

Ready...Set...Flow: Going Back to Basics to Improve Patient Care in a Busy Birthing Center

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Summary

Introduction

In April 2011, USAF Hospital Langley leadership was introduced to the Institute for Healthcare Improvement's (IHI) Real Time Demand Capacity (RTDC) model (IHI, 2011). RTDC is a method to optimize patient flow throughout the hospital that uses historical and real-time data to predict admissions, capacity and staffed available beds within a specific timeframe. If demand exceeds capacity, an action plan is required to resolve the mismatch.

Methods

RTDC data collection tools were customized for inpatient units to help understand the demand and capacity of the hospital on a day-to-day basis that affects the patient's experience of care. With the use of this tool, a unique sense of awareness developed and the Langley Birthing Center recognized several areas where improvement was needed. Process improvements were implemented to eliminate bottlenecks and outcomes have reflected improvement in patient flow, increases in efficiency related to patient bed assignments, unit staffing, decreasing patient diversions, accuracy in predicting admissions and discharges, cost effectiveness, collaboration between units and teamwork between providers and nurses.

Results

Process improvements were implemented to eliminate bottlenecks and outcomes have reflected improvement in patient flow, increases in efficiency related to patient bed assignments, unit staffing, decreasing patient diversions, accuracy in predicting admissions and discharges, cost effectiveness, collaboration between units and teamwork between providers and nurses.

Conclusion

The RTDC process truly changed the culture on the unit once nurses were given the autonomy and leadership's support to make changes that focus on the patient. Nursing autonomy is the foundation to nursing practice, emphasizes communication, teamwork and being proactive in managing patient care. This journey to improve has been embraced by the Birthing Center team from the most junior enlisted member to the most senior officer on the unit. By managing patient flow, diversions due to limited bed capacity have decreased. This has allowed more patients to deliver their infants in the hospital that provided their prenatal care, preserving the continuity and experience of care they have come to expect. Providing the best care possible is what we want for our patients as they start their journey with their new infant, the most memorable moment of their life.

Abstract

In April 2011, USAF Hospital Langley leadership was introduced to the Institute for Healthcare Improvement's (IHI) Real Time Demand Capacity (RTDC) model (IHI, 2011). RTDC is a method to optimize patient flow throughout the hospital that uses historical and real-time data to predict admissions, capacity and staffed available beds within a specific timeframe. If demand exceeds capacity, an action plan is required to resolve the mismatch.

RTDC data collection tools were customized for inpatient units to help understand the demand and capacity of the hospital on a day-to-day basis that affects the patient's experience of care. With the use of this tool, a unique sense of awareness developed and the Langley Birthing Center recognized several areas where improvement was needed. Process improvements were implemented to eliminate bottlenecks and outcomes have reflected improvement in patient flow, increases in efficiency related to patient bed assignments, unit staffing, decreasing patient diversions, accuracy in predicting admissions and discharges, cost effectiveness, collaboration between units and teamwork between providers and nurses.

The Chief Nurse Executive assembled a team of nurses to look at how the hospital as a whole system could improve the patient experience of care as the patients move through the hospital system. The plan was to use the RTDC process to accomplish this goal. Units reviewed data to see exactly what times patients were admitted and discharged. One of the goals of RTDC was for the predicted admissions and discharges to occur between the hours of 0800 to 1400.

Along with the RTDC tool, a morning bed meeting was implemented for all inpatient units and the Emergency Department. The intent of these 5-minute meetings is to focus on the status of each unit's capacity and demand. The data tool is simple to use; the bed meeting is

short yet effective. The morning meetings encouraged charge nurses to develop collegial relationships with other nurses and providers which ultimately fostered communication and overall improved patient care. Unexpected results of implementing RTDC were noticed almost immediately. Nurses were empowered; communication and collaboration among charge nurses and units greatly improved.

