more expensive drug or device than is needed
- Use of any drug or therapy that is not needed
- Hospitalization that are unnecessary
- Hospital lengths of stay that are longer than are necessary
- Unorganized supply rooms with outdated inventories and unnecessary variety
- Confusing goals & metrics
- **Underutilized human potential - skills, talents, and creativity**
- **PHYSICIAN MUDA**

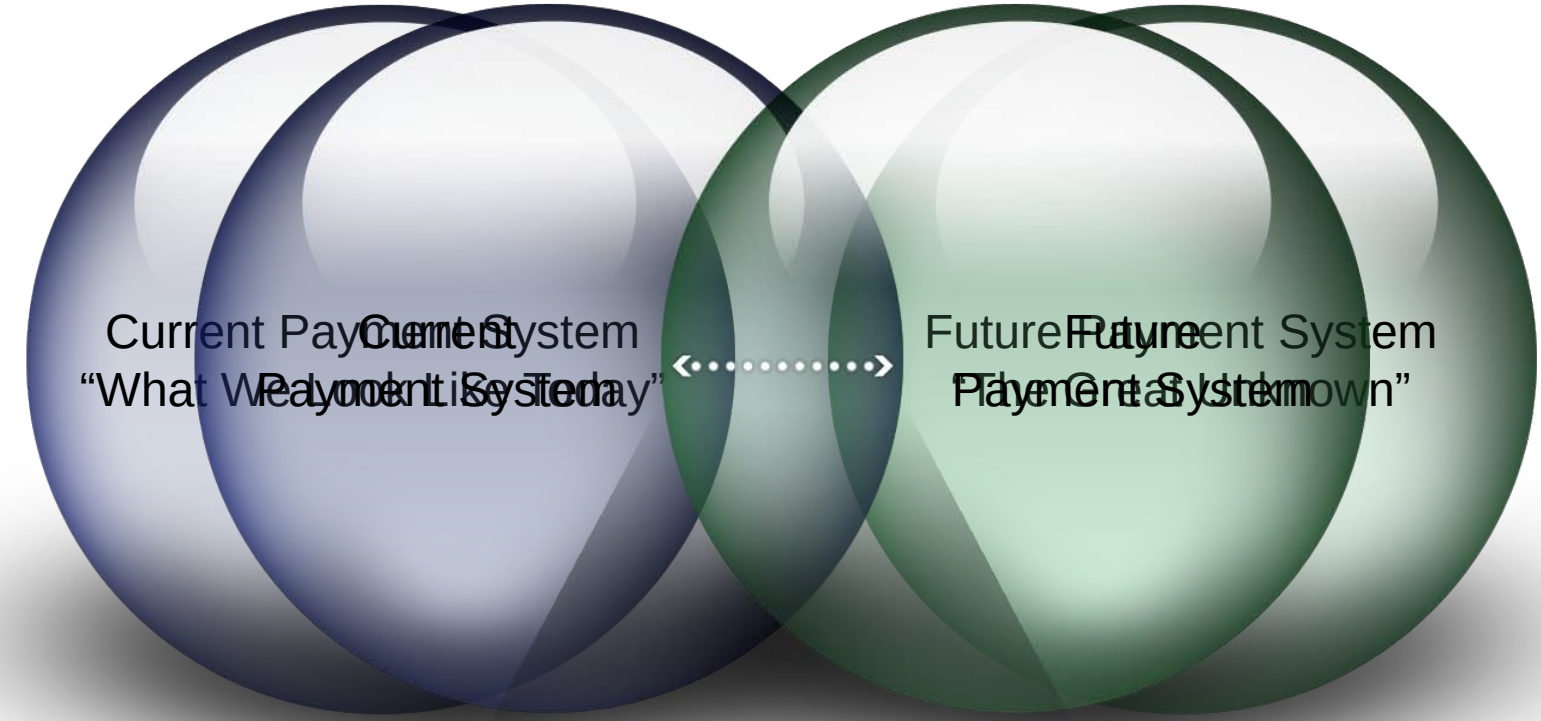
A win win situation for all parties

Improve the quality of care you deliver

Reduce the cost of the care

