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REDUCING TIME TO DISCHARGE AT A LARGE MULTISPECIALTY HOSPITAL

SITUATION

Discharging patients in a timely manner is an issue that plagues most large hospitals. At a 300 bed multispecialty hospital in West Delhi, the discharge process for a typical self pay patient took approximately 5 hrs. Patient and family complaints were frequent and had started to adversely affect the hospital's reputation. Delayed discharges also blocked beds for new admissions and artificially drove up bed occupancy rates and average length of stay.

HealthBridge was asked by the hospital management to:
    a. Identify the major bottlenecks and their root causes
    b. Re-engineer the process to improve patient satisfaction and release bed capacity
    c. Work with the hospital staff to implement the new process

ANALYSIS

Our approach to evaluating and redesigning an ADT system is as follows:
    a. Work with the hospital team to set measureable targets for improvement.
    b. Map each step in the discharge process and document the time taken for each activity.
    c. Design an ideal end-state for the hospital and prepare a roadmap to improvement.
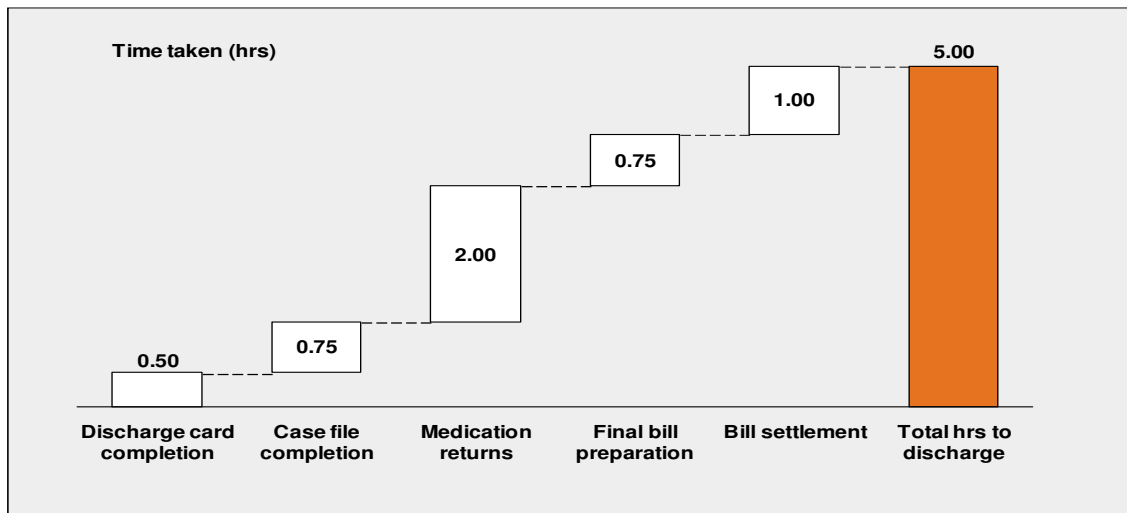
After analyzing the data collected and holding conversations with key stakeholders, we identified the following bottlenecks (Table 1):

Table 1: Major bottlenecks preventing timely discharge and their root causes

Bottleneck	Root cause
Delay in start of discharge process	Care plans with the expected length of stay and discharge date were not created at time of admission. The discharge process began unpredictably only when the consultant determined the patient to be ready during rounds.
Delay in completion of discharge card	Cards are handwritten and activity begins after consultant signoff on the day of discharge
Delay in completion of final case file	Case file not checked each day to update services ordered with services and reports received
Delay in preparation of final bill	Wards waited for a stack of billing files to accumulate before sending them to the billing counter for processing
Delay in financial clearance	Attendants were not immediately informed that the final bill was ready. Late entry of charges led to a substantial hike between the interim and final bill that was often questioned during settlement.

We also measured the time taken for each step in the discharge process to quantify the delays and capture baseline performance   (Exhibit 1):

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Exhibit 1: Total time to discharge at baseline

Time taken (hrs)

Discharge card completion	Case file completion	Medication returns	Final bill preparation	Bill settlement	Total hrs to discharge
0.50	0.75	2.00	0.75	1.00	5.00

RECOMMENDATION

HealthBridge believes that ADT systems can be significantly improved to 'best in class' by redesigning the process based on the following principles:

- Design the process around the patient and their family to minimize movement and waiting times
- Use IT to deliver this process efficiently and reliably
- Hold staff accountable for ADT performance

Our major recommendations to eliminate the bottlenecks described above were (Table 2):

Table 2: Recommendations to reduce time to discharge

Recommendation	Impact
Discharge planning begins at admission - Create a care plan for all elective patients within 24 hrs of admission	The patient, family and care team are all informed of the discharge date. The discharge process can then begin predictably 24 hrs prior to the discharge day
Update the discharge card daily	Complete the discharge summary quickly within 10-15 minutes of discharge orders
Update the patient's case file daily	The case file is ready when the discharge orders are given - only services provided on the morning of discharge are pending
Return discontinued medications daily in the wards	Eliminate the pharmacy from the discharge process altogether
Enter charges at the time and point of consumption	Generate up-to-date interim bills and minimize billing errors
Send an automatic SMS to patients and families when the bill is generated	Enable quicker bill settlement

IMPLEMENTATION

Our implementation plan was divided into two phases. We would first pilot an interim discharge process in one ward that drew upon existing resources and minimized changes to the hospital's health information system. The interim process would not achieve the target time to discharge but would still deliver significant improvements quickly and garner support for the larger change program. The end-state process would achieve the target and be completely IT-enabled.

A Project Management Office was set up the drive the pilot consisting of the Medical Superintendant, program champions, department staff and the HBA team. The hospital's HIS vendor developed a discharge tracker that allowed us to track the time to discharge in real time.

Structured review meetings were held every week with the floor manager and the Medical Superintendant to resolve any issues. The joint HBA-hospital team then presented a progress update to the CEO every fortnight.

IMPACT

After three months, the discharge time decreased from 5 hrs to just over 2 hrs in the pilot ward (Exhibit 2). Patient satisfaction scores also improved to 95 %. The hospital staff noted improved communication and coordination between departments.

After the successful pilot, the new process was rolled out to other wards and the hospital operations team assumed ownership of the project. With targeted support from our team, the hospital continues to make progress towards implementing the end-state discharge process.

Exhibit 2: Total time to discharge following HealthBridge program

Reduction in time taken (hrs)

5.00	0.75	0.50	2.00	0.50	2.25
Time to discharge Oct '10	Discharge summary completion	Case file completion	Medication returns	Final bill preparation	Time to discharge Feb '11