



# All the How's and Why's to Achieving Standard Work in the Laboratory

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## What is Standard Work?

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### Definition

- An agreed-upon set of work procedures (standards) that establish the current one best method to deliver the expected results

### Purpose

- Achieve a stable and reliable process in order to systematically improve. It is the basis for daily excellence and Continuous Improvement.

## Standard Work

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The **current one best way** to complete an activity

- **Current**
  - Standard work is meant to be improved (kaizen)
- **One best way**
  - Assumes there is always a best way
  - Consistent process yields consistent outcomes
  - Safety and quality are mandatory
- **Developed by the people who do the work**

**“...nip common problems in the bud so that staff can focus instead on solving uncommon problems...”**

**–Bill Marriott**

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## Fixing the Problems

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- **Great Companies Understand:**
  - Importance of Basic Standards
  - Rules for what is acceptable & what is not
    - Practices
    - Processes
    - Product Quality
    - Employee Policies
    - Customer Relationships

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# How to Achieve Standard Work

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## How can you measure quality without a process?

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- Set appropriate standards and develop them through a team approach
- Establish an environment where success is assured
- Organize operations based on takt time (rate at which end product must be produced in order to satisfy a defined customer demand)
- Job Standardization Packages are variable and incomplete at all times
- Without Job Standardization, it is impossible to systematically improve

## Basic Elements of Standard Work

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- Job Guidance Sheet
  - Steps
  - Sequence
  - Times
  - Key safety and quality points
- Material Location Plan
  - Tools and materials

Level of detail varies depending on the process

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## Go to the Process

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“Farming looks mighty easy when your plow is a pencil and you’re a thousand miles from the corn field.”

- President Dwight D. Eisenhower



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## Preparation of the Job Standardization Package

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- Setting the Stage:
  - Based on an experienced, proficient operator (NOT Average)
  - Developed through a team approach
    - Operators
    - Supervisors
- Building the Package
  - Determine Job Steps and sequence
  - Categorize each Job Step by code and estimate the time for each Job Step from analysis
  - Identify if the step requires special tools or parts
  - Describe key quality and safety points
  - Provide diagrams or pictures as necessary

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## Evolution of Standard Work

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- Analyze current state
- Conference Room Pilot
- “Real World” Mock-up
- Full pilot
  - Introduce real product with heightened Quality Assurance during validation
- Full implementation

This process continues forever as new “best” ways are discovered

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# Standard Pork

## Activity

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## Standard Pork

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- Draw a pig
- You have 40 seconds – Start now!

## Creating Standard Work: Draw a Tic-Tac-Toe Board



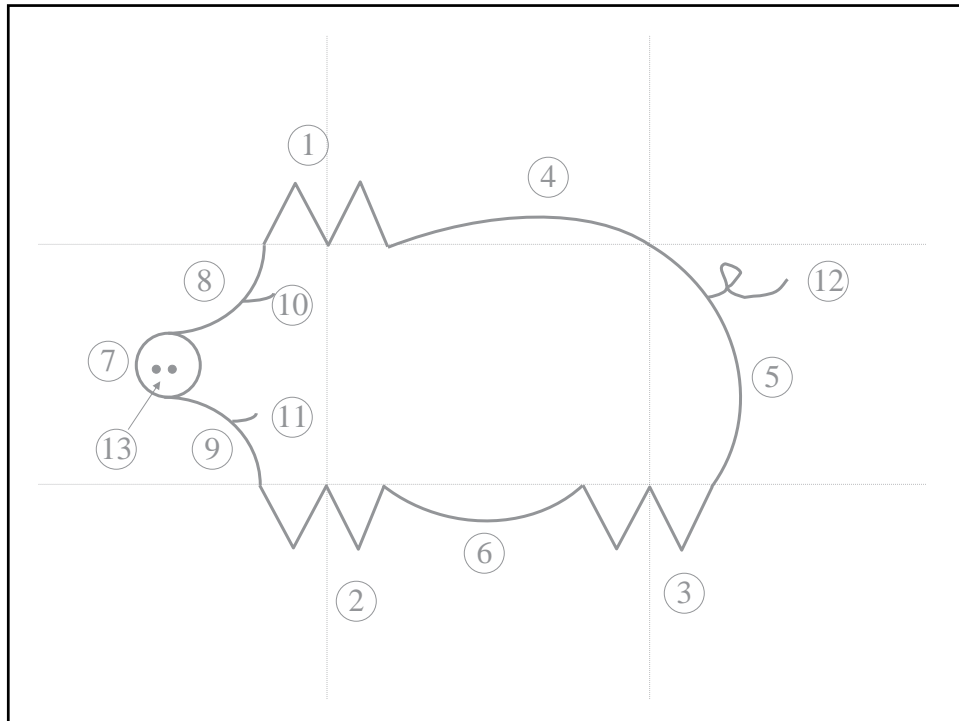
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## Standard Work for Pig Drawing