Improve the experience of receiving care

Improve the experience of giving care

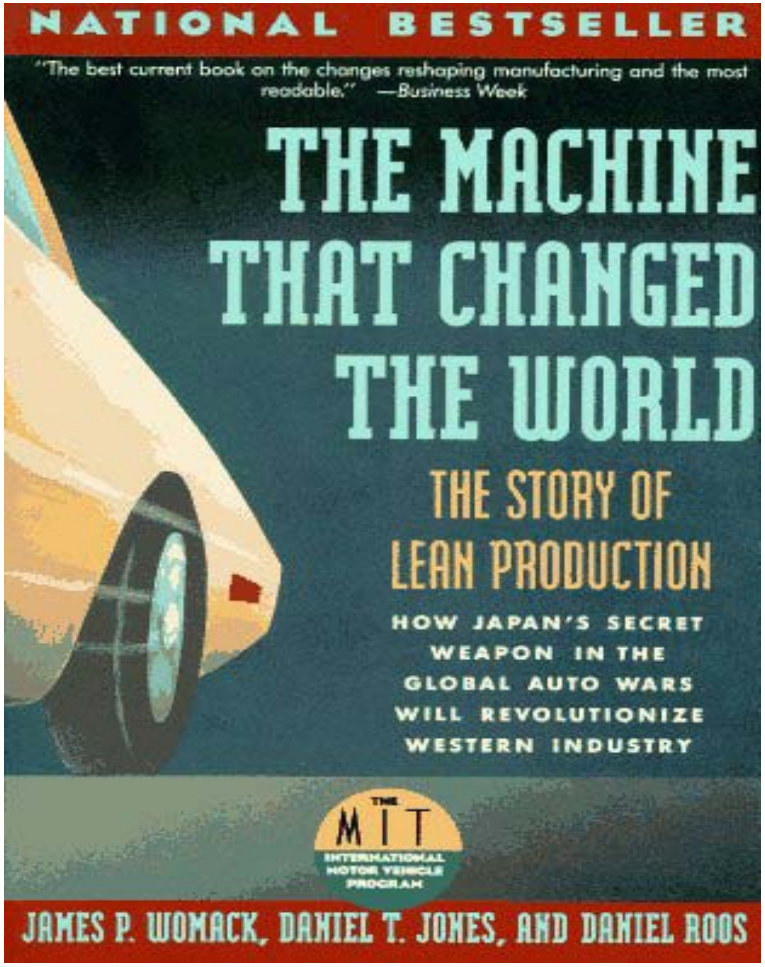


The

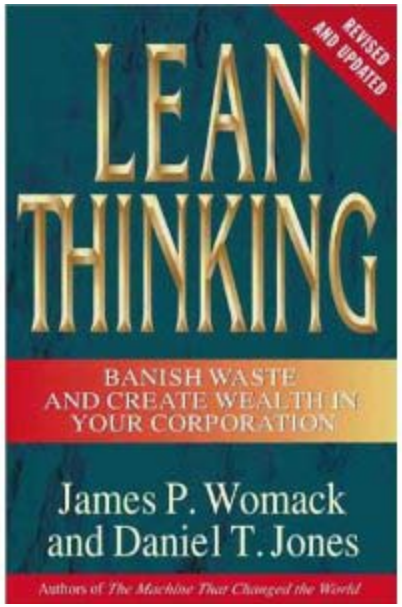
Sweet Spot

Waste Elimination

Lean = The Operational Philosophy behind the Toyota Production System



Lean Philosophy



Lean Is…

"The endless transformation of waste into value **<u>from the customer's perspective</u>**".

Womack and Jones, *Lean Thinking*

Lean increases product value by removing waste and slowly driving a process towards perfection.

