

Lean and Six Sigma tools that can
improve workflows and quality
outcomes.



2015 CBHC FALL CONFERENCE

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Objectives:

- Learn to apply lean six sigma tools to improve service quality, work flow, and outcomes in behavioral health.
- Turn *ideas* for improvement into *action*



Today's agenda

- What is Lean and Six Sigma?
 - Examples from MHCD continuous improvement projects
 - How can these process improvement tools be utilized in your agency
 - Engaging staff in quality improvement
 - Launching Lean and Six Sigma in your organization
 - Lessons learned, feedback and improvement for your lean six sigma program

Lean thinking

- Lean is a broad catchphrase that describes a holistic and sustainable approach to using less of everything to give you more.
- Lean maintains a relentless focus on providing customer value.
- Lean promotes the respect of people.
- Lean is a philosophy of continuous learning and everyday improvement.

Lean principles: Eliminate Waste

- Transport-any movement of a product or material that is not otherwise required to perform value added processing is waste.
- Waiting- Waiting in all forms is waste.
- Overproduction-Producing more than your customer requires is a waste.
- Defect-Any process product or service that fails to meet specifications is waste.

Lean principles: Eliminate Waste

- Inventory- inventory anywhere in the value stream is not adding value.
- Motion- Any movement of a person's body that does not add value to the process is waste.
- Extra processing-Any process that does not add value to the product is waste.

Recent Lean Project at MHCD

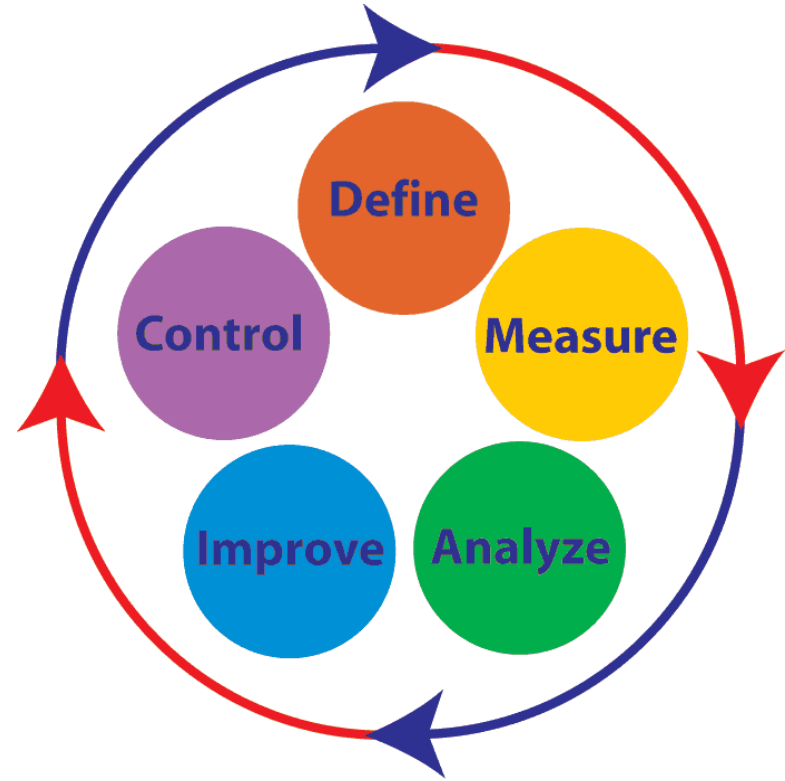
- Hiring new staff
- Reduced from 89 to 51 days (average), median 46.5)
- Reduction of mean = 43% = 38 days faster!
- Estimated savings for one Case Management position:
 - Vacant position cost: CM 1 salary \$30,888.x3(average cost of position to company)= \$92,664 divide by 52 weeks= \$1,782.00 cost per week.
 - Above data suggests a **5.5 week decrease in hiring time.**
 - **5.5x \$1,782.00 = \$9,801.00** savings in one CM position by hiring faster. Source: LasoCareers.com

Six Sigma

- Six Sigma is a problem solving methodology
- Six Sigma performance is the statistical term for a process that produces fewer than 3.4 defects per million opportunities.
- Six Sigma improvement is when the key outcomes of a business or work process are improved dramatically.
- Six Sigma deployment is the prescriptive rollout of the Six Sigma methodology across an organization with assigned practices, roles and procedures.

The Six Sigma Framework

- Steps
 - Define
 - Measure
 - Analyze
 - Improve
 - Control
- Motorola, General Electric
- What was its initial focus?
 - Industry
 - Meaning of Six Sigma = 6σ
- Healthcare adoption
 - Now in Mayo Clinic in every function
 - Finance group used determine staffing level required to meet compliance tracking requirements



Recent Six Sigma project at MHCD

- Integrated care billing process.
- User needs analysis identified a lack of standard processes to collect billing data.
- New contracting checklist and pre-planning process was created to ensure stakeholder input and review of contracting process occurred.
- New process clearly identifies data sharing and billing requirements upfront.