0. Pick up your pen (1 sec)
1. Draw a letter M at the top left intersection. Bottom center of M touches the intersection. (3 sec)
2. Draw the letter W at the bottom left intersection. Top center of W touches the intersection. (3 sec)
3. Draw the letter W at the bottom right intersection. Top center of W touches the intersection. (3 sec)
4. Draw an arc from the letter M to the top right intersection. (2 sec)
5. Draw another arc from the top right intersection to the bottom right W. (4 sec)
6. Draw an arc between the two bottom W's. (2 sec)
7. Draw the letter O in the center left box. (3 sec)
8. Draw an arc from the letter M to the tangent of the circle. (2 sec)
9. Draw an arc from the left W to the tangent of the circle. (2 sec)
10. Draw an arc for the eye. Half way between M and circle. (2 sec)
11. Draw an arc for the mouth. Half way between W and circle. Must be a happy pig!! (2 sec)
12. Draw the cursive letter e near the top of arc on the right. (3 sec)
13. And finally draw two dots in the middle of the circle for the pigs nose. (3 sec)
14. Put your pen down and hang up your pig. (5 sec)

Total Time Required  
= 40 sec.

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## Standard Pork

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- Draw a pig
- You have 40 seconds – Start now!
- What do you see?
- Any Improvements?

