

## **Recommendation for Improving Maintenance Procedures in a Hospital by Implementing Total Productive Maintenance (TPM)**

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### **Abstract**

Any organization needs maintenance activities on a regular basis to ensure its safety and to maintain its essential facility functions. A healthcare facility, for which the primary concern is to provide a safe and effective environment for patient-care, needs a maintenance program, as well, to manage healthcare facilities. Therefore, due to the high-risk of this field, the hospital maintenance department has to ensure that all users are able to operate their equipment without causing any interruption that could affect patient life. Moreover, risk and equipment failures have to be reduced or eliminated. A solution to this dilemma would be for top management to evaluate different maintenance programs to select the best option that meets their targets. This paper describes the pilot implementation and evaluation of TPM for the maintenance department in the Riyadh Military Hospital (RMH) in the Kingdom of Saudi Arabia. Both quantitative and qualitative research methods were used to identify and analyze the factors contributing to maintenance improvement in healthcare Facility Management (FM) in order to come up with some effective solutions to control and mitigate these factors. Furthermore, difficulties in the adoption of TPM and the problems encountered during the implementation are discussed. Based on these discovered facts, the research concludes with recommendations for best practice and future research work.

### **Biography**

**Hesham Alzaben** is currently a PhD research student in engineering management at Nottingham Trent University. Mr. Alzaben's research focuses on improving maintenance activities in the healthcare industry. He holds a Bachelor degree in Mechanical Engineering from King Saud University and a Master of Science degree in Engineering Management from University of Nottingham Trent. He is a member of Institute of industrial engineer (IEE), Saudi council of Engineers, and Institute of Healthcare Engineering and Estate Management (IHEEM). Mr. Alzaben has over 10 years of experience in hospital maintenance; overseeing and planning maintenance activities for a large-scale hospital.