



## Simulation Modeling Solves OR Turnover Issues



### Problem

A 600-bed regional Level I trauma center hospital failed to meet industry standards for turnaround time in its operating room suite

### Solution

Alacer created a simulation model of the OR that identified processes needing corrections to sustain improved performance

### Results

Maintenance and cleaning delays reduced 90%; staffing levels reduced, nurse's prep time increased 110%; savings of \$1.25 million

### Overview

The industry standard for patient turnaround time in a hospital operating room is 40 minutes. For a well-known regional hospital offering a full spectrum of surgical services, failing to meet the industry standard more than 50% of the time was resulting in lost revenue and higher overtime requirements with corresponding staff dissatisfaction. Initially, it was thought that the cleaning crews were to blame; however, the Alacer experts recommended creating an event simulation (process) model that would more clearly outline problems and bottlenecks, and verify whether the existing assumptions were correct.

### Challenges

Prior to creating the simulation model, Alacer needed to observe and map existing processes. Once the model was in place, the team could explore existing behaviors and conduct "what if?" analyses – all without disrupting patient care. It became clear that, while the maintenance crews did contribute to OR turnover delays, the problem was more complex. Supply availability, staff communication (particularly between the maintenance crews and OR nurses) and clinical documentation all played significant roles in the OR's inefficiencies. The entire underlying structure of the OR needed revision in order to establish continuous process improvement.

### Results

Through better coordinated communication between the cleaning crews and the nursing staff, OR preparation time immediately improved by as much as 10%, boosting the quality of patient care and reducing risk factors. Maintenance operations and cleaning delays were reduced by 90%, staffing levels were adjusted and nurses were given 110% more prep time. While the project was not driven by revenue gains, \$1.25 million in incidental savings was achieved through increased surgical suite capacity and reductions in errors, patient length of stay, staff overtime and required reschedules.

