

Dental Clinic Redesign Simulation

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Abstract: The team worked with a Binghamton-area hospital, specifically in their dental clinic. The clinic can currently see roughly 48 patients per day. However, since the number of patients the clinic serves has grown rapidly over the last few years, the lead-time for the next available appointment is between four to six months, caused mainly by the limited patient care rooms that the clinic has. The objective of this project is to redesign the dental clinic to decrease the lead-time for the next available appointment and to increase the utilization of the clinical staff. In order to determine the best redesign, the team has constructed several Simio simulations to model the clinic and analyze the results of making changes to the system. The redesign will also aim to make the entire experience in the clinic more pleasurable not only for the patients, but also for the staff by increasing room sizes and adding amenities.

Keywords: Dental clinic, lead-time, limited clinical rooms, utilization, staff, patients