Does this salt shaker need to be filled?

GREEN
UNTAIN
COFFEE
ROASTERS
ng Coffee Crafted with Care™
FRESH
Chilled
Cream

GREEN
UNTAIN
COFFEE
ROASTERS
ng Coffee Crafted with Care™
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Cream

What activity does

Mr. Potato Head value?

Standardization must occur before you can have innovation and improvement

“It is impossible to improve any process until it is standardized. If the process is shifting from here to there than any improvement will just be one more variation that is occasionally used and mostly ignored. One must standardize the process before improvements can be made.”

Masaaki Imai

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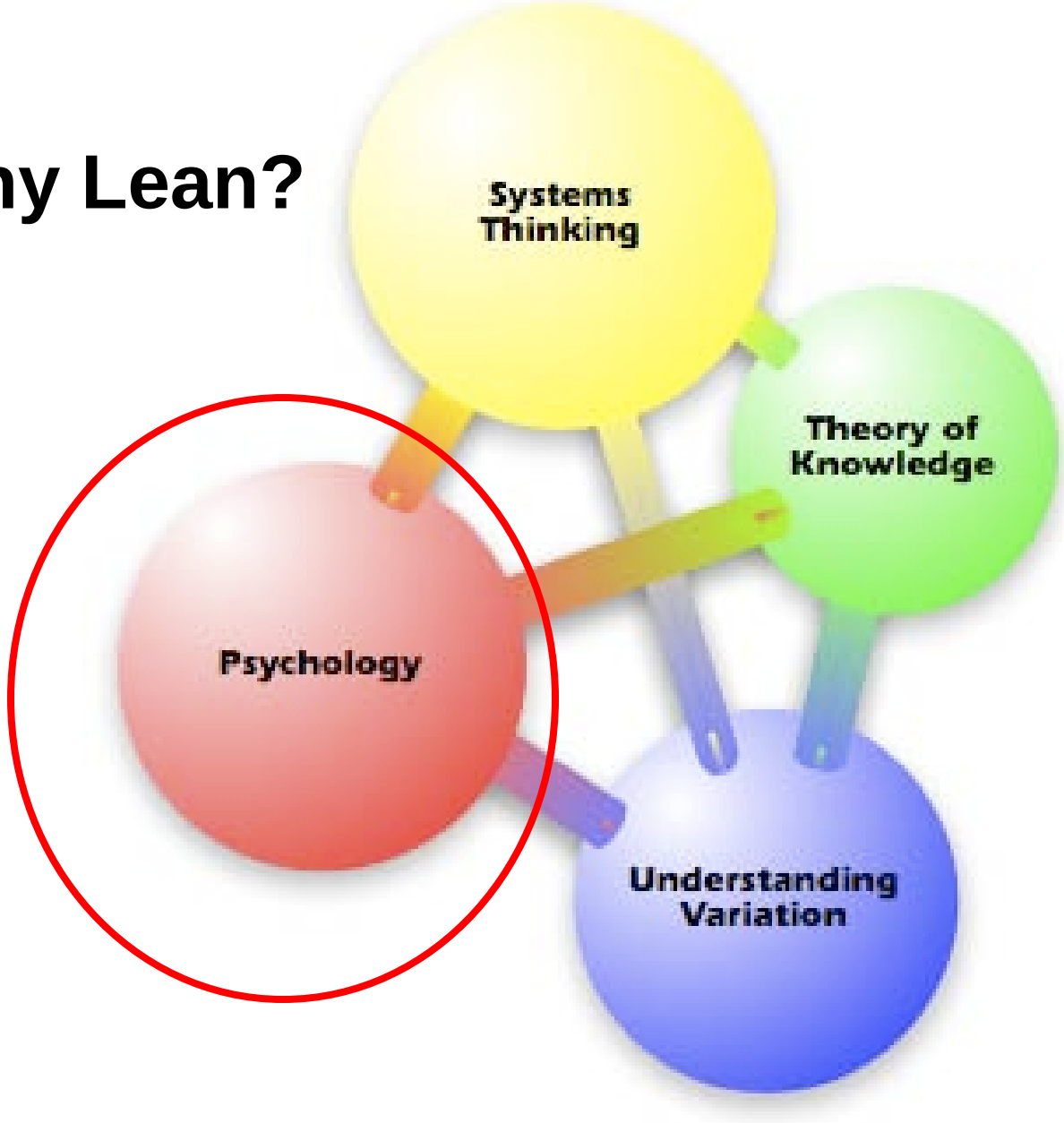
The first step in improving the treatment of any disease is standardizing its care. If the treatment of an acute or chronic condition within our system is variable, any effort at improvement will just be one more variation that is occasionally used and mostly ignored. We must standardize our care using evidence- or consensus-based pathways before we can improve it using discovery and innovation.

