

Reducing Length of Stay in the Emergency Department: Room Vacancy Times in the North Pod of Johns Hopkins Hospital

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1 Background

Addressing emergency department (ED) crowding and length of stay is important because crowding has the potential to:

- compromise care quality,
- become costly,
- compromise community trust,
- can be mitigated by improving patient flow throughout the hospital.

The Johns Hopkins Department of Emergency Medicine is a designated Level 1 Trauma Center and treats more than 60,000 patients each year (JHH, 2014). This project focused on observing the patient flow through the ED at Johns Hopkins Hospital specifically observing room vacancy times in a section where patients are either discharged or admitted to the hospital.

When looking at bed vacancy times there are a multitude of factors that are at play in the process such as:

- the patient either leaves the department or is admitted to the hospital,
- the patient is transferred to another unit,
- the patient leaves the room and/or then another patient is brought to occupy the bed.

While it is important to have quick turnaround times, this process involves a lot of coordination and communication in an environment that is difficult to predict.

Purpose of the project

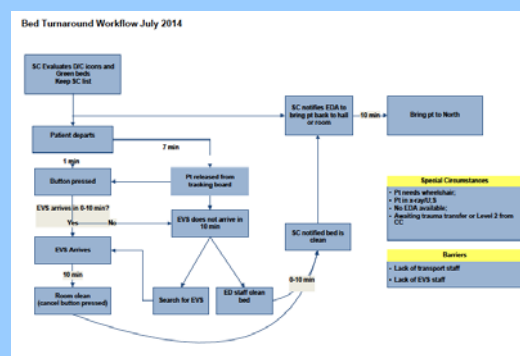
The purpose of the project was to examine the process of bed turnaround times to identify what is working and note the areas for improvement.

2 Methods

This project used process observation as a method to confirm what is happening during the process of bed turnaround times in the one area of the ED. Process observation “allows you to gather useful information about almost any process, activity, or human behaviors that you can use to refine your process map, as well as to help uncover issues that are compromising the effectiveness of the process.” Observations were made with recording sheets and checklists to standardize the observation data collected.

3 Results

Room vacancy observations were conducted during the month of July 2014. Observations were made on various days of the week and at various times of the day/night with a total of 41 observations. The median time from a patient leaving a room to a new patient entering the room was 27 minutes, and the average time was 31 minutes. The bed turnaround workflow process is depicted in the graphic below:



Average time patient leaves room to new patient in room: 31 minutes



4 Discussion

From these observations what worked well in the process of bed turnarounds were the following:

- Nurses consistently push button to alert Environmental Services (EVS) to clean room when patient leaves (~1 minute)
- EVS takes ~10 minutes to clean room
- Shift coordinators are proactive, determining if rooms are available and if EVS or EDA is not available to either clean or transport patient will either do it themselves or delegate to reduce times that a room is vacant.

From these observations, the largest time gaps, contributing factors to longer lengths of stay noted were:

- 24% of observations patient waited in hallway while room was being cleaned (patients generally not dissatisfied with waiting in the hall)
- Insufficient EVS staff to clean multiple rooms when simultaneous turnover of multiple beds -- 10% of the time nurses cleaned the room because EVS was not available
- EVS not always using their pagers so do not know that room is empty and ready to be cleaned
- Transport not always available to bring patients back to North Pod, SC sometimes goes to get patients themselves to fill rooms.

5 Conclusions

Based on these observations, recommendations for reducing room vacancy times in the North Pod of the ED and improving patient flow through the North Pod of the ED are:

- Additional transport resources available to bring patients to and from rooms.
- Always have 2 EVS staff in North pod to clean the rooms
 - Ensure EVS are carrying their pagers for notification.

6 Future Directions

More observations should be conducted when staffing levels are at desired levels to compare results of the bed turnaround workflow.

It would also be beneficial to compare the results found here to other Emergency Departments in the area.

7 References

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