

A reimagined discharge lounge as a way to an efficient discharge process

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Abstract

Faced with inherent inefficiencies built into transfer of a patient from emergency department (ED) to an inpatient bed, we determined that the timely availability of an inpatient bed was essential to improving efficiency and flow. Lack of beds early in the day was a major cause for delays and backup in the ED, which in turn placed the ED at risk for overcrowding and diversion. Review of the discharge process revealed that only 33.4% of discharges were completed prior to noon, and on average took 126 minutes from the time a discharge order was written to the time the patient actually left their inpatient bed.

To achieve our goals of improving patient flow and discharge efficiency, we proposed a new project, called the "Discharge Hospitality Center (DHC)." Our previous attempt at creating a 'discharge lounge' was unsuccessful. However, we learned from that endeavor which then allowed us to completely redesign the new DHC project and incorporate ongoing feedback from all stakeholders, sharing performance metrics regularly, and collectively searching for ways to overcome barriers and improve performance together. Strict eligibility criteria were created, and every patient was screened for DHC eligibility daily at our multidisciplinary discharge planning meeting. This multidisciplinary group made the final decision about eligibility for the DHC, and took responsibility for distributing the list of eligible patients to the acute care nursing floors immediately after their early morning meeting. Using the list of patients appropriate for the DHC, the acute floor nursing teams developed standard work for prioritization of DHC eligible patients for discharge, which more reliably allowed those patients to leave their inpatient beds earlier in the day. We found there was no need for dedicated staff at our DHC, as after discharge all outpatient procedures and policies applied.

Our outcomes were quite favorable. Four months after the DHC project was launched, ED stays over 6 hours decreased from 24.6 to 15.8%, discharges before noon increased from 33.4 to 41.5%, and time improved from 126 down to 84 minutes from the time a discharge order was written to the time the patients actually left their inpatient bed. We reviewed all patients who went to the DHC on the subject of readmission and found two that were unavoidable (whether or not the DHC was used), and one patient nearly missed his ride home as he sat in the wrong location for transport pickup. In conclusion, a DHC can be successfully designed through integration and collaboration with stakeholders which can be a valuable tool to improve discharge efficiency and patient flow.

Problem

At the Syracuse Veteran Affairs Medical Center, Syracuse, New York, we were faced with inefficiencies in patient flow from emergency department (ED) to the floor as evidenced by the metrics consistently not meeting the goals. The data revealed that 24.6% of all patients were staying in ED for over 6 hours. Among this patient group, 59.1% were admitted to the hospital and 69% admitted to medicine service. Several reasons for delays were discovered, with the major reason being unavailability of inpatient beds, responsible for 38.3% of the delays.

The entire process of patient flow was analyzed, and this revealed inefficiencies in the discharge process. Both patient admissions and discharges consistently peaked at the same period of the day (12 to 5 pm), when 46% of daily admissions and 74.7% of daily discharges occurred. This put a significant strain on the system and the staff.

We recognized that fluctuation in the number of admissions was a factor of natural variation that we would not be able to affect. On the other hand, variation of discharges throughout the day was a result of artificial variation, where we may be able to make an impact.

Based on feedback from nursing staff, patients were usually occupying an acute bed for several hours after completion of discharge while waiting for a meal or transportation to arrive.

Background

Emergency department flow is not just about the metrics of not meeting goals. From the patient perspective, prolonged ED stay has been associated with increased hospital mortality and length of stay.[1]

Several approaches to improve efficiency of the discharge process have been described in the literature including various versions of a discharge lounge, which, if designed appropriately, can be a valuable tool to increase efficiency of the discharge process. The suggested key components of a successful discharge lounge were communication with stakeholders and their buy-in, appropriate location allowing convenient patient pick-up and diligent selection of appropriate patients.[2]

We took into account our own unsuccessful experience from the previous pilot of a discharge lounge. Several reasons that contributed to the past failure were identified:

- Lack of upfront and continuous education of the front-line staff and, as a result, lack of their understanding of the process
- Location in a small isolated room that was difficult to find, with no entertainment facilities or oversight
- Lack of ownership with efforts focused only on initial project period without a consideration of sustainability
- Inadequate screening of patients for eligibility.

