World Academy of Science, Engineering and Technology International Journal of Industrial and Systems Engineering Vol:12, No:01, 2018

The Adoption of Leagility in Healthcare Services

Authors: Ana L. Martins, Luis Orfão

Abstract: Healthcare systems have been subject to various research efforts aiming at process improvement under a lean approach. Another perspective, agility, has also been used, though in a lower scale, in order to analyse the ability of different hospital services to adapt to demand uncertainties. Both perspectives have a common denominator, the improvement of effectiveness and efficiency of the services in a healthcare setting context. Mixing the two approached allows, on one hand, to streamline the processes, and on the other hand the required flexibility to deal with demand uncertainty in terms of both volume and variety. The present research aims to analyse the impacts of the combination of both perspectives in the effectiveness and efficiency of an hospital service. The adopted methodology is based on a case study approach applied to the process of the ambulatory surgery service of Hospital de Lamego. Data was collected from direct observations, formal interviews and informal conversations. The analyzed process was selected according to three criteria: relevance of the process to the hospital, presence of human resources, and presence of waste. The customer of the process was identified as well as his perception of value. The process was mapped using flow chart, on a process modeling perspective, as well as through the use of Value Stream Mapping (VSM) and Process Activity Mapping. The Spaghetti Diagram was also used to assess flow intensity. The use of the lean tools enabled the identification of three main types of waste: movement, resource inefficiencies and process inefficiencies. From the use of the lean tools improvement suggestions were produced. The results point out that leagility cannot be applied to the process, but the application of lean and agility in specific areas of the process would bring benefits in both efficiency and effectiveness, and contribute to value creation if improvements are introduced in hospital's human resources and facilities management.

Keywords: case study, healthcare systems, leagility, lean management

Conference Title: ICIEOM 2018: International Conference on Industrial Engineering and Operations Management

Conference Location : Sydney, Australia **Conference Dates :** January 29-30, 2018