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Middletown General Hospital Emergency Department Observation Unit Analysis Exercise

Dr. Nate Greene, director of the Middletown General Emergency Department (ED), looked out over the patients on mobile beds lined up in the hallway. He could barely meet their eyes, understanding fully how upsetting a lack of privacy and impressions of substandard care are to vulnerable people in need. Unfortunately, overcrowding in the ED was commonplace due to a scarcity of inpatient beds in the main hospital. There was no place for these patients to go until an inpatient bed opened up.

"There has to be a better way to manage this, at least for the sickest patients," he muttered to himself. Greene knew that day the ED had already moved 10 patients into the hospital on observation status, and he wished he could call those back and send some of his sickest patients upstairs instead. "If I had a safe place to hold observation patients down here in the ED, it would make a world of difference," he thought.

Middletown General Hospital is a tertiary care hospital with 400 inpatient beds. In 2011, the Middletown Hospital Emergency Department (ED) saw about 200 patients each day. On average, 150 were discharged after being seen, but about 50 stayed overnight. About 20% of these patients were on "observation" status, meaning that an admission decision had not been made, pending test results or the results of an overnight observation stay. The remaining 80% were admitted directly. All patients who stayed overnight (whether admitted or on observation status) were put into an inpatient bed. That is, there was no separate observation area. The average admitted patient stayed 5.8 days and represented about $3,500 in profits to the hospital. The average patient under observation occupying an inpatient bed netted the hospital about $3,300 in profits.

Observation patients stayed on observation status for an average of 1.2 days before being either discharged or admitted (upgraded to inpatient status). Eighty percent of observation patients were discharged, and 20% were upgraded to inpatient status. After admission, observation patients stayed an average of 5.8 days before discharge and netted the hospital $3,500. See **Figure 1**.

In January of 2012, Greene had become convinced that an ED observation unit would be an attractive way to board observation status patients without using an inpatient bed. Observation beds are less costly

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to staff than inpatient beds due to the more stringent code requirements associated with an inpatient stay. In addition, in Certificate of Need[i] states regulators make increasing observation bed capacity much easier than increasing licensed inpatient bed capacity.

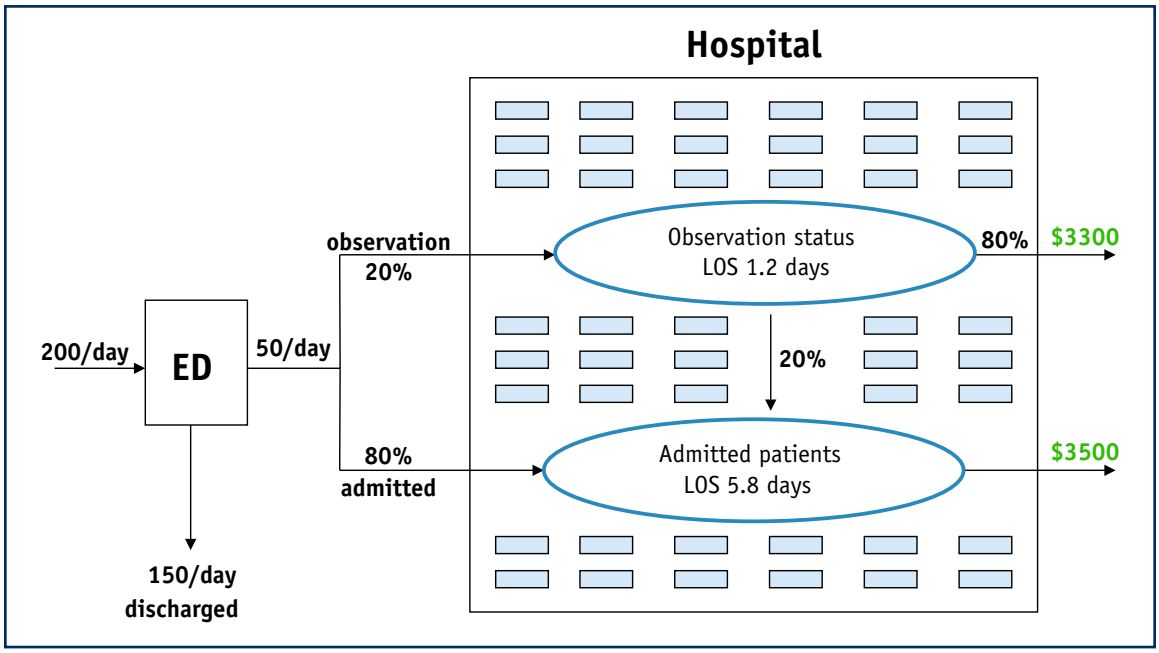
While it was obvious that the extra space provided by an observation unit would alleviate congestion, Greene knew that it would never be built unless he could make a sound economic case for it to the hospital administration. He made some rough calculations and estimated that if an observation unit was available, the average profit per observation patient who was discharged without being admitted would be $3,700. He also estimated the fixed investment required to construct (and equip) an ED observation unit to be $5 million plus $60,000 per bed.

Weary of compiling numbers and trying to make sense of them in the scraps of time he was able to steal between shifts in the ED, Greene decided to give the project to a group of business students from a local university who had been assigned to him as part of a project course.

"Team, I need a business case. You can assume that all vacated beds will be backfilled by new admitted patients, and that all of those new patients come in on admitted status and so represent $3,500 in profits to the hospital," he said. "What I want to know is whether an observation unit makes economic sense for Middletown."

Figure 1

Middletown General Patient Intake Flow Chart



Source: created by authors

i In Certificate of Need states, a hospital must prove the need for additional capacity to a state agency before being allowed to carry out the expansion. The intent is to mute capacity competition and reduce overbuilding.

Notes

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