

Six Sigma Process Improvement


Maximizing your Workflow

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1

1



Learning Objectives

- 1) Discuss the History of Six Sigma
- 2) List the steps of DMAIC (Define, Measure, Analyze, Improve, Control) methodology
- 3) Using the Six Sigma process in a case study, identify wastes in pharmacy work area
- 4) Describe how to reduce unnecessary waste in processes
- 5) Apply Six Sigma tools to common practice via case study

2

2

What is Six Sigma?

A set of **management techniques** intended to improve business processes by greatly reducing the probability that an error or **defect** will occur.

3

3

Six Sigma History



In 1981, Motorola called on the top engineers within the company and asked them to combine all their best practices to make a methodology, which would become the base of Motorola's quality improvement program.

Thus was developed the first Six Sigma program, where they documented more than \$16 Billion in savings as a result.

4

4

— How do we use Six Sigma?

Define, Measure, Analyze, Improve, and Control.



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Insulin Waste



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Insulin Waste

Define: Heavy amounts of insulin vial waste.

Measure: 10mL insulin vial are loaded into the automated dispensing cabinet (ADC) and labeled for 28 day expiration. The vial is replaced after 28 days.

Analyze: Only half of the vial (5mL) is used after 28 days.

Improve: Load 3mL vial size into ADC.

Control: Monitor usage for future opportunities.

8

8

Large Volume Plain IV Solution Waste



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Large Volume Plain IV Solution Waste

Define: Heavy amounts of Large Volume Lactated Ringers (LR) IV waste.

Measure: One 24 count case of LR is ordered per year. Bags are stored until expiration.

10

10

Large Volume Plain IV Solution Waste

Analyze: 9 to 11 LR bags are used per year. The remaining bags are wasted.

Improve: Loan 10 to 12 bags from Materials Department and store until expiration.

Control: Rotate bags every 6 months for best dating.

11

11

Active Learning: Practice

Waste (Type): _____

Define (Problem): _____

Measure (Process): _____

Analyze (Defects): _____

Improve (Eliminate defects): _____

Control (Find new ways to improve): _____

12

12

— Applying DMAIC to Workflow Management



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13

- Six Sigma Principles help to eliminate **waste**. One of the largest waste in the workplace is **time**.

- Time waste results from defective processes, incorrect or insufficient information and poor communication, low-grade workmanship, and so much more.

- Using DMAIC can help to eliminate these waste for a more productive environment.



14

14

Active Learning: “Danny’s Daily Refill”



This is Danny.

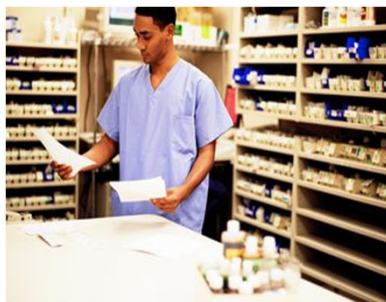
Danny refills the Automated Dispensing Cabinet (ADC) every day.

He rarely gets a lunch break.

15

15

Active Learning: “Danny’s Daily Refill”



First, he prints the refill reports.

Danny has an older printer to work with, so it takes him **30 minutes** to run all of the necessary reports.

16

16

Active Learning: “Danny’s Daily Refill”



Next, he takes **5 minutes** to pull the items needed for the fill.

It takes **15 minutes** for Pharmacist to check everything before it is ready to be delivered to the ADC.

How can Danny maximize his time so that he can take a lunch break every day?

17

17

Active Learning: “Danny’s Daily Refill”

Define (Problem): Danny doesn’t take a lunch break

Measure (Process): Print reports (**30 min**), pull items (**5 min**), and pharmacist check (**15 min**)

Analyze (Defects): Time waste = **45 minutes**

Improve (Eliminate defects): If Danny goes to lunch while his reports print, he can maximize **30 minutes**

Control (Find new ways to improve): Danny can find new ways to be productive during 15 min pharmacist check

18

18

Six Sigma in Your Everyday Life



19

19

Active Learning: Six Sigma in Everyday Processes

Your Morning Ritual



Waste?



Process
inefficiencies?



Overall
Optimization??

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Ready Set Action!!!!



To Be

SKIT



Not to Be!

Or...

21

21

Morning Routine Improvements

- 1) Alarm clock??
- 2) When to start the coffee machine?
- 3) When to put the shower on?
- 4) When to brush your teeth?
- 5) Leaving bathroom door open
- 6) Put clothes on in which order:
- 7) While the toast is toasting...
- 8) Place coffee in...

22

22

Conclusion

Six-Sigma Process could be used in everyday life,
including the pharmacy

Pay attention to the process to focus on all
potential wastes that surrounds you

Be careful, because the Six-Sigma Process could
take over your life...in a good way

23

23



24

24

References

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