Selected Lean and Six Sigma tools

- PROJECT CHARTER AND A-3 DOCUMENT
- FLOWCHARTS AND PROCESS MAPS
- RAPID IMPROVEMENT EVENT(Kaizen)
- ROOT CAUSE ANALYSIS AND FISHBONE DIAGRAMS
- USER NEEDS ANALYSIS
- AFFINITY DIAGRAMS

Project charters and A-3 format

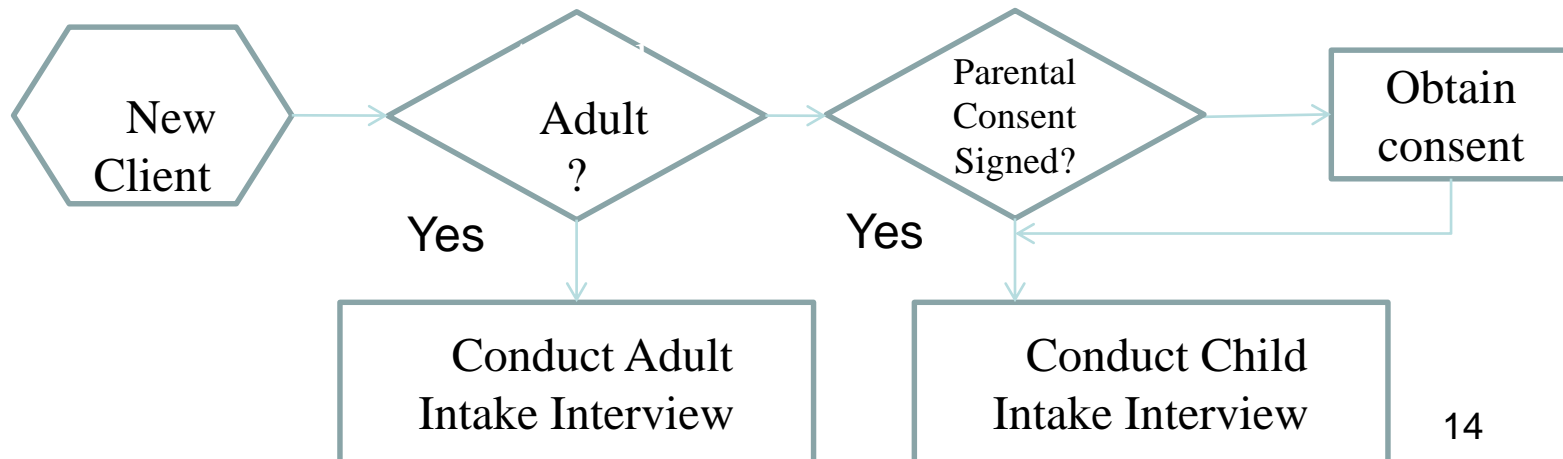
- Problem statement/Goal statement
- Business case/Project scope and Resources made available for project with time commitment.
- A-3 Template example
- Reason for action/Current state/Target state.
- Gap analysis/Solutions and experiments. Complete the plan.

FLOWCHARTS

- Why use it? To allow a team to identify the actual flow or sequence of events in a process that any product or service follows.
- What does it do? Shows unexpected complexity, problem areas, redundancy and where simplification and standardization may be possible.
- Allows a team to come to agreement on the steps of the process and to examine which activities may affect the process performance.

