Implementing lean in a surgical ward.

Using the well-known principles from lean management in an orthopedic surgical ward at a major Danish hospital reorganized their work-flow and processes. The ward has ten operating rooms and performs the complete range of the orthopedic procedures ranging from patients that need simple standard procedures to patients in need of complex emergency procedures. The primary result of the lean project has been to split the flow of patients in two. The first flow is concerned with highly standardized and non-emergency procedures, e.g. minor knee surgery. These surgeries are routine, predictable and can be planned in advance and meet the prerequisites for lean management. Two of ten operating rooms have been allocated to this flow. Selected surgeons, nurses and porters have been allocated to the two operating rooms and they remain in the sterile environment for the duration of the workday. The effect of the lean implementation has been a 33% increase in patient throughput. The second flow is unchanged and concerned with non-standard and emergency procedures, e.g., major hip surgery on old people or surgery on traffic victims. The surgeries within this flow are non-routine, unpredictable and cannot be planned (in detail) in advance. The remaining operating rooms are allocated to this flow and there have been no significant changes to the organization of work in these theaters. Lean management is derived from the Toyota production system and is a comprehensive system of tools and techniques for productivity improvement. Lean management has its origins in industrial production, but it is now being transferred to many other sectors, e.g., health care. Two important prerequisites exist for implementing lean management: Firstly, stable and standardized processes and secondly leveling of production. Stable and standardized processes ensure quality and predictability (e.g. process time). Leveling of production is essential for production planning. Based on the results of the case study of the surgical ward this paper will discuss three issues or challenges that emerged from the implementation of lean management. Firstly, is lean a suitable tool to increase productivity in the health care sector. Secondly, what are the major challenges associated with implementing lean in the health care sector. Special emphasis will be given to a discussion of the implementation of lean in a professional bureaucracy as a hospital ward and the preconditions for a successful implementation of lean in this particular environment? Thirdly, what are the effects of implementing lean on the work environment and can lean principles be applied without deteriorating the work environment of the employees? These three challenges will be analyzed and discussed using a number of different theoretical perspectives from, e.g., organization theory, lean and manufacturing management. The paper will conclude by outlining a number of recommendations for the successful implementation of lean in the health care sector.

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