Improving Operating Room Efficiency and Decreasing Wait Times Using Lean Six Sigma

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Introduction

In the healthcare industry where informatics, reimbursement guidelines, and changes are prominent, there is a need for leadership that challenges practice strategies, organizational protocols, workflow processes, and overall efficiency (Hargreaves & Alscow, 2015). The ability to meet a customer’s demands for safe, high quality care is directly related to the organization’s ability to streamline processes and eliminate areas of waste (Geedey, 2015). Mapping workflow processes with Lean Six Sigma techniques can help accomplish the goal of improved efficiency and decreased wait times so as to provide patient care in a consistent, safe, reliable, and more efficient manner to meet the standards of practice guidelines (Cain & Haque, 2008).

Problem

In an era with declining resource availability, operating room inefficiencies can have a major impact on an organization (Wasterlain, et al., 2015). Optimizing workflow processes in the operating room setting is one of the strategic goals for a hospital (Reiner et al., 2002). Total turnaround time is non-productive time in an operating room, but it is an essential link of the workflow process (Stanford University Department of Anesthesiology, 2006). Same-day services can add to patient wait times, especially if inefficiencies exist in the workflow process, which then result in patient dissatisfaction (Gijlaj, Campos, Oller-Pino, & Fernandez, 2016). Lean Six Sigma techniques have emerged in the healthcare industry as a set of methods to increase efficiency and to eliminate wasted time and processes (Reiner et al., 2002).

Purpose

This study’s purpose was to improve the workflow processes within the perioperative services departments that were producing delays in the surgical flow of patient care, thus creating patient and staff dissatisfaction. Lean Six Sigma methodologies were beneficial because they are designed to identify areas of improvement, eliminate waste, and streamline processes (GoLeanSixSigma, n.d.).

Setting/Sample

The setting was a not-for-profit hospital in the Atlantic coastal plain region of rural South Carolina. The project sampled the workflow processes of the perioperative services departments at the hospital for all patients having a surgical procedure.

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Theoretical Framework

Kotter’s 8-step Change Model

The project investigator and operational effectiveness team member observed all workflow processes from arrival to registration through discharge. A workflow diagram was developed for all of the operating room and same-day services processes.

Methods

An appointed multidisciplinary team met and developed a value stream analysis map for all workflow processes. Lean Six Sigma methodologies were used to identify areas of waste, value-added steps, and current workflow processes. A fishbone diagram was developed from the identified areas of waste.

The project investigator worked with the director of perioperative services to implement the specific steps designed to improve the patient wait times and operating room inefficiencies.

Creative ways to communicate changes to staff were used by team.

Findings

Conclusions

The findings of the project demonstrated that operating room efficiency and patient wait times can be improved using Lean Six Sigma techniques.

The Value stream analysis and the workflow process changes showed that various factors can influence the entire patient surgical experience. The observation of the entire process for the surgical experience allowed a better understanding of the workflow and assisted in the identification of waste and opportunities for improvements.

By decreasing patients’ wait times during their surgical experience, the satisfaction scores that influence healthcare reimbursement for the hospital can be improved.

Leadership can stress the importance of perioperative services departments as areas for nurses to become proficient and promote quality care improvements that can enhance their work, as well as the patient’s experience.

References


Dobie, W. A. (2014). Lean and six sigma impact on operating room: right information to right staff at right time. Journal of Operating Room Technology, 39(1), 51-59. http://dx.doi.org/10.1053/j.jort.2014.03.003


Wasterlain, J., et al. (2015). Improving Operating Room Efficiency and Decreasing Wait Times Using Lean Six Sigma. Starlette Godwin, MSN, RN, CRNA Department of Nursing Faculty Advisor: Dr. Janelle Harding