

# IMPACT OF MEDICAL EQUIPMENT TRACKING IN A HEALTH CARE SYSTEM

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## ABSTRACT

The University of Missouri Health Care is preparing to employ Bar Code technology, in addition to their current systems, besides having high census and staff shortages. Based on Industrial Engineering analysis methodologies, the problem of how to control the flow and selection of medical equipment can be mapped into the basics of material handling systems.

The main goal is to reduce the capital expenses and operating expenses, and to optimize the patient care by maximizing the correct utilization of equipment. In order to accomplish this goal, a model that defines the interactions of the different performance variables was created. Then the model was tested under different scenarios using Monte Carlo simulation. Finally, the results of the different technology scenarios were compared using the Net Present Value method.