Flow Charts

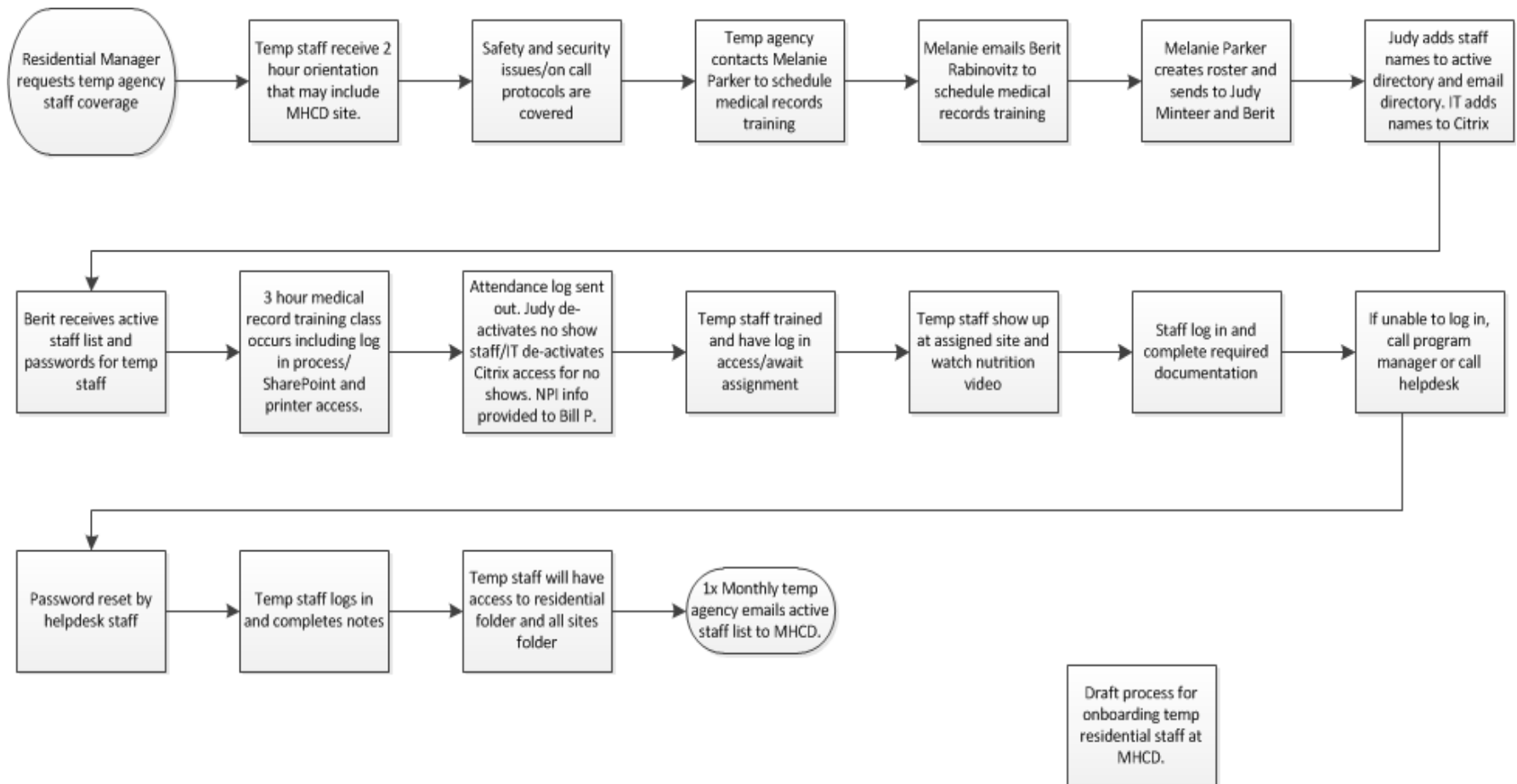
- Why? Identify flow or sequence
- What is it? A picture of a process with standard symbols for steps and decisions
- Helpful to
 - Understand how process actually works
 - Identify problems or complexity that could be simplified
 - Train to understand a complete process



