McMaster University

CAS 4ZP6

Team 9

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Porter Simulation

Problem Statement Revision 1

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1 THE PROBLEM

Hamilton Health Sciences have become aware of several inefficiencies in their porter services at their Juravinski Hospital location. Porter services, in this context, are defined as the movement of hospital equipment and patient transfers from one area to another. Porters are a key piece of overall patient experience and satisfaction; the flow of day to day operations in a hospital depends on their efficiency. Some of the particular issues they identified relate to porters complying with operational policies, as well as finding ways to better handle spikes in work volume on busy days. Hamilton Health Sciences have gathered substantial operational data on porter activity, but are lacking the tools to interpret it. Our goal is to provide HHS with the tools to simulate their porter services so that they can test their own solutions, methods and make calculated decisions based on the results.

2 PROBLEM SIGNIFICANCE

Hamilton Health Sciences are facing budget cuts and are trying to improve efficiency throughout all of their operations. There are currently a lot of new ideas and theories that have been suggested to management level that deal with overall process improvement and expense saving. Unfortunately many of these propositions cannot simply be implemented without concrete empirical evidence because of high risk value. These hospitals provide life saving treatment, and interruption of critical services cannot be tolerated. The current problem of porter inefficiency affects the workflow of every staff member using this service as well as the overall patient experience. Simply put, if the porter service becomes a bottleneck then the hospital service slows down as a whole.

3 CONTEXT

The hospital operations team are looking for a low risk and low cost solution to generate the necessary empirical evidence so they can justify deploying and practicing modifications to porter services provided. The solution is the porter services simulation which will be designed and developed by our Capstone Team. The simulation will focus on modeling just one of the HHS hospitals in the Hamilton area, with the possibility to expand to other locations in the future. Users of this simulation will be the operational management staff. They will use the results generated by the simulation to trial different scenarios and how each one will affect the flow of operations. Based on the output data, the decision support staff will decide if these new ideas and plans should be implemented into the actual porter services. This project is a brand new initiative that will be developed from scratch, with the goal to expand the scope if the initial solution is determined to be a success. The biggest external resource to be used during the course of this project will be the large sets of data that HHS has available. HHS representatives have agreed to supply six months of porter activity logging, representing patient transfer jobs completed in the hospital during that time period.