Discharging Patients Before 10am-A Pilot Study

Chiao-Wen Chang¹, Bi-Yu Chang¹, Chiung-Ying Chang², Li-Mei Ou², Tsung-Hsien Lin¹,³,⁴, Yen-Hsu Chen³,⁴
Kaohsiung Medical University Hospital, Kaohsiung Medical University, Taiwan
¹-Administration and Quality Assurance Center, ²-Nursing Department, ³-Superintendent Office, ⁴-Department of Medicine

Background
Late afternoon hospital discharges are thought as a bottleneck for the emergency department (ED) patients admission to the ward. Currently, the discharge process is lack of generalized solutions. If admission patients discharges are earlier in a day, it might improve ED admission process, ED overcrowding, and increase satisfaction for both patients and staffs.

Purpose
This article describes the application of a five-phase Six Sigma define, measure, analyze, improve, and control (DMAIC) approach to increase the morning discharge percentage between 8am and 10am in a 1680 beds university medical center in Taiwan. Within the context of the five phases, the team applied Cause-and-Effect [Fishbone] diagrams, process mapping to make decisions.

Intervention
The steering group create a Discharging Procedure Program (DPP) to enhance everyone’s responsibilities for early discharge. We initiated several meeting rounds to explain the procedure and fully communicated with all participants. A next-day patients discharge list was created and a short message was sent at daily 8:00 am to notify physician and nurse practitioner to remind the scheduled discharge patients at the same day. We also created a website to monitor the patients expected to be discharged since April 2016.

Results
Total 21,670 patients discharge was analyzed. The early discharge percentage increased from 15% to 19% over the 5-month intervention. The non-elderly (age < 65 year old) group has more earlier hospital discharges than the elderly group (age ≥ 65 years old) (p<0.001).

Conclusions
Our study demonstrates that increased patients early discharge could be possible by a team work. Future effort and investigation will allow for better early discharge and understanding of the difficulties on hospital discharges of the elderly.

Key words: Discharging patients, Elderly

Control
- Percentage on pre-visit discharge orders the day before
- Percentage on discharge process completion before 8am
- Required time to complete admission after ward bed is available
- SOP establishment
- Information System go online
- Proper Communication with Clinical Departments
- Overworked at Outpatient Service
- Discharge cannot be completed before 8am by family
- Discharge orders did not issue by physicians earlier

Define
- Discharging Patients Before 8am
- Reducing discharging time
- Improving the admissions waiting time

Measure
- Percentage on pre-visit discharge orders the day before
- Percentage on discharge process completion before 8am
- Required time to complete admission after ward bed is available

Improve
- Percentage on pre-visit discharge orders the day before
- Percentage on discharge process completion before 8am
- Required time to complete admission after ward bed is available

Analyze
- Overworked at Outpatient Service
- Discharge cannot be completed before 8am by family
- Discharge orders did not issue by physicians earlier

Cause-and-Effect [Fishbone] diagrams

Discharge process cannot be completed before 8am

Waiting for treatment or examination (e.g. labs, x-rays, imaging study) and discharge

Discharge orders can only be completed if family is in the room

Discharge time before 8am

Family could not initiate before 8am

Waiting for discharging changes to be implemented

SOP establishment

Medical

Others

24-Hrs shift

50% IV

Prepared discharge orders

Waiting for physician to complete

Other medical physicians complete discharge orders

Emergency physician complete discharge orders

Diagnostic and Treatment physician complete discharge orders

Discharge process can be completed on time

FIS doctors will be trained when he/she is assigned to “Discharge Orders”