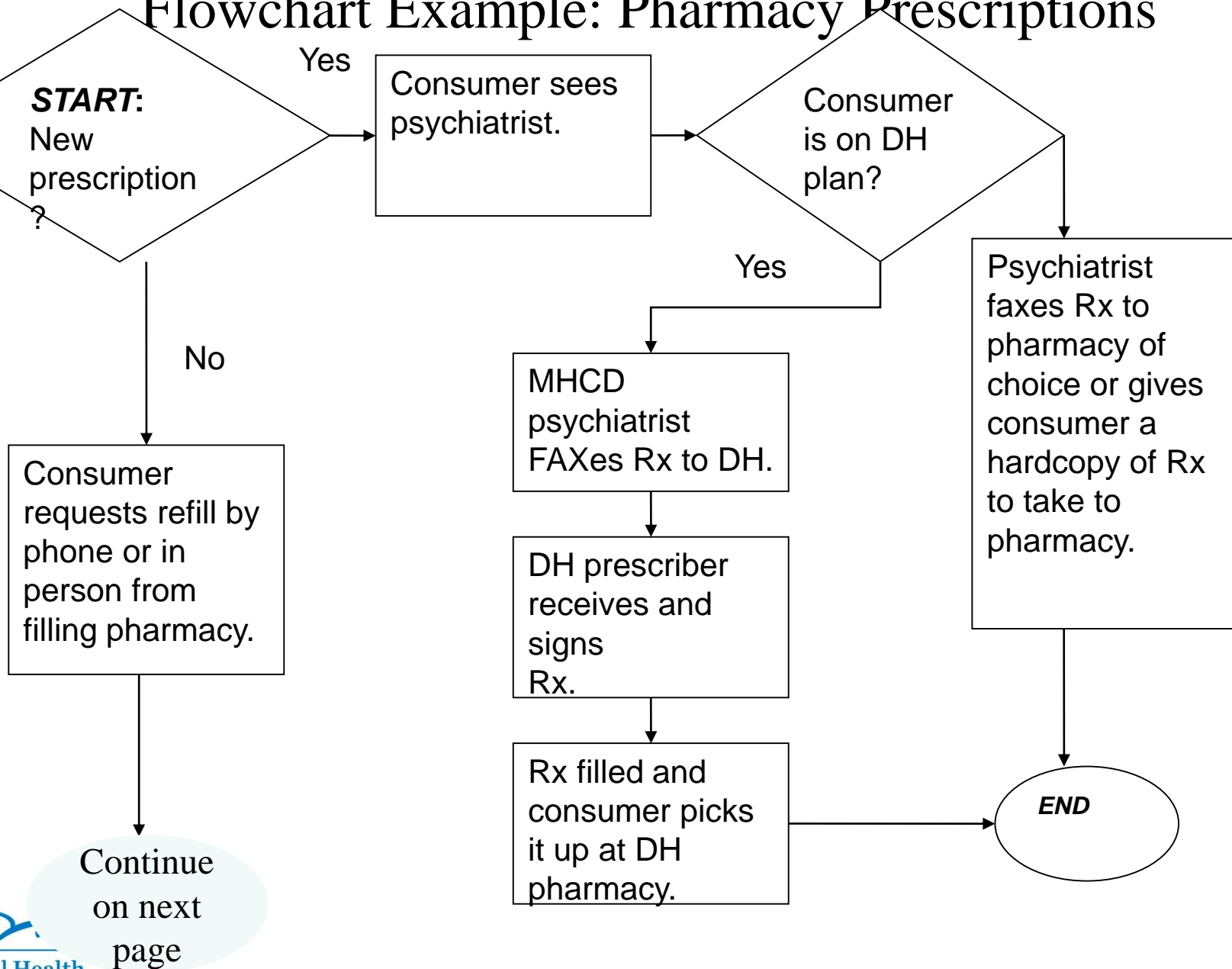
FLOWCHARTS

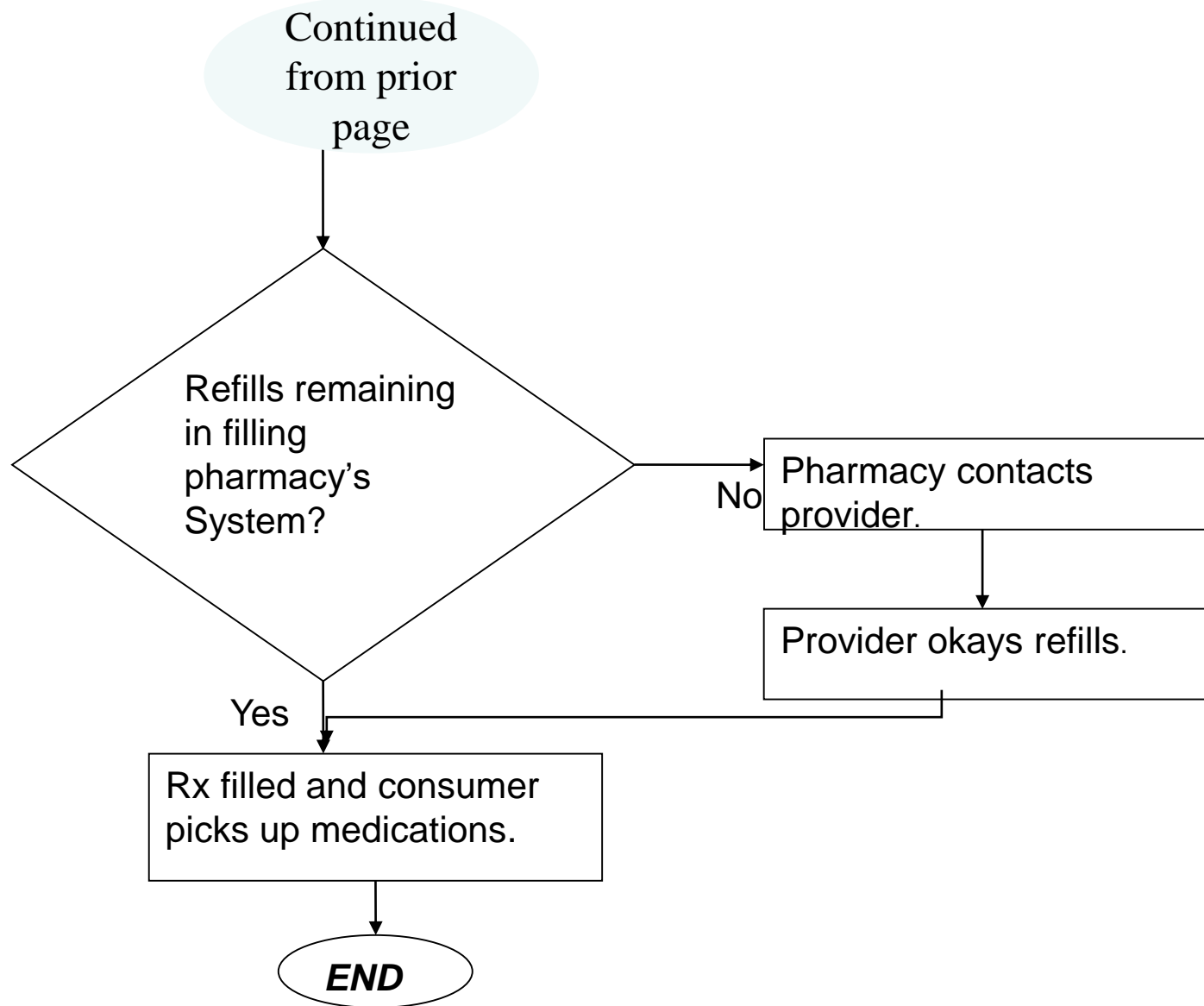
- Serves as a training aid to understand the complete process.
- Identifies locations where additional data can be collected and investigated.
- How do I do it? Clearly define where the process starts and ends. Determine and document the steps in the process in sequence as they occur by putting them on a whiteboard or easel paper. Review it for completeness and verify it.