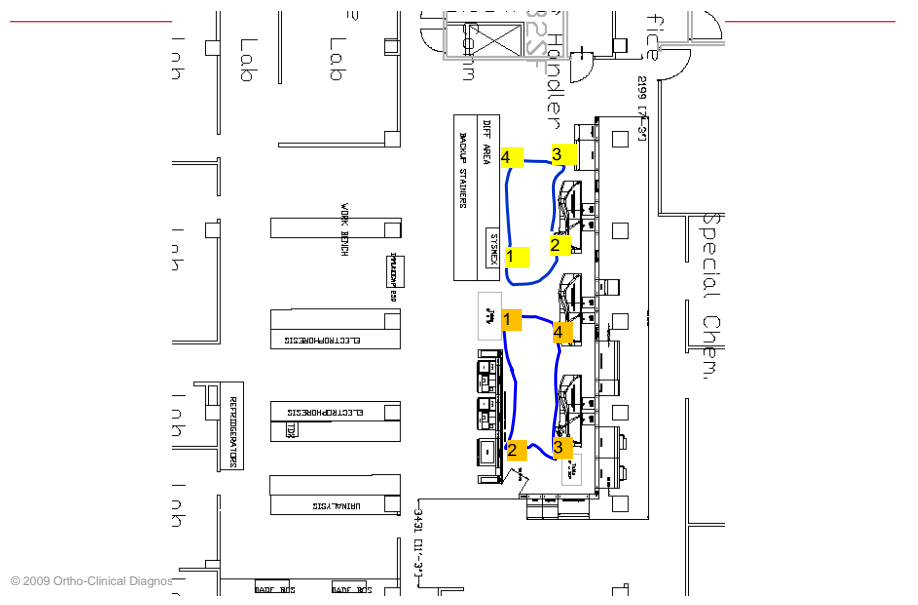


## Visual Tools for Standard Work

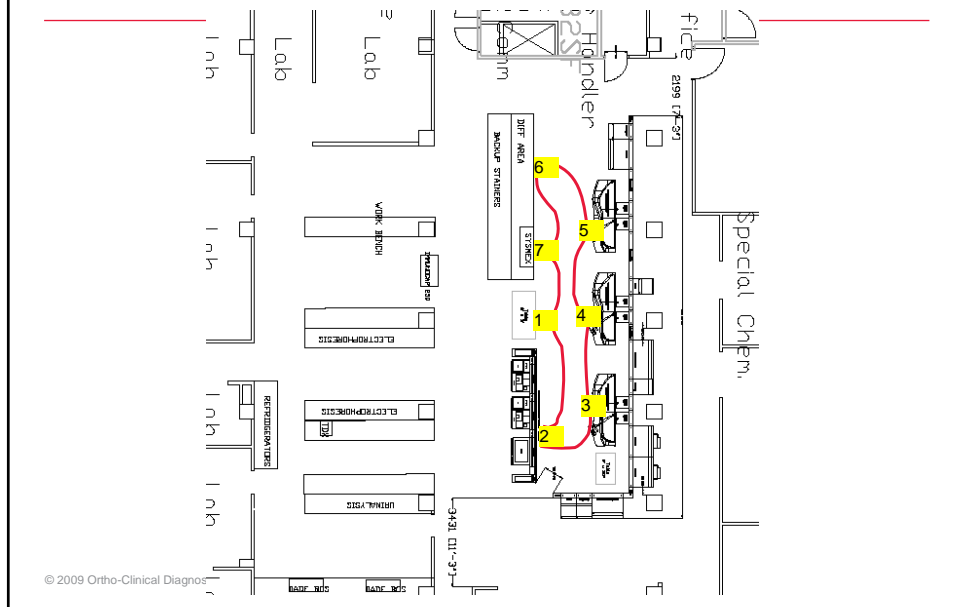
- Draw a diagram of the work area
- Indicate the order of process steps
- Draw operator walk patterns for each operator
- Multiple sheets may be necessary if the cell needs additional people depending on demand and staffing

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## Standard Work Walk Patterns- Example



## Standard Work Walk Patterns- Example



## Material Location Plan (MLP)

- Take a photo of the workstation or draw a diagram showing all required parts and tools in their proper location
- Materials should be placed in sequence of use
- Clearly identify all parts and tools, include part numbers or descriptions as necessary
- There will be multiple MLPs – should be one for each type of workstation

## Material Location Plan (MLP) – Example

Institution Name: EXAMPLE HOSPITAL		Operator Title: Lab Tech	
Process Location: HEMATOLOGY		Date Last Revised: May 19, 2007	
Work Process: In Cycle Process A & B - Midnight		Developed by: Ortho-Clinical Diagnostics, Inc., ValuMatrix Services	
<b>MATERIAL LOCATION PLAN</b>			
<b>PROCESS NAME</b> Core Cell		<b>STATION DESCRIPTION</b> 950 Verification	
			

## Helpful Hints for the Supervisor

- Clearly display the Job Standardization Package in the area
- Create an atmosphere that encourages adherence to the Job Standardization Packages
- Take swift and effective action on ideas generated by the team
- Establish the importance of Job Standardization through education, practice, and accountability
- Use videotape analysis to verify adherence to the standard
- Build a library of videotapes and use them as training aids

**Revision of Job Standardization Packages is one of the most important jobs of the supervisor**

## Standard Work is Not Always a Popular Idea

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- **People do not want to be told what to do**
  - Developed by the people that will use it – doesn't mean everyone will agree
- **People have pride in their old way**
  - Might have put a lot of effort into figuring out their own way
  - Might mean giving up something they are proud of
  - Need to convince people the benefits outweigh the perceived "loss"
- **People may be afraid they will have trouble learning new process quickly**
- **People may feel that oversight and standards = micromanagement**
- **Some people prefer chaos to consistency**

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## What if Standard Work is not being followed?

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- Is the standard work appropriate?
- Are the right tools, equipment, and materials in place and of appropriate quality?
- Is the person following the steps and sequence?
- Has the person had adequate practice in the operation?
- Is the person physically unable to meet the standard?  
(Can't or won't do it?)

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# Why Should We Have Standard Work?

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## Benefits of Standardized Work

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- Provides workers a means to define their jobs
- Provides consistency between operators and shifts
- Avoids unnecessary motion and wasted effort
- Assures safety
- Assures quality
- Reduces costs
- Easier to learn new operations
- Easier to shift to different operations within a process, or to shift to other processes or work areas
- Easier to see problems and contribute improvement ideas
- Foundation or baseline for improvement

## Benefits of Standard Work for Supervisors

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- Provides workers with a set of instructions for performing standard operations safely and accurately
- Refresher for experienced operators
- Training tool for new operators
- Helps identify improvement opportunities
- Using cycle time as a guidepost, approximates the range of processes that one worker can handle
- Helps identify bottleneck processes
- Determine headcount requirements
- Set operator expectations for each hour

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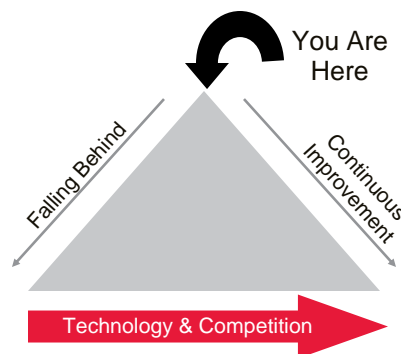
## Standard Work System

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Continuous Improvement:

Technology and competition continue to advance.