Baseline measurement

The percentage of ED patients staying over 6 hours was retrieved from the national database and at baseline was 24.6%. To evaluate the discharge process, we measured the percentage of all discharges completed before noon and found it to be 33.4%, with a goal of 40% or more.

The second metric utilized was discharge time (the time from submission of discharge order to the time patient leaves the hospital) for medicine patients as determined by chart review. The baseline measurement of discharge time was 2 hours, 6 minutes.

Design

In our facility, we care for a significant proportion of elderly patients, who are dependent on others in their activities of daily living (ADL), have mental impairment or residing at nursing home level facilities. Discharge of these patients may be a prolonged and complex process. We envisioned that patients who are mentally intact, independent in their ADL, and discharged to home without any frequent care needs could be prioritized for discharge and efficiently leave the hospital. This facilitates the opening of beds for the patients in the ED with acute care needs. Review of 62 patient charts revealed that patients meeting these requirements would comprise 56.5% of all our patients, creating an opportunity for more efficient discharges.

In attempt to re-imagine a discharge lounge, we have identified all stakeholders in the process. The services involved were the frontline and managing level nursing, physicians, pharmacy, physical therapy, respiratory therapy, secretaries, volunteer service, social work, and the business office. The stakeholders' input was solicited on the key components of discharge lounge design as well as the perceived barriers to success, ensuring that they have an opportunity to address them in the plan.

We chose to name the project as Discharge Hospitality Center (DHC) [2] as the feedback provided by the front-line staff suggested that there was a negative connotation with the name "discharge lounge" based on the prior experience in our facility. The location for the pilot was selected to be a new large lobby in proximity to the hospital entrance to allow convenient patient pick-up. Accommodations available in the lobby included comfortable chairs, television, reading material, coffee machine, restroom, automated external defibrillator and indirect supervision from the staff already

present, as the lobby was utilized for other purposes such as the outpatient surgery waiting area.

Strict DHC eligibility and non-eligibility criteria were developed. Eligibility criteria included patient independence in ADL, intact mentation, and a lack of ongoing care needs. Oxygen requirement was added to exclusion criteria per request of respiratory therapists due to a concern of oxygen supply running out prior to patient arriving home. Cards with DHC eligibility criteria were distributed to physicians, nursing, and members of multidisciplinary discharge planning group and displayed on the information boards.

At daily discharge planning meetings, physicians would report whether patients planned for discharge are DHC eligible. The final decision of patient DHC eligibility would be made by a multidisciplinary discharge planning team to allow multi-directional input to assure that only appropriate patients arrive to DHC. A discharge nurse, who is a leader of the meeting, would keep the list of DHC eligible patients and distribute it to the charge nurses on each medicine floor.

Based on this list, nurses would prioritize discharge of the DHC eligible patients as they could safely wait for their transportation at DHC. This would help free up acute care beds for new admissions. They would also contact family members of the patients in order to facilitate transportation. Nurses would have an option to order an early tray, as per patient request. After discharge, patients would have access to the cafeteria to purchase additional meals.

Based on the consideration that appropriately selected and adequately discharged patients should not require ongoing medical care after discharge, a decision was made that dedicated medical staff at DHC was not required. While patients are at DHC, all outpatient procedures and policies would apply. Upon completion of the initial design, all stakeholders were educated on the processes of the pilot and had an opportunity to have their questions answered.

A sustainability plan was created that was based on the assignment of supervision of patient DHC eligibility screening, distribution of the list of eligible patients to the floors to a leader of discharge planning group, with biweekly audits to monitor adherence, measuring discharge times for DHC eligible and all Medicine patients, and sharing this feedback with physicians and nursing to identify opportunities for improvement. To date, DHC has been operating for four months.

Strategy

PDSA cycle 1: The pilot was conducted according to the initial design.

PDSA cycle 2: Nursing staff reported that some patients were unhappy with the last-minute notification at discharge about going to DHC. A flyer with DHC information was added to patient admission information folders to avoid a surprise effect and allow patients to have their questions answered throughout their hospital stay. We were aware about an incident when a patient almost

missed his public transportation while at DHC as the patient was not aware that the public transport pick-up area was in a different location. The information clarifying this subject was included in the patient DHC flyer.