RTDC became a catalyst for process improvement in the Birthing Center. After reviewing the data, nurses began to ask “why”. Why did it take so long to discharge a mom and an infant? What were the reasons for diverting patients? Process improvement initiatives started to take place in order to help move patients through the Obstetric Unit, the largest product line in our hospital averaging 100 deliveries per month. Birthing Center has 14 labor-delivery-recovery-postpartum beds, one antepartum bed, two triage rooms, and a Level II Neonatal Intensive Care unit. Staff consists of 53 nurses, 28 medical technicians and one eight-hour shift birth certificate clerk. There are 13 obstetric providers and nine pediatric providers that cover the unit. Unit nurses took ownership of the following improvements where the greatest gains were realized: change of shift report, provider and charge nurse morning huddle, managing triage patients, timeliness of procedures, and preparing the patient for discharge.

Change of shift report, with RN’s and medical technicians, was revised from one to one report to a group process. The shift report sheet was also revised and used by all team members. These changes alone clarified team assignments for the shift and the whole team was aware of the patient’s plan of care.

Continuing to emphasize the team approach and remembering a basic nursing principle, discharge planning begins on admission. The oncoming/off-going providers had a morning

huddle with the charge nurse to identify patients that plan to be discharged for the day and the plan of care for all other patients. Providers began rounding earlier in the shift, especially on days where demand for beds was projected to exceed capacity. Providers were also encouraged to complete procedures the day before the projected discharge when possible or as soon as possible after the morning huddle. Providers adopted an anticipatory and proactive approach to ensuring the patient was ready for discharge when eligible. Providers began treating each patient as an individual rather than a couplet and began discharging each patient individually when each discharge criteria were met.

In reviewing discharge preparation, it was discovered that frequently patient discharge teaching was not accomplished until after 1400 on the day of discharge. Prior to RTDC, the nurse would give patient discharge instructions on a one-to-one basis. If the nurse had several discharges that day, this process could take several hours, delaying the discharge of all patients. Some unit nurses determined to standardize the discharge teaching process; a group discharge class would be taught by a registered nurse twice daily, once in the morning and once in the evening. This would ensure that all patients receive the same information and would be prepared for discharge in a timely manner.

Data collection prompted nurses to look at the inpatient discharge procedure and realized that improvements could be made in managing the triage process. Prior to RTDC, if a patient needed to be examined for labor, a cervical exam would be performed. The patient might be sent to walk for several hours, return for a repeat cervical exam then would either admitted for labor or discharged home. If the patient was sent walking, the room was held for the patient's return. Since RTDC implementation, the unit staff now cleans and prepares the triage room after the

patient leaves. This simple change improves utilization of the room for additional triage patients which leaves labor beds available for laboring patients.

The RTDC data collection showed a delay in discharge of triage patients due to a prolonged wait time for discharge medications to be dispensed from the pharmacy. It was found that the pharmacy did not receive notification that medications were ordered unless the patient was admitted to the Birthing Center. The process was changed so the nurse would notify the pharmacy of the triage patient's arrival and any medication orders. This process has significantly decreased the wait times for medications, allowing the triage patients to be discharged more efficiently.

While the RTDC process is in its infancy, it has transformed our unit to one that even on the busiest day is no longer chaotic but rather runs like a well-oiled machine. The data collection process continues to be refined using stricter controls. Additional process improvements are expected in areas such as patient flow, preceptor courses and nursing education.

The RTDC process truly changed the culture on the unit once nurses were given the autonomy and leadership's support to make changes that focus on the patient. Nursing autonomy is the foundation to nursing practice, emphasizes communication, teamwork and being proactive in managing patient care. This journey to improve has been embraced by the Birthing Center team from the most junior enlisted member to the most senior officer on the unit. By managing patient flow, diversions due to limited bed capacity have decreased. This has allowed more patients to deliver their infants in the hospital that provided their prenatal care, preserving the continuity and experience of care they have come to expect. Providing the best care possible

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References

Institute for Healthcare Improvement (IHI), (2011). Real-time demand/capacity management to improve flow. Retrieved on November 15, 2011, from <http://www.ihi.org/knowledge/Pages/Changes/RealTimeDemandCapacityManagement.aspx>