If you are not improving, you are falling behind.



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# The Secret to Success: Leadership Standard Work

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## Roles in Driving Improvement

- Executive
- Middle Management
- Front Line Managers/Supervisors
- Support Functions
- Value Adding Employees



## Leadership is Key

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- Success requires aligned and supportive leadership
- Leaders must:
  - Own and champion the new process; demonstrate visible, public, and active sponsorship
  - Invest their personal time and attention to follow through on actions to ensure success
  - Be known as advocates; take initiative and challenge the status quo
  - Act as role models of new behavior

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## Leader Standard Work

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- Why Leader Standard Work?
  - Provide the structure to build new habits in management
  - Provide the foundation for continuity
  - Quickly raise the game of existing leadership
  - Same expectation as for front-line workers
  - Keep the focus on the critical elements (rationale for prioritizing other requests)

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# Senior Tech

Standardized Work Process Audit - Senior #1			
Auditor:		Date:	
Person/Process Audited:			
Process Inputs:	Yes	No	Action Taken
Were the Job Guidance Sheet(s) being followed?			
Is the 5S being adhered to and visual controls being followed? (everything in it's place, etc.)			
Is the material management system being followed? (using bin system, no excess stock on bench, etc.)			
Is continuous flow happening? (no batching or smallest batches possible)			
Has this person received adequate training on running this position?			
Process Outputs:	Yes	No	Action Taken
Did you find any excessive backups or delays at this process?			
Were any quality concerns identified?			
Additional Comments:			

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# Lab Manager

Process Inputs:	Yes	No	Action Taken
Were all of this person's audits of their people/processes completed since my last audit of them?			
Were all of this person's audits of their people/processes completed accurately to my level of expectations/standards?			
Were all of the issues found during this person's audits addressed appropriately?			
Were unresolved issues from this person's audits elevated appropriately and documented on the Open Issues Log?			
Are the staffing levels adequate to manage the work load at this time as defined by the lean staffing model?			
Did my "floor walk" match the observations on this person's audits?			
Did my "floor walk" uncover other issues that were not covered on this person's audit sheet?			
Were today's suggestions retrieved, reviewed and posted on the Open Issues Log?			
Are there any items on the Open Issues Log that are more than 3 days past due?			
Did the lean committee meet this week to review the process, lean model and any new process change suggestions?			
Process Outputs:	Yes	No	Action Taken
Is TAT being tracked and monitored daily?			
Is TAT acceptable and improving?			
Are the quality indicators (data) acceptable and improving?			
Are the suggestions on the Open Issues Log contributing to the lean flow process in the lab?			
Are the recommendations from the Lean Committee being implemented in a timely manner?			
Are the audit frequencies of the Seniors appropriate based on the issues that are being found?			

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## Lab Director

Process Inputs:	Yes	No	Action Taken
Were all of this person's audits of their people/processes completed since my last audit of them?			
Were all of this person's audits of their people/processes completed accurately to my level of expectations/standards?			
Were all of the issues found during this person's audits addressed appropriately?			
Is the Open Issues Log being used consistently and appropriately?			
Is the Suggestion Program generating continuous improvement opportunities?			
Did my "floor walk" match the observations on this person's audits?			
Did my "floor walk" uncover other issues that were not covered on this person's audit sheet?			
Process Outputs:	Yes	No	Action Taken
Is TAT acceptable and improving?			
Are the quality indicators (data) acceptable and improving?			
Is customer satisfaction acceptable and improving?			
Is staff satisfaction acceptable and improving?			
Are the staffing levels adequate to achieve my budget requirements?			
Are the Continuous Improvement Systems delivering breakthrough ideas that move the lab towards our Ideal Lean State?			
Has the Lean Vision been clearly communicated to the lab staff and is it in line with hospital's long term goals?			
Is the Manager's audit frequency of the Seniors appropriate based on the issues that are being found?			