PDSA cycle 3: Nurses reported that there were occasions when patients found it confusing to find DHC location as not every patient was escorted by volunteers after discharge. The approaches considered to address this issue were to develop a better signage, to provide veterans with a hand-out containing detailed directions to DHC, or to implement a universal patient escort. At that time, another pilot project was conducted by the business office that included implementation of a universal patient escort, and a decision was made to await the results of that pilot with possibility that universal post-discharge patient escort will be instituted.

PDSA cycle 4: The first data analysis after opening DHC revealed that discharge time for DHC eligible patients was 2 hours 16 minutes, which was higher than average for all medicine patients. A meeting with nursing managers of each medicine unit was held. The discussion revealed that prioritizing the discharge of DHC eligible patients represented the major opportunity for improvement. A decision was made that the nursing managers will take a more active role in education and supervision of the front-line nurses to assure adherence to the pilot process. Further measurement of discharge time revealed a significant reduction of discharge time compared to baseline level.

PDSA cycle 5: Despite a sustained reduction of discharge time for DHC eligible patients, there was a spike in discharge time for all medicine patients up to 2 hours 21 minute. The discharge time was divided by medicine floors and revealed that one of the floors had exceptionally high discharge time of 3 hours 26 minutes, driving the overall discharge time up. The feedback was solicited from the floor with highest discharge time and revealed that there was a higher than usual number of complex DHC ineligible patients who required prolonged discharge process and additional time to wait for transportation. The discharge time audit conducted two weeks later demonstrated a decrease of discharge time to 1 hour 24 minutes.

Results

Over a period of four months, the percentage of patients staying in ED for over 6 hours decreased from 25% on average at baseline to 16% over the last month.

On average, two to seven DHC-eligible patients were identified by daily screening, although one to five patients a week actually arrived to DHC as most patients were able to obtain transportation arranged by their families sooner. We consider that the major factor in this phenomenon was the expectation that patients would wait for the transportation in a chair, not in a bed, which motivated families to arrive sooner.

Over the course of four months, percentage of discharges completed before noon increased from 33.4% to 41.5%. Discharge time for DHC eligible patients decreased from 2 hours 16 minutes to 1 hour 23 minutes ($p=0.008$) (chart 2), while discharge time for all

medicine patients decreased from 2 hours 6 minutes to 1 hour 24 minutes ($p=0.138$) (chart 3). The reduction of the discharge times was mostly attributed to a "virtual effect" of a prioritized discharge of DHC eligible patients and a faster arrival of patient transportation. We recognize that to some degree the observed results could have been influenced by improvement of human performance under direct observation, known as the Hawthorne effect.

Twice a month, we monitored by direct observation adherence to patient screening for DHC eligibility at discharge planning meeting and adherence to distribution of DHC eligible patient list to the floor nursing. In both cases, adherence was 100%.

Over four months, two patients were readmitted from DHC. A review of each case concluded that both were not preventable. There was a single incident of a patient almost missing his public transportation as he was not aware of the different location for a patient pick-up. There was also one formal complaint from the patient related to a more efficient discharge process.

See supplementary file: ds3646.pptx - "Outcomes of Discharge Hospitality Center pilot"

Lessons and limitations

Planning of the project is one of the most critical steps. Prior to designing a DHC, we collected a large number of inputs and opinions from all stakeholders and took it into account in the final design. Soliciting feedback allowed front-line staff to warm to the idea of DHC by helping them realize that their opinion matters and is taken into consideration.

Reaching out to the entire nursing staff was challenging given differences in schedule and inconsistent dissemination of the information from managers to the front lines. To overcome this barrier we provided repeated education to nursing, displayed relevant information in visible locations, and held regular meetings with nursing managers to assure the information is provided to every staff member.

Having an additional meal supply for the patients discharged to DHC has been a topic of several discussions. The chosen approach was to have an option for a nursing staff to request an early tray per patient request prior to discharge. There were no complaints or requests from patients at DHC in regards to additional meals.

Another point of repeated discussion was related to having a nursing assistant assigned to DHC. However, the pilot was started without any dedicated staff, and we have not observed a strong necessity for assigned medical personnel.

Conclusion

Based on our experience, an appropriately designed DHC can help improve efficiency of the discharge process. A design of successful DHC may vary among different facilities. The key ingredients of our project were continued communication with all stakeholders,

monitoring the metrics selected, and sharing this feedback with the front-line staff to identify barriers to better performance and ways to overcome them.

References

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Declaration of interests

Nothing to declare.

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