Based on work by Masaaki Imai in the book Kaizen

Why Lean?


Systems Thinking
Theory of Knowledge
Psychology
Understanding Variation

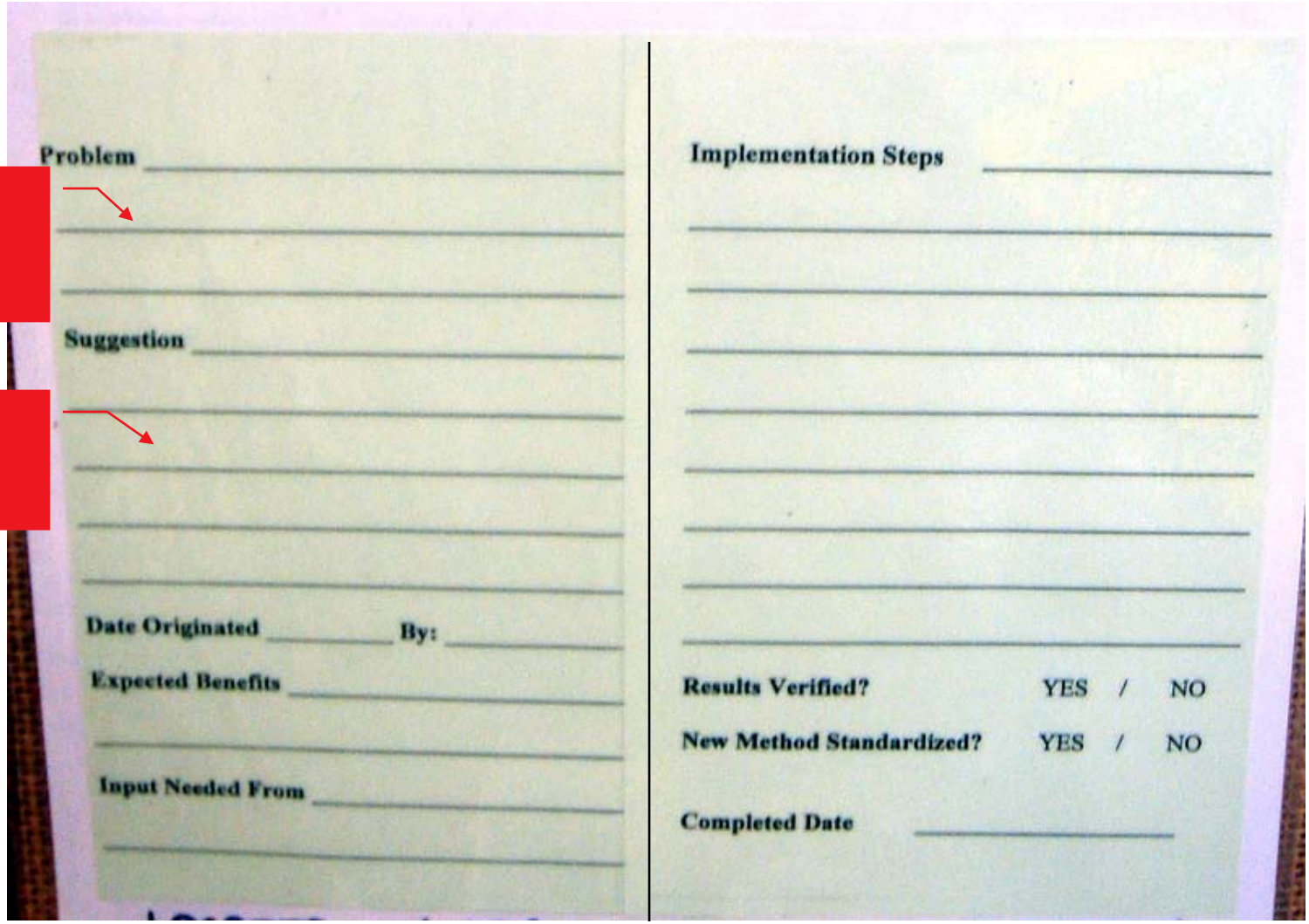
QS x AS = likelihood of success

BLUE TEAM
Lean Managers move the staffs ideas from left to right
NOT STARTED
IN PROGRESS
FINISHED

Idea Card Format

Not just a “complaint” (requires an idea)

Not just an idea (requires a problem statement)



FRONT BACK

Slide Courtesy of Mark Graban

Nursing Units Storage Areas Standardization & Scanning Compliance
Rapid Process Improvement
Osborn Campus: OB Triage Supply Room

Before

After

Courtesy of Abdul N. Mansour
Scottsdale Healthcare

TRUE NORTH METRICS

Safety/Quality

- Preventable Mortality
- Medication Errors

Customer Satisfaction

- Access
- Turnaround Time
- Quality of Time

People

- OSHA Recordable Injuries
- HAT Scores
- Employee Engagement Index

Financial Stewardship

- Operating Margin
- Productivity

Slide Courtesy of John Toussaint

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Our Patients

We will focus first and foremost on the health and wellbeing of the Patients we serve

High Quality Efficient Integrated Care

Service Line Performance
Preventable Mortality
Patient Satisfaction
PC Covered Lives
Meaningful Use

Engage and Empower our People

Physician Engagement
Physician Recruitment and Retention

Financial Sustainability

Net Income to Plan
Academic Spend Rate
MGMA Productivity %

Inflexibility is the greatest barrier to successfully applying Lean in health care and it is best overcome by Genchi Genbutsu

Lean Processes that Typically Exist in Hospitals

- Trauma Activations
- Code STEMI
- Code Stroke
- Central Line Bundle
- WHO Surgical Checklist
- Integrated Care Pathways

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Lean managers bring structure to problem solving

- Define your improvement goal.
- Define the current state using a process/ value stream map and measures specific to your goal.
- Redesign the process using ideas from the frontline staff (process redesign).
- Measure again to determine the effect of your intervention.

PDCA

Title: What you are talking about?

Owner/Date

I. Background

Why are you talking about it?

II. Current Conditions

Where do things stand today?

- Show visually using charts, graphs, drawings, maps, etc.

What is the problem?

III. Goals/Targets

What specific outcomes are required?

IV. Analysis

What is the root cause(s) of the problem?

- Choose the simplest problem-analysis tool that clearly shows the cause-and-effect relationship.

V. Proposed Countermeasures

What is your proposal to reach the future state, the target condition?

How will your recommended countermeasures affect the root cause to achieve the target?

VI. Plan

What activities will be required for implementation and who will be responsible for what and when?

What are the indicators of performance or progress?

