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M. D. Anderson Cancer Center: Gaining Capacity by Improved Patient Throughput

Gerard J. Colman[a], Frank R. Tortorella[b], Renee T. Konstanzer[a]

[a]*Clinical Operations, The University of Texas M. D. Anderson Cancer Center, United States*
[b]*Clinical Support Services, The University of Texas M. D. Anderson Cancer Center, United States*

Abstract

As demand for services increases, healthcare organizations must be able to efficiently diagnose and treat more patients utilizing fewer resources. By focusing on the inpatient discharge process, M. D. Anderson Cancer Center developed short- and long-term solutions: formation of housekeeping room turnover teams, creation of a patient-escorted discharge process, assignment of discharge nurses and selection of an electronic bed management system. The first three solutions as listed resolved the immediate issue of patient boarding time in the Emergency Center, Admissions and the Operating Rooms; in combination, all solutions show promise in achieving a longer-term reduction in length of stay (LOS) and a capacity gain.

Keywords:

capacity, patient throughput, patient discharge, bed management

Methods

Increasing demand requires faster patient throughput, optimally allowing for more admissions with the same scarce staff; this faster throughput provides the hospital with additional "free" beds [1]. Beginning in 2004, M. D. Anderson Cancer Center faced a critical bed shortage as patients boarded for several hours in the Emergency Center, Operating Rooms, and Admissions while beds became available. As bed space and staff were limited, the institution focused on developing innovative short- and long-term solutions to meet demand.

In 2005, Clinical Operations initiated Project BED (**B**ringing **E**fficient **D**ischarge) to improve patient throughput. The Administrative, Clinical, and Faculty teams identified and measured each step in the current discharge process, targeted specific steps to improve, and eliminated process flow obstacles.

Results

In September 2005, patient escorts began to transport all discharged patients from their rooms to reduce turnover time. Patients waiting on external transportation were relocated to a central holding area. In the initial eleven months of operation, escort-assisted discharges increased from 52 percent to 85 percent of discharges.

In December 2005, Housekeeping standardized its processes and established room turnaround teams on nine inpatient units in order to quickly inspect, clean and make minor repairs to each room. Since February 2006, cleaning time was reduced by five minutes to 40 minutes per room; the goal is 30 minutes per room. Quality scores hover between the 90% target and 100%, and response time is three to five minutes, exceeding the original goal of 10 minutes.

Nurses were realigned to ensure efficient, timely, and appropriate discharge of patients. Currently, 70 nurses have been trained in discharge nurse functions - coaching bedside nurses, rounding with clinical teams, and coordinating 23-hour observation. The program goal is to reduce LOS by 0.5 days. In a 500-bed hospital, a reduction in LOS by 0.5 days translates into 41 additional beds [1]. For M. D. Anderson in October 2006, this 0.5 reduction equates to over $4.5 million in net revenue [2].

Team members evaluated and recommended purchase of an electronic bed management system to enhance productivity of and interconnectivity between Admissions, Nursing, Housekeeping and Patient Transportation. Functional requirements included an electronic bed board, electronic notification system, assignment of work, and reporting capability. Currently, M. D. Anderson is in the go-live stage and anticipates data analysis within the next quarter.

Other solutions included ordering discharge medications and writing discharge orders the day prior to discharge to reduce patient wait time. Generally, the shift toward outpatient and minimally invasive surgery has also positively influenced M. D. Anderson's ability to provide capacity.

Conclusion

Project BED efforts have added capacity and decompressed patient boarding. While some results are preliminary, these efforts show promise in longer-term reduction in LOS.

References

[1] Health Care Advisory Board CEO Roundtable. The Advisory Board Company, Washington, D.C., 2006.
[2] M. D. Anderson Cancer Center Institute for Performance Excellence, 2006.