

ASSIGNMENT INFORMATION

Due Date Monday, July 29, 2019 9:00 AM	Points Possible 150 View Rubric
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Case Study 1: Statistical Thinking in Health Care

Due Week 4 and worth 150 points

Read the following case study.

Ben Davis had just completed an intensive course in Statistical Thinking for Business Improvement, which was offered to all employees of a large health maintenance organization. There was no time to celebrate, however, because he was already under a lot of pressure. Ben works as a pharmacist's assistant in the HMO's pharmacy, and his manager, Juan de Pacotilla, was about to be fired. Juan's dismissal appeared to be imminent due to numerous complaints, and even a few lawsuits over inaccurate prescriptions. Juan now was asking Ben for his assistance in trying to resolve the problem, preferably yesterday!

"Ben, I really need your help! If I can't show some major improvement or at least a solid plan by next month, I'm history."

"I'll be glad to help, Juan, but what can I do? I'm just a pharmacist's assistant."

"I don't care what your job title is. I think you're just the person who can get this done. I realize I've been too far removed from day-to-day operations in the pharmacy, but you work there every day. You're in a much better position to find out how to fix the problem. Just tell me what to do, and I'll do it."

"But what about the statistical consultant you hired to analyze the data on inaccurate prescriptions?"

"Ben, to be honest, I'm really disappointed with that guy. He has spent two weeks trying to come up with a new modeling approach to predict weekly inaccurate prescriptions. I tried to explain to him that I don't want to predict the mistakes, I want to eliminate them! I don't think I got through, however, because he said we need a month of additional data to verify the model, and then he can apply a new method he just read about in a journal to identify 'change points in the time series.' whatever that means. But get this, he will only identify the change points and send me a list, he says it's my job to figure out what they mean and how to respond. I don't know much about statistics – the only thing I remember from my course in college is that it was the worst course I ever took – but I'm becoming convinced that it actually doesn't have much to offer in solving real problems. You've just gone through this statistical thinking course, though, so maybe you can see something I can't. To me, statistical thinking sounds like an oxymoron. I realize it's a long shot, but I was hoping you could use this as the project you need to officially complete the course."

"I see your point, Juan. I felt the same way, too. This course was interesting, though, because it didn't focus on crunching numbers. I have some ideas about how we can approach making improvements in prescription accuracy, and I think this would be a great project. We may not be able to solve it ourselves, however. As you know, there is a lot of finger-pointing going on; the pharmacists blame sloppy handwriting and incomplete instructions from doctors for the problem; doctors blame pharmacy assistants like me who actually do most of the computer entry of the prescriptions, claiming that we are incompetent; and the assistants tend to blame the pharmacists for assuming too much about our knowledge of medical terminology, brand names, known drug interactions, and so on."

"It sounds like there's no hope, Ben!"

"I wouldn't say that at all, Juan. It's just that there may be no quick fix we can do by ourselves in the pharmacy. Let me explain how I'm thinking about this and how I would propose attacking the problem using what I just learned in the statistical thinking course."

Source: G. C. Britz, D. W. Emerling, L. B. Hare, R. W. Hoerl, & J. E. Shade. "How to Teach Others to Apply Statistical Thinking." *Quality Progress* (June 1997): 67–80.

Assuming the role of Ben Davis, write a three to four (3–4) page paper in which you apply the approach discussed in the textbook to this problem. You'll have to make some assumptions about the processes used by the HMO pharmacy. Also, please use the Internet and / or Strayer LRC to research articles on common problems or errors that pharmacies face. Your paper should address the following points:

1. Develop a process map about the prescription filling process for HMO's pharmacy, in which you specify the key problems that the HMO's pharmacy might be experiencing. Next, use the supplier, input, process steps, output, and customer (SIPOC) model to analyze the HMO pharmacy's business process.
2. Analyze the process map and SIPOC model to identify possible main root causes of the problems. Next, categorize whether the main root causes of the problem are special causes or common causes. Provide a rationale for your response.
3. Suggest the main tools that you would use and the data that you would collect in order to analyze the business process and correct the problem. Justify your response.
4. Propose one (1) solution to the HMO pharmacy's on-going problem(s) and propose one (1) strategy to measure the aforementioned solution. Provide a rationale for your response.
5. Use at least two (2) quality references. Note: Wikipedia and other Websites do not qualify as academic resources.

Your assignment must follow these formatting requirements:

- Be typed, double spaced, using Times New Roman font (size 12), with one-inch margins on all sides; citations and references must follow APA format. Check with your professor for any additional instructions.
- Include a cover page containing the title of the assignment, the student's name, the professor's name, the course title, and the date. The cover page and the reference page are not included in the required assignment page length.

The specific course learning outcomes associated with this assignment are:

- Describe how organizations use statistical thinking to be more competitive.
- Apply the basic principles of statistical thinking to business processes.
- Apply the SIPOC model to identify OFIs in business processes.
- Use technology and information resources to research issues in business process improvement.
- Write clearly and concisely about business process improvement using proper writing mechanics.

Click [here](#) to view the grading rubric

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