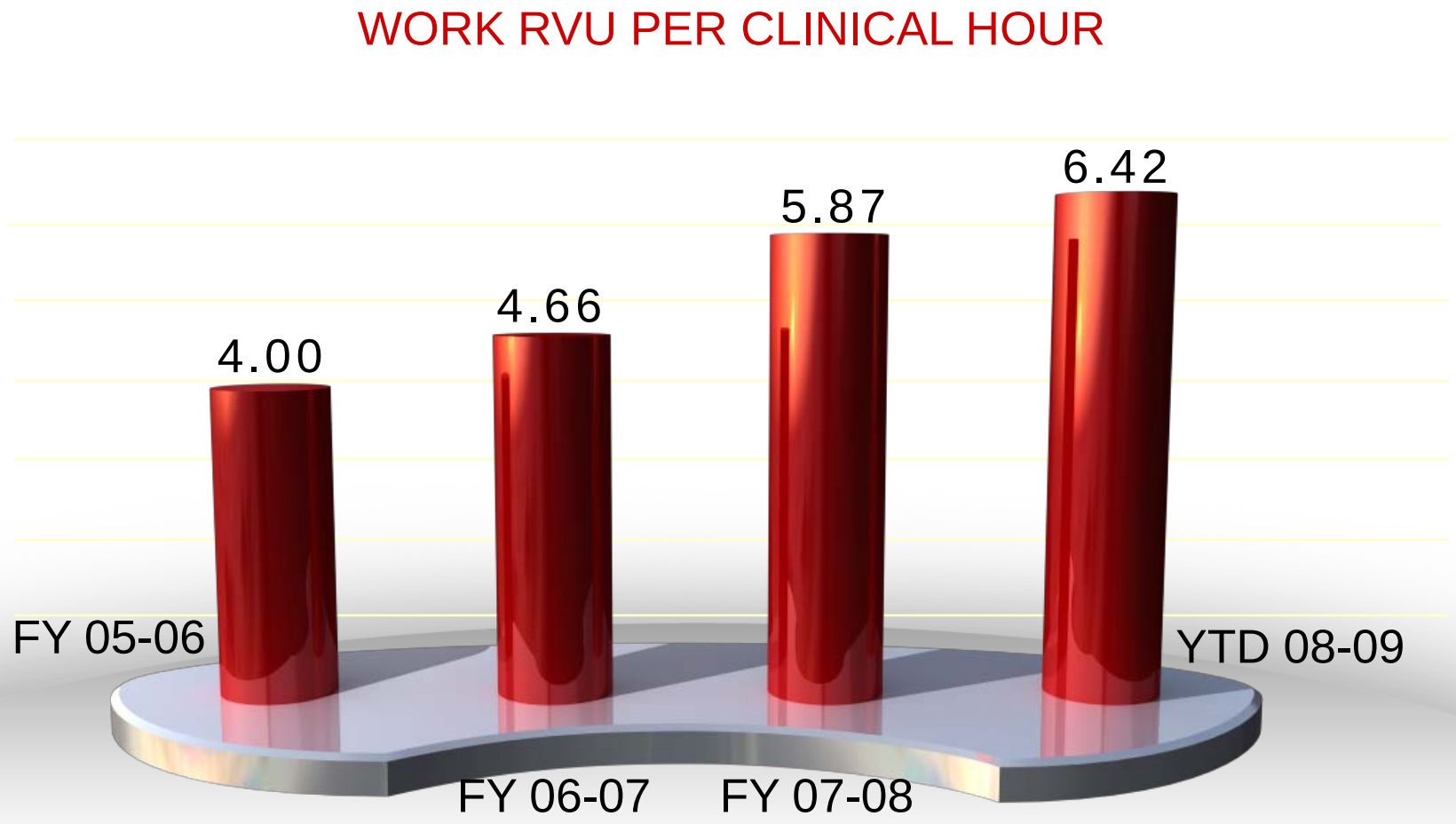
- Incorporate a Gantt chart or similar diagram that shows actions/outcomes, timeline, and responsibilities. May include details on specific means of implementation.

VII. Followup

What issues can be anticipated?

- Ensure ongoing PDCA.
- Capture and share learning.

Lean improved physician productivity by > 50% in 3 years.



Any Questions?
Play-Doh