This study investigated the effectiveness of implementing Lean Six Sigma in emergency departments to improve operational performance. In addition to considering commonly accepted success factors, this research focused on evaluating the effect of work environment on achievement of outcomes due to the unique and complex operating conditions of urgent care. Understanding the effect of the operating environment, such as culture, job satisfaction, and motivation, will support LSS teams in achieving and sustaining improved performance. First, a systematic literature review was conducted to identify peer-reviewed, empirical studies of factors that affect implementation of LSS in healthcare. A thematic analysis was used to synthesize a concise list of factors commonly reported in the existing literature. Next, a grounded theory study was conducted with a panel of subject-area experts to develop a theoretical model of the factors for successful LSS implementation in the ED. The framework was then further developed and tested using a quantitative questionnaire including developing a multi-item construct to evaluate work environment.

This mixed-methods research is grounded in current theoretical evidence and practical experience providing a theoretical model to guide the implementation of LSS in ED bringing the potential benefits of this approach to a critical department in healthcare organizations. Further, this study informed future research by investigating the effects work environment on the practical application of LSS.

Major: Industrial Engineering

Educational Career:
Bachelor’s of International Business Administration, BA, 2010, King Abdulaziz University
Master's of Engineering Management, MS, 2014, Milwaukee School on Engineering

Committee in Charge:
Heather Keathley, Chair, Industrial Engineering & Management Systems
Ahmed Elshennawy, Professor and Associate Chaire
Luis Rabelo, Industrial Engineering and Management Systems
Sandra Furterer, University of Dayton

Approved for distribution by Heather Keathley, Committee Chair, on June 9, 2020.

The public is welcome to attend.