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Using simulation and lean principles for reducing patient waiting queues and cost: A case study from a developing countryAtiya Al-Zuheri^{1,2}, Yousef Amer¹ and Ilias Vlachos²¹University of South Australia, South Australia²Ministry of Science and Technology, Iraq³La Rochelle Business School, France

Long waiting queues are symptomatic of inefficiency in healthcare systems. Large number of patients every day arrive the centres and consequently this generates long patient waiting times. In recent years, many research works focused on use of simulation modelling technique to solve this problem without being accompanied by use a clear and well-structured approach for defining and then eliminating the existing wastes. To address this problem, the intended research work to be adopted in this paper is based on using lean six sigma strategy (LSS) as a framework for improving healthcare operations and building simulation model reflects LSS principles to verify these principles. It consists of three stages; (i) developing of LSS procedure via study and analysis the current situation for the system by collecting data of the patients; (ii) constructing a model for current situation for the health care centre system using SIMPROCESS software package, and (iii) introduce multi alternatives to solve the waiting lines problem in the centre, and is supported with charts and statistics tables. At the end, the paper aims to propose a system can solve the waiting lines problem in the centre, by managing the human resources through adding physician, babies' doctor, and nurses.