



War on Waste: Process Improvement for Compounding Pharmacies

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Objectives

- Understand the 8 wastes
- Be able to identify waste in our environment
- Develop ideas on how to address waste
- Lean to “see”

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Agenda

- Purpose of Lean
- Define value and waste
- How is waste created?
- The 8 wastes
- How to identify and address waste
- Recap



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Lean Thinking

Maximize value in our process so that we can make exactly what is needed, when it is needed and in the quantity needed by our customer

The relentless identification and elimination of waste from our processes



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How does Lean Help Us?

- Reduces lead time to customer by eliminating waste from our system
- Reduced frustration by removing obstacles
- Increases customer satisfaction
- Optimal utilization of resources



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Value

What the customer is willing to pay for

Activity, process or operation that changes the product from one form to another in order to get it closer to the customer's specifications



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Waste

Consuming more resources (time, money, space, etc.) than are necessary to produce the goods or services that the customer wants

Pure Waste: Actions that could be stopped without affecting the customer

Incidental Waste: Actions that need to be done based on how the current system operates but do not add value



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8 Wastes



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Overproduction

Supplying the process with more than is needed to meet order requirements, sooner and faster than it is needed

This waste causes all others

Causes:

- Producing more than is required to make up for yield loss
- Scheduling production to forecasted demand
- Long changeovers or avoiding long changeovers leads to large lot production



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Inventory

Requires people, equipment and space to count, transport, store and maintain it

If we do not get orders the material will become obsolete and be thrown away

Often used to help hide other wastes

Causes:

- Overproduction
- Poor equipment layout
- Long changeover times
- Mismatched production speeds
- Defective or questionable parts
- Lack of confidence in supply



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Transportation

Double or triple handling, moving it in and out of storage areas and warehouses

Material can get damaged if it's moved too much

It adds no value and is often used to get the extra inventory out of the way

Causes:

- Extra Inventory
- Retention points before and after operations
- Excessive distance between operations (layout)
- Single skill focused operations



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Motion

Walking without working

Searching for tools, materials or information

Reaching, bending or unnecessary motion due to poor housekeeping or workplace layout

Process not designed with employees in mind

Causes:

- Poor workstation layout
- Isolated operations
- Shared tools
- Congestion



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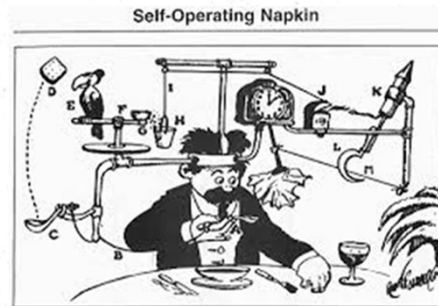
Over-Processing

Doing more than is necessary to produce an effectively functioning product

Extra setup steps, over-specification of the process, extra processing steps

Causes:

- Lack of standard work or processes
- Equipment over designed
- Process not updated with technology changes
- Lack of effective problem solving



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Defects

Defective or scrap materials

Cost of inspecting defects

Responding to customer complaints

Rework or re-inspection of questionable materials

Causes:

- Emphasis on downstream inspection; questionable material passed on
- Lack of standard work
- Material Handling (transportation)
- Process design/equipment



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Waiting

Operator waiting for machines/Technicians waiting for upstream step to be completed

Machine waiting for operator

Waiting for parts, instructions, approval, materials, information, maintenance, decisions

Causes:

- Mismatched output rates
- Poor layout
- Machine breakdowns (ours or upstream)
- Insufficient staffing



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Underutilized Skills

Employees are seen as a source of labor only, not seen as true process experts

People are told what to do and asked not to think

Employees are not involved in finding solutions, opportunities to improve our processes are missed

Causes:

- Management does not involve employees in problem solving
- Narrowly defined jobs and expectations
- Old school management/worker relationships



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How Does Waste Get There?

Built into our processes

Fail to understand why we do something a certain way, so we continue doing it that way even if the limitation has been removed (Great Grandma's Roast Recipe)

Root cause of problems is not addressed or band aid solution is implemented



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How Can We Find It?

Find the value added work, everything else is waste

Go out and SEE it: observe our processes as if you do not know them, talk to operators so you can understand why we do things the way we do

Spaghetti diagrams (map the flow of materials on a layout—i.d. storage points, transportation, etc)



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How Can We Find It?

Have the right attitude—waste is hard enough to find when you want to find it, if we don't want to find waste it will be impossible to root it out and remove it



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How Do We Remove It?

- All the lean tools are designed to identify and remove waste
- 5S
- Standard Work
- Quick Changeovers
- Mistake Proofing
- Kanban
- One Piece Flow
- Kaizens (focused improvement activities)



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Contact Information

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 Alliance for Pharmacy Compounding
Compounding the Joy of Living

 Owner Summit