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## Executive Management

Process Inputs:	Yes	No	Action Taken
Were all of this person's audits of their people/processes completed since my last audit of them?			
Were all of this person's audits of their people/processes completed accurately to my level of expectations/standards?			
Were all of the issues found during this person's audits addressed appropriately?			
Is the Standardized Work Audit Tracker up to date with acceptable levels of audit completions?			
Is the Suggestion Program generating an acceptable number of continuous improvement opportunities?			
Is the % of suggestions made vs. implemented at an acceptable level?			
Did my "floor walk" match the observations on this person's audits?			
Did my "floor walk" uncover other issues that were not covered on this person's audit sheet?			
Is the Lean Implementation Phasing Plan on track for timely implementation?			
Process Outputs:	Yes	No	Action Taken
Are the lab performance metrics acceptable and improving? (TAT, etc.)			
Are the lab financial metrics acceptable and improving?			
Are the lab quality indicators acceptable and improving?			
Is customer satisfaction acceptable and improving?			
Is staff satisfaction acceptable and improving?			
Are the Continuous Improvement Systems delivering breakthrough ideas that move the lab towards our Ideal Lean State?			
Has the Lean Vision been clearly communicated to the lab staff and is it in line with hospital's long term goals?			
Is the Director's audit frequency of their Managers appropriate based on the issues that are being found?			

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## Leadership Audits

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Person Responsible	Frequency of Audit
Senior Tech	Daily
Lab Manager	Weekly
Lab Director	Monthly
Executive Management	Quarterly

- Completed audits are posted on the wall for all to see
- Creates accountability for leaders to follow their own standard work
- Takes leaders out of their offices and to the “gemba”- the place where the work is done

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## Keys to Success for Standardized Work

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- Standardized work must occur at **ALL** levels of the organization and be coached from the top down to each subsequent level
- Only when you have standardized work can you systematically improve your operations without creating chaos, bringing everyone along when a better way is discovered
- A Continuous Improvement culture in your organization is critical for the success of Standardized Work

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## Leadership is the Key

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- “Lean projects” simply re-establish or improve the fundamentals of process management
  - Carefully arranged, well designed workplace
  - Defined expectations and visual management tools for ongoing review
- What succeeds or fails is the management. Take advantage of the tools and drive success or make excuses and continue business as usual.

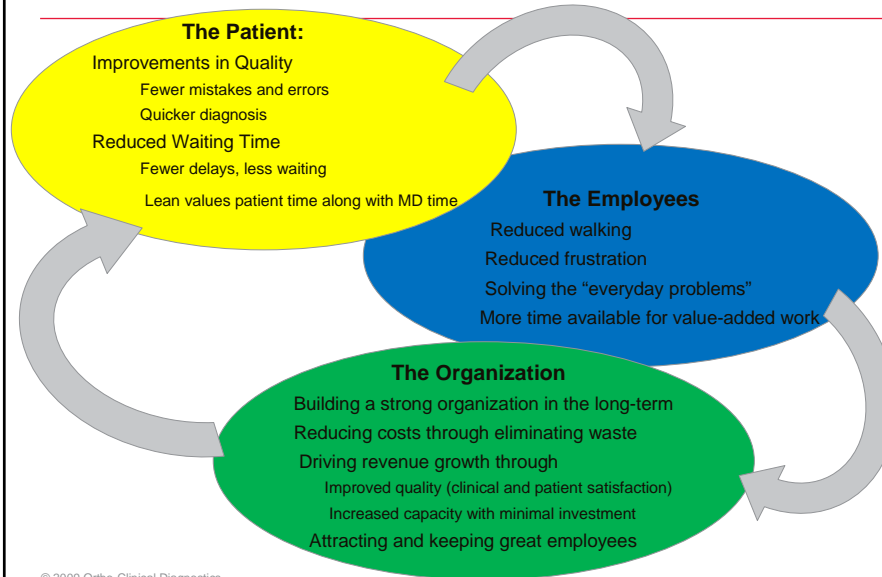
You get what you expect and  
you deserve what you tolerate

## Company Culture

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- “Culture” is not something you can change directly
- Culture is the result of management practices
- To change culture, you must change the way you manage
- People will respond to their measures and the expectations of their management

## Standard Work is Good For Everyone



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# Questions ?

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