

# Customer Focused Process Improvement and the Performance Analysis Studies in Healthcare Systems

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## Abstract

**Purpose:** The main contribution of this paper is to generate an optimum solution for capacity planning and appointment scheduling issues, which are frequently encountered in clinical flows with various route and treatment periods at dental hospitals.

**Design/methodology/approach:** It is essential to define the system well in order to ensure that the working staff and patients use their time very efficiently and that the process flows continuously. By having examined a sample healthcare system through the help of a study addressed in such context, studies on process improvement in line with the dissatisfactions of the working staff and patients have been carried out. Within the scope of the study, the operation of 7 Departments in a dental hospital undergoing a treatment process have been reviewed and examined. The problems encountered as result of the observations made are discussed in detail, and formerly and recently designed system performance analyses are conducted by having performed the respective process improvement studies. The relevant samplings of this study are modelled via the Arena Simulation Program. The data of the previous four months is used in the parameters, which are used through the modelling. The system data are entered by taking into account seasonal characteristics of the data.

**Findings:** The analyses are made as a consequence of such study that has been addressed, it is established that the efficiency of the internal customers of the hospital increases substantially, and that the waiting durations of the dental patients decrease and in turn, the external customer satisfaction increases drastically.

**Research limitations/implications:** Under the scope of the present study, 7 different treatment processes are analysed in a dental hospital in Cukurova Region with a significant patient potential. The treatment clinics present in the hospital are radiology, periodontology, surgery, treatment, orthodontics and prosthesis. These clinics run their own appointment and treatment system independently. Thus, the study has limited with five departments among 7.

**Originality/value:** With this study, given the flow of different existing treatment processes belonging to patients are optimized, and also the continuity of the system is ensured by minimizing the patient waiting times within the existing system.

**Keywords:** Healthcare Systems, Performance Analysis, Process Improvement, Patient Satisfaction, Productivity

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