FLOWCHARTS: an example



Flowchart Example: Pharmacy Prescriptions





Activity: Create a Flow Chart of a process that has at least two decision points (branches in the flow)

➤ Suggestions

- New people calling your center to receive services. Differences by types of consumers or payer type or other factors?
- New employee training or onboarding according to position (clinical or non-clinical, medical or other factors?)
- Your own processes



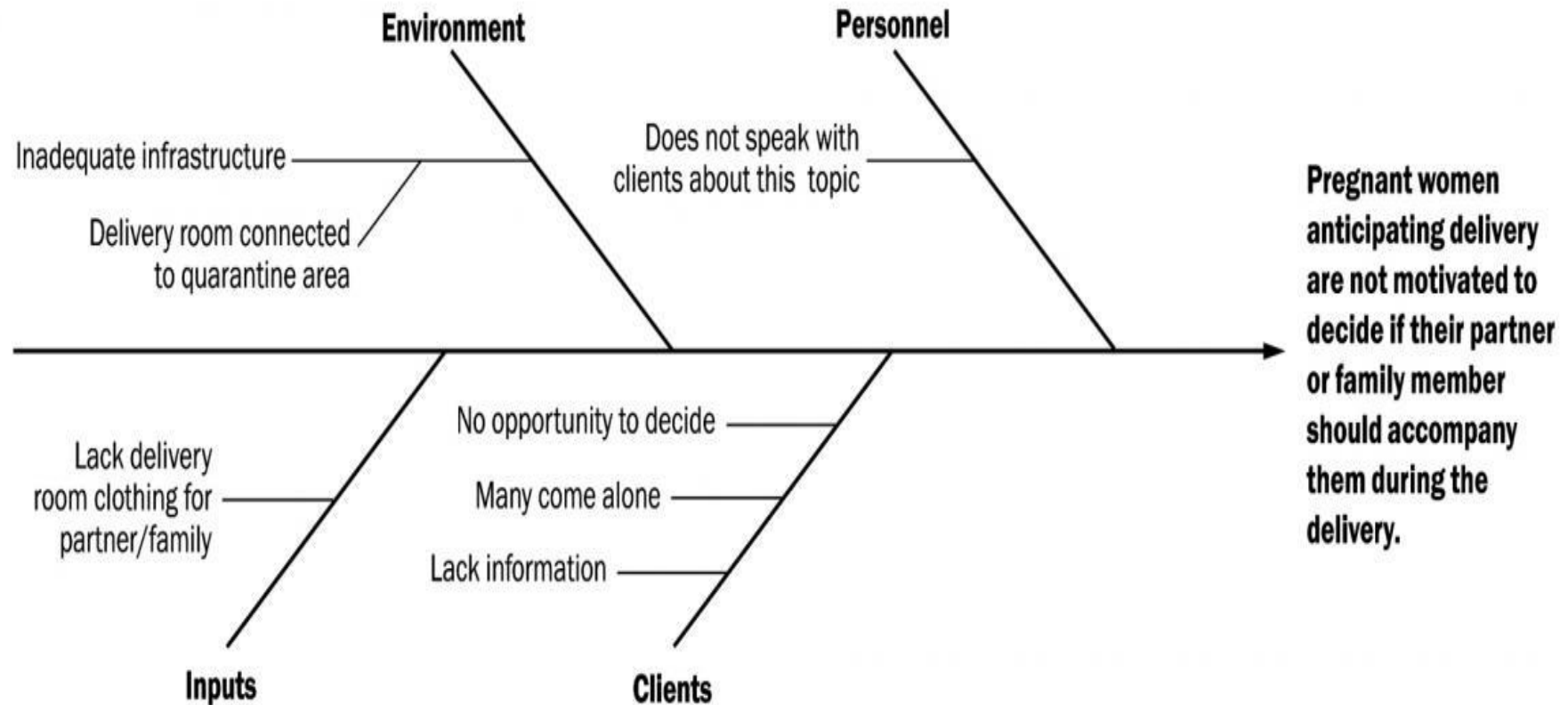
FISHBONE DIAGRAM

- Why use it? To allow a team to identify, explore and graphically display in increasing detail all of the possible causes related to a problem or condition to discover its root cause.
- What does it do? Enables a team to focus on the content of the problem, not on the history of the problem or differing personal interests of team members.
- Focuses the team on causes not symptoms.
- When to use: When the exact cause of an effect is not known.

