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Homework #11 – Statistical Thinking and Applications – Part 3

TECH 50000 - Quality Standards

Friday, April 01, 2011

Chapter 11

Case: HMO Pharmacy Crisis. Respond to all questions.

- 1) How do you think John should approach this problem, using what he has just learned?**
- 2) Assume that John really pick up a SOLID understanding of the concepts and tools of statistical thinking in the course -- Do a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis to his approach?**
- 3) What recommendations would you make based on this information?**

As stated in our textbook:

“Simply knowing statistical tools and methods is not enough; one must understand the role that the science of statistics plays in managerial decisions. Managers need to think statistically. Statistical thinking is a philosophy of learning and action based on the following three principles:

1. All work occurs in a system of interconnected processes.
2. Variation exists in all processes.
3. Understanding and reducing variation are keys to success.

Understanding processes provides the context for determining the effects of variation and the proper type of managerial action to be taken. By viewing work as a process, we can apply statistical tools to establish consistent, predictable processes; study them; and improve them. While variation exists everywhere, many business decisions do not often account for it, and managers frequently confuse common and special causes of variation. We must understand the nature of variation before we can focus on reducing it.”

The way I see it, John probably did pick up a solid understanding of statistical thinking, as well as an understanding of statistical tools and methods. However, John is not the only one within this entire process who should be thinking statistically. Since HMOs either contract or employ different types of health organizations including physicians, finding the root causes of errors in the HMOs pharmacy should include individuals from all of those sources. The HMO in question is putting blame on Mr. Pacotilla, who is more than likely not only the manager of the HMO’s pharmacy employees, but might also be the manager of other employees throughout the HMO system. Putting all the blame on him concerning pharmacy errors is not fair, and is evidence that the HMO is acting in a “Red Bead” fashion.

Assuming that John really did pick up a solid understanding of the concepts and tools of statistical thinking, I am quite sure that he would start this project by completing a SWOT analysis like that which follows and is based on what I think after reading this case.

Strengths

The most obvious strength within the pharmacy is that John (the pharmacy assistant) took the intense “Statistical Thinking for Continuous Improvement” course. Although the first part of the case stated that John had completed the course, he really didn’t. To officially complete the course, John must complete an improvement project of some type, and like his manager stated, the pharmacy crisis would be the perfect project for John to complete for his course. This is also a plus for the pharmacy and its manager. Reason being, John most likely wants to complete the course successfully, therefore, he will probably excel above and beyond when working on a solution.

Also, Mr. Pacotilla, John’s manager, acknowledged that John’s ideas and suggestions are important regardless of his title because, unlike the manager, John is at the pharmacy every day. Because John is at the pharmacy every day, he bears witness to the pharmacy’s day-to-day operations. The manager is looking at John through the eyes of a manager who values his employees as assets.

John and his manager have on their side the fact that it was the HMO itself that offered the “Statistical Thinking for Continuous Improvement” course to all employees. If the employees are expected to think statistically, then maybe the HMO can be convinced that it needs to do the same. After all, why would the HMO pay for all its employees to take a class that teaches statistical thinking if they are not going to listen to what their employees have learned in the course?

Weaknesses

Of course the biggest weakness within the pharmacy is the dispensing of inaccurate prescriptions, regardless of whether or not the errors are the fault of the pharmacy. Another problem is that Mr. Pacotilla stated that he has until next month to show some major improvement or at least a solid plan. The “by next month” deadline could mean less than a month depending on what time during the current month the deadline was given. This not only puts pressure on the manager, but John as well if he is going to take on this project. However, if John is good at thinking statistically, his approach may start with convincing the HMO that more time is needed. This takes us back to the fact that it was the HMO itself that offered the “Statistical Thinking for Continuous Improvement” course to all employees. While John may have taken the course, his manager didn’t (stating that he didn’t know much about statistics) and should have since it was offered to all employees.

Opportunities

The most obvious opportunity for the pharmacy, with the help of John, is finding the root causes of the errors and designing a solid method of improving prescription accuracy. Another opportunity is convincing the HMO that more time is needed and that there are more individuals involved in the process of filling a prescription than just the pharmacy itself. Those outside of the pharmacy such as physicians, nurses, hospitals, clinics, and so on within the HMO, must also understand the nature of variation. Like our textbook states, “The complex interactions of variations in materials, tools,

machines, operators, and the environment are not easily understood. Variation due to any of these individual sources appears at random; individual sources cannot be identified or explained. However, their combined effect is stable and can usually be predicted statistically. These common causes of variation are factors that are present as a natural part of a process. The remaining variation in a process is the result of special causes which arise from external sources that are not inherent in the process.”

Threats

The threats currently facing the pharmacy are complaints and more importantly, possible lawsuits. Another threat is the HMO pointing fingers. This is most likely because, in my eyes, HMOs are publicly looked down on. Maybe the HMO thinks if it puts the blame on certain managers and threatens them with employment termination, then the one being blamed will find a way to fix the problem. This is a bad way to do business. At least Deming would think so. Also, as John stated, pharmacists blame doctors' sloppy handwriting and incomplete instructions for the problem; doctors blame the pharmacy assistants who do most of the computer entry of the prescriptions, and so on. Another threat is not meeting the deadline given to the manager by the HMO.

Recommendations

My recommendation to John, since he is the one heading the project, would be to start with convincing the HMO that more time is needed and the project cannot be completed by him or the pharmacy alone. He can convince them of this by explaining what he has learned in the course that they offered him. A big aspect of the SWOT analysis involves gathering the perspective of multiple stakeholders who may influence the process of prescription accuracy. Therefore, John could form a team of individuals from each organization within the HMO. Sort of like a cross-functional team of administrators, doctors, pharmacists, nurses, and even insurance company people. These could be the ones who help him pinpoint the problems and find a solution. Then together the team can create process maps of the different prescription filling processes. I'm sure there would be more than one process map, since there will be different steps depending on where the prescription originated. Once the process maps are completed, the team should brainstorm errors that could occur during each step of each process. Then I think the best thing to do would be to complete a systematic risk assessment of the potential errors that could occur during each step and prioritize which ones have the highest risk. A cause and effect diagram could then be constructed. Once risks have been identified and assessed, potential methods of reducing or avoiding them should be developed, tested, and tracked. Once the right method is determined, it should be continuously tracked and improved.