

An Evaluation of Operating Room time utilization

and efficiency in Private Hospital

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The main goal of this Project was to identify key factors that impact operating room (OR) time utilization and evaluate different scenarios on OR performance, by using historical data from multiple databases, and the observations from a one-year period at Assuta hospital.

Assuta Medical Center offers a wide range of specialized health services and advanced medical treatments to ensure optimal outcomes for patients. The hospital has 16 operating rooms, and currently as is common practice in this industry, use a block-scheduling system to schedule its surgeries. A block-scheduling system assigns a block of operating room (OR) time to each practicing doctor or group of doctors per a particular period of time, typically, on a weekly basis.

Operating Room (OR) is one of the most expensive resources of a hospital, associated with high revenue and cost. It is a primary concern for hospital's management to run the OR effectively in order to improve the efficiency and quality of services.

By using a case-study approach, based on Assuta Hospital, through discussions with stakeholders, and with most suitable data analysis techniques, we examined a large dataset of elective surgical cases for deviations from scheduled surgery time in relation to first case start, surgery duration, undertime (surgeries finishing earlier than estimated) or overtime (surgeries exceeding their allocated time). This Project aimed to help the Assuta (OR) managers to uncover the hidden patterns in order to determine where to improve future Operating Room (OR) time utilization.

This project demonstrates the importance of information and knowledge management in large organizations. On a personal level, I was able practically to evaluate OR performance and uncover areas where improvements can be made so as to realize gains in efficiency and financial indices.