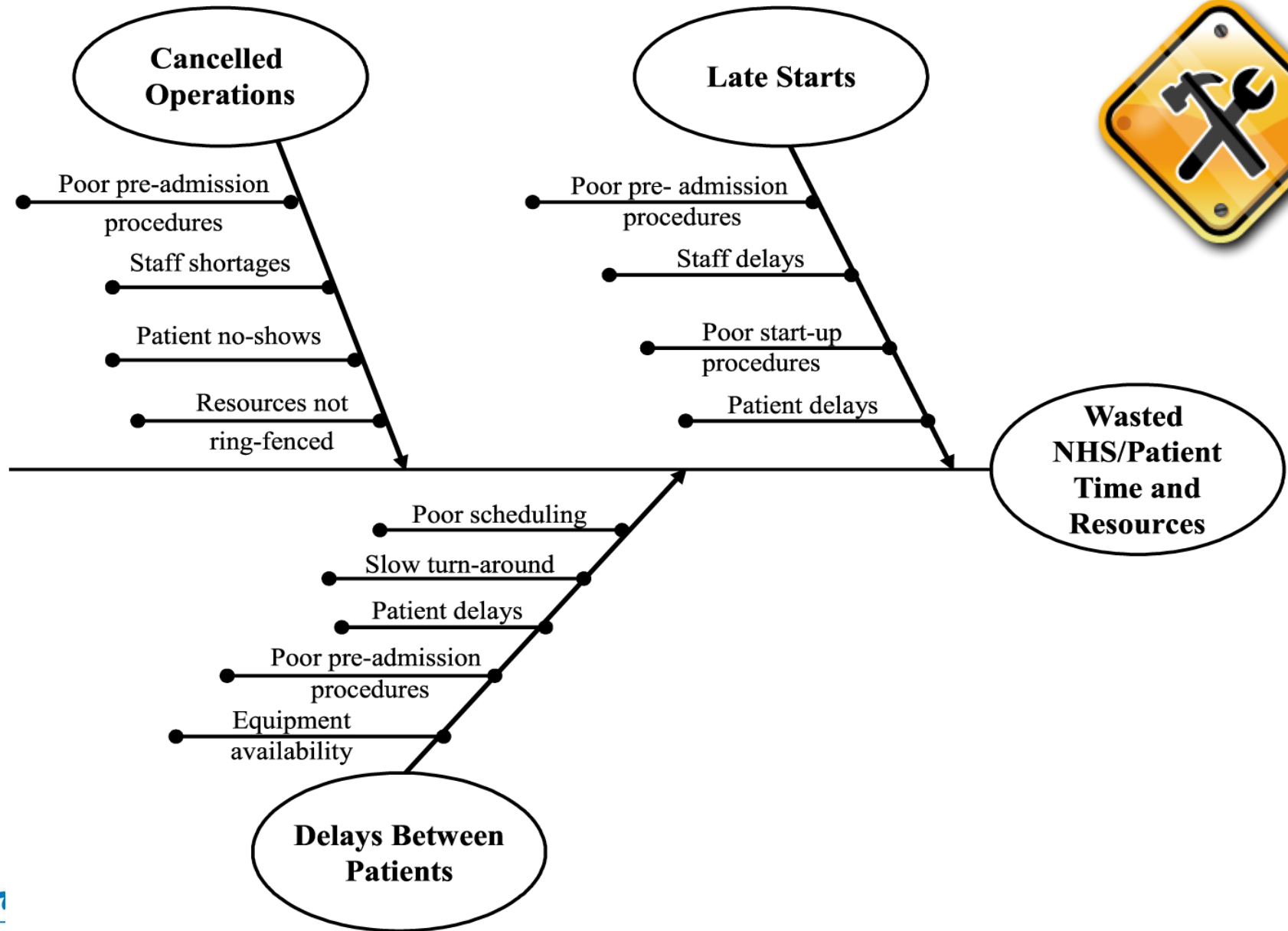
Fishbone Example



Fishbone Diagram Used at the San Carlos Hospital



Fishbone Example: National Health Service (NHS) in the UK



Activity: Create a Fishbone Diagram for a problem in your organization

➤ Suggestions

- Consumer no-shows
- Staff turnover
- Computer / administrative issues
- Your own situations



AFFINITY DIAGRAM

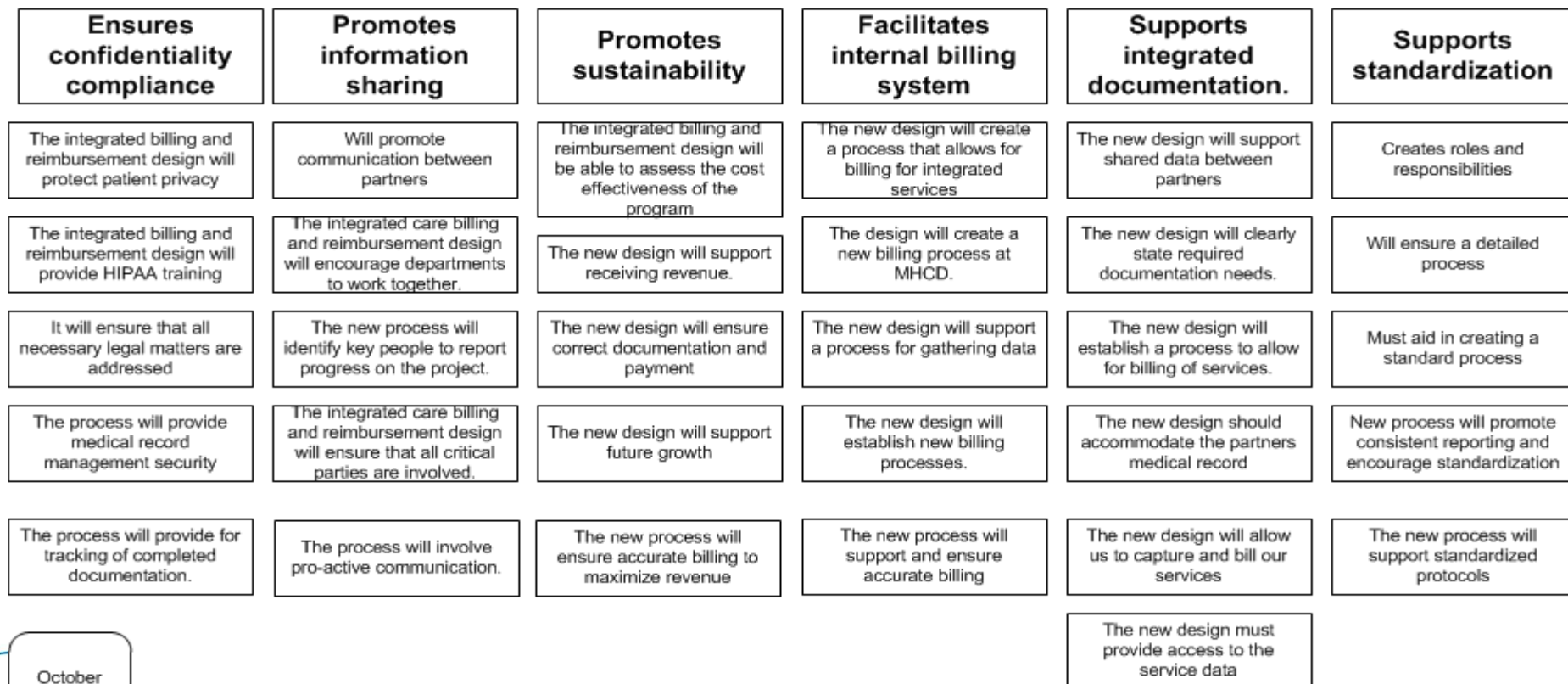
- Why use it? To allow a team to creatively generate a large number of ideas and then organize and summarize natural groupings among them to understand the essence of a problem and breakthrough solutions.
- What does it do? Encourages creativity by everyone on the team. Encourages ownership of results that emerge because the team creates them. Overcomes paralysis which is brought on by overwhelming options and lack of consensus.

