The Societal Implications of Changes to the UVA Primary Care Unit

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Tyson Wittmann

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Technical Project Team Members: Eric Nour, Emily Riggleman, Aditi Jain, Harshal Patel

On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

Signature Tyson Wittmann Date 10/30/2022

Tyson Wittmann

STS Topic

The role that this capstone project will play in society and the potential positive and negative impacts of having excellent and bad recommendations respectively cannot be easily understated. The potential redesign of a hospital system could either help people get the care they need or unnecessarily delay care, creating reasons for people to avoid seeing the doctors for the care they desperately need. For example, a redesign of the UVA Primary Care facility could neglect those people who have difficulty walking and need canes or wheelchairs to get around. If these people did not receive the care they need either directly or indirectly, they could get frustrated, making them less likely to set up an appointment in the future. On the other hand, if the process becomes faster and more efficient for the patients, then they will feel comfortable setting up an appointment. They will know that their time will be respected and they can receive the high-quality care they deserve, making them more likely to return and catch any potential health problems.

The three main stakeholders in this project aim to improve the University of Virginia primary care unit, but they all have competing interests and objectives. These stakeholders are as follows: the doctors, the nurses, and the University of Virginia. The doctors' primary objective is to see their patients on time and to have enough time allotted to them to conduct a thorough meeting with their patients. The next stakeholders are the nurses who want to have enough time between appointments to take notes of the meeting, set up the room for the next patient, and reduce the risk of burnout from the stress of being overworked. However, the University of Virginia primarily wants to maximize profit, minimize the time between appointments, and get as many patients through the system with the fewest number of nurses possible. This objective conflicts with the nurse's objectives of reducing burnout risk and having enough time to set up

rooms between meetings. It also conflicts with the doctors' primary objectives of meeting with patients on time and having enough time to conduct a thorough meeting. While the preferred solution of the nurses and the doctors is to spend the money to hire another full-time nurse, the University of Virginia appears as though it would rather ignore the problem and increase the number of patients each doctor sees a day. Rather than placing the burden of proof on themselves to show that increasing the number of patients will not result in skyrocketing wait times, the University of Virginia has shifted the responsibility of the analysis to this capstone group to prove that hiring an additional nurse is the correct move.

When it comes to the decision-making process of the technical analysis, the ultimate decision will be made by the University of Virginia, and its choice may influence other facilities to follow suit. If the recommendation is that they hire another full-time nurse practitioner, then more nurses may be able to demand better working conditions with a reduced number of patients they have to see every hour, reducing attrition but also reducing profit. However, if the recommendation is that they do not hire another nurse and then the wait times get worse, the nurses get more stress and start quitting, then the University of Virginia will have to hire a team of travel nurses who would be significantly more expensive than simply hiring the extra nurse. While it may seem like hiring the extra nurse is better, it could also contribute to nursing wages rising to levels that rural hospitals that are already struggling may not be able to keep up with and eventually go under (Kaufman, 2016). Either way, there are potentially negative unintended societal consequences from both options.

Research Question and Methods

The fundamental question of this analysis remains whether or not the UVA primary care unit should hire another nurse given the fact that the University of Virginia wants to increase the

total number of patients seen in a day. Our group will use both the in-person observational data we collected and pre-existing data stored in the system. We will then model the patient visitation process from sign-in to check-out with the distributions of times each stage of the process takes modeled through statistical analysis. We then hope to build a simulation of the hospital's effects of adding another nurse and more patients, viewing the effects that the changes have on the average amount of time that patients have to wait in the system.

Conclusion

The University of Virginia aims to reassess its current primary care system coming out of the coronavirus pandemic. While this presents a significant challenge, it also brings opportunities for improvements to the system as well. By comparing our study to similar ones done at different universities and learning from their mistakes and innovation, our group can come up with the ideal solution for the UVA primary care system. The list of potential changes the University of Virginia is considering includes hiring another nurse and increasing the number of patients the primary care unit sees in a day. These potential changes are viewed differently by all of the different stakeholders, and the societal consequences of them can be severe. So, when presenting our final technical analysis and recommendations, we should also make sure to mention the elements of uncertainty that underlie any stochastic analysis. Our recommendations could have a large effect on various key stakeholders in addition to the patients themselves. So, in the next steps of this analysis, we must consider the needs of all of the different possible users of the system, ensuring that our client recommendations lead to the equitable and efficient treatment of all patients and stakeholders in the primary care system.

Resources

Kaufman, B. G., Thomas, S. R., Randolph, R. K., Perry, J. R., Thompson, K. W., Holmes, G. M., & Pink, G. H. (2016). The rising rate of rural hospital closures: The rising rate of rural hospital closures. *The Journal of Rural Health: Official Journal of the American Rural Health Association and the National Rural Health Care Association*, *32*(1), 35–43. https://doi.org/10.1111/jrh.12128