AFFINITY DIAGRAM

- How to do it? Phrase the issue under discussion in a full sentence. Brainstorm at least 20 ideas or issues by recording them on paper or post it notes. Sort ideas or issues into related groupings. For each grouping create a summary or header card and move ideas or issues under the appropriate header card.

AFFINITY DIAGRAM: example

DFSS integrated care billing Affinity Diagram



October
2012



Activity: Create an affinity diagram

- Choose an issue, problem, or objective
- Examples:
 - How to ensure reimbursement in collaborative integrated care systems
 - Objectives and areas of focus in a strategic plan
 - How knowledge is developed in Design for Six Sigma projects
- Group discussion of Affinity Diagrams, where to go next?

User needs analysis tool

- Four questions to gain information and ideas.
- 1. What do you need a for?
- 2. What do you like about the current process?
- 3. What are your dislikes about the current process?
- 4. What are your suggested improvements for this process?

LAUNCHING Lean and Six Sigma at your organization



- Launching Lean and Six Sigma in your organization
- More examples of lean/continuous improvement projects
- Lessons learned, feedback and improvement for your lean six sigma program

Projects that are suitable for Lean process improvement events meet these criteria:

(Note: There are many other valuable projects and activities that aren't suited to Lean but are worth pursuing as innovation, service/product development, marketing, etc.)

- Increase service capacity or revenue, or decrease costs or expenses
- Add value for identifiable customers
- Reduce waste
- Improve an existing process or activity rather than create a whole new activity
- There are benefits in involving a cross-functional team
- Solutions and plans can be identified by the end of week
- There is a current state of the process and a desired future state can be identified
- Something that is repeated with some frequency (not a one-time event)
- There are benefits in process standardization

Value and Impact considerations for prioritizing and selecting Lean projects:

- (In other words, assuming structural suitability, why would we choose this project: how is it useful, what do we expect to gain?)
- Relevant to Strategic Plan
- Impacts bottom line
- Contributes to annual growth target
- Expands capacity
- Customer impact, especially *external*
- Other identifiable value

Candidate Processes for Lean Improvement:

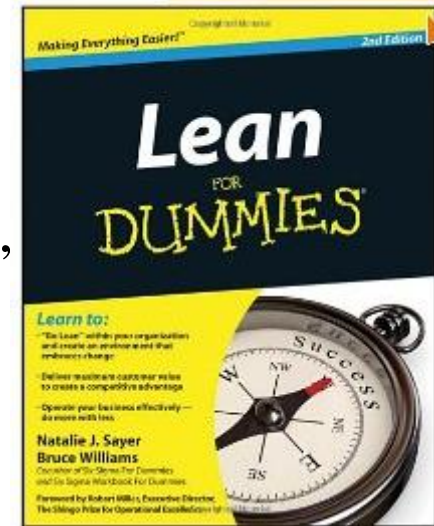
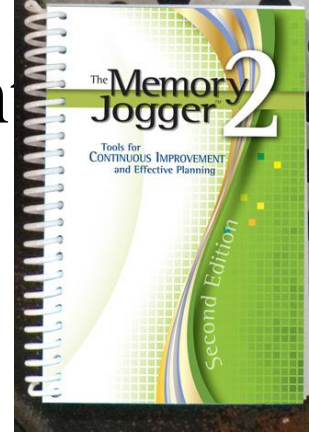
Example selection and ranking

Process/ Objective	Staff	Relevant to Strategic Plan?	Impact Bottom Line?	Contribute to Growth Target?	Value added?	Target date	Level of Interest or Preference (5= high, 1 =low)
Call center							
Clinical capacity							
Filling a staff vacancy							
Error-free computer systems							

Insights from our experience

- It works! It really can work.
- People are busy, be flexible.
- Employees appreciate being involved in developing solutions.
- It takes follow up and ownership to keep changes in place and working.
- Not every event turns out as expected!

Resources for Continuous Improvement



- Books and Printed Materials
 - The Memory Jogger 2: Tools for Continuous Improvement and Effective Planning, ISBN 978-1-57681-113-9 or see www.MemoryJogger.org
 - Lean for Dummies, Second Edition, by Natalie J. Sayer and Bruce Williams
 - Chapter 15, Real-Life Lean, Getting New Consumers to Show-up to Scheduled Appointments, pages 327-331
- Web sites
 - The American Society for Quality: www.asq.org
 - Tools of Quality: <http://asq.org/learn-about-quality/seven-basic-quality-tools/overview/overview.html>
 - www.isixsigma.com Tools and Templates
- Mental Health Center of Denver: Our publications and examples
 - <http://mhcd.org/resource-library>