

Project Title

Go with the Flow: Improving Patient Movement into AMU

Project Lead and Members

Project lead: Dr. Maria Teresa Kasunuran Cruz

Project members:

- Dr. John Tshon Yit Soong
- Dr. Marion Christine Caraon Carteciano
- Marivic Garcia Joaquin
- Tan Bee Ngoh
- Chan Pui Wan Doreen
- Amirah Bte Daud
- Png Yan Ting

Organisation(s) Involved

National University Health System

Project Period

Start date : February 2019

Completed date: August 2019

Aims

To improve patient movement into the Acute Medical Unit

To increase percentage of patients transferred from the EMD to the AMU within 4 hours (target goal 60%).

Background

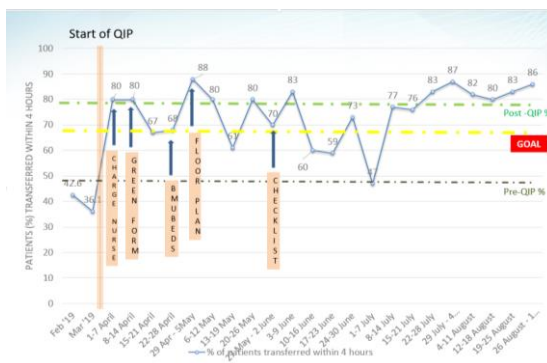
Prolonged EMD stay leads to a delay in the patients' definitive management. Goal is to reduce bed wait time to < 4 hours for 60% of the patients. As of data collected from October to November 2018, 433 out of 1130 (38.3%) patients were

transferred from EMD to AMU within 4 hours. However, 665 (58.8%) waited for > 4 hours, with 66 patients (6%) waiting for > 12 hours.

Methods

A root cause analysis was performed by the team comprised of representatives from the different stakeholders. Problems were identified with the aid of a pareto chart. Solutions were formulated to promote patient movement within 4 hours. Reallocation of beds assigned, lack of bandwidth of staff to receive admissions, inadequate booking information and incomplete handover were the problems identified. Interventions were implemented and reviewed through PDSA cycles.

Results



There was an increase from 39.3 to 78.6% patients transferred within 4 hours. Reduction in A&E stay leads to lower resource utilization. By improving patient flow into the Acute Medical Unit, patient safety is ensured as specialists are able to assess patients, decide on necessary investigations, as well as start appropriate treatment. Earlier definitive care has shown to reduce overall length of stay (LOS) which equates to bed days saved.

Lessons Learnt*

By streamlining the bed allocation process, re-aligning medical / nursing responsibilities and clarifying special bed capabilities, patient flow can be improved.

Conclusion

By improving patient flow, patient safety is enhanced with early specialist review. By reducing bed wait time, investigations were requested and completed expediently. Hence, early definitive care was provided. There was a reduction in the steps of bed allocation, improved BMU awareness of AMU bed characteristics, modification of staff responsibilities as well as revision of EMD bed request form. There is an associated reduce in the overall length of stay, which subsequently translates into bed days saved. With an average bed day cost of \$ 1887, reducing LOS by 24 hours through AMU would equate to 926.5 bed days saved for the year.

Project Category

Care Redesign

Keywords

Care Redesign, Quality Improvement, Pareto Chart, Plan Do Study Act, Waiting Time, Effective Care, Length of Stay, Acute Care, Emergency Medicine, Medical Services, Nursing, National University Health System, Patient Movement, Bed Management

Name and Email of Project Contact Person(s)

Name: Maria Teresa Kasunuran Cruz

Email: maria_teresa_kasunuran_cruz@nuhs.edu.sg

Project Title	Go With The Flow		
Department	Medicine	Duration	6 months
Team Leaders	Maria Teresa Kaasunuran Cruz	Sponsors / Facilitators	Amelia Santosa
Team Members	Dr. Marion Christine Caraon Carteciano (A&E RP), Marivic Garcia Joaquin (ANC), Tan Bee Ngoh(SN), Doreen Chan (AMU PSA) Amirah Daud (BMU) Png Yan Ting (Ops), Dr. John Tshon Yit Soong (Supervisor)		

A: Define the Problem

In 2018, 9864 patients were admitted at the Acute Medical Unit. From October – November 2018, only 433 out of 1,130 (38.3%) of patients were transferred to AMU from EMD within 3-4 hours; 665 (58.8%) waiting for > 4 hours, with 66 (6.0%) patients waiting for more than 12 hours. As a result, significant numbers of patients were transferred after office hours, when critical investigations and primary decision makers (e.g. team consultants) are not available, resulting in delays in the provision of definitive care.

D: Interventions & Action Plan

PROBLEM	INTERVENTION*	DATE OF IMPLEMENTATION
Nurses distracted by other duties	AMU Charge Nurse to accept new admissions.	1 April 2019
No ownership of Bed Request Form (green form)	Green form is the responsibility of the doctors. PSA to check	10 April 2019
PSA multi-tasking	BMU to allocate beds and calling to AMU PSA for clarification	22 April 2019
	AMU Floor plan provided to BMU for understanding and cohorting depending on patient's needs	29 April 2019
Lack of coordination	EMD checklist to be completed prior to tele-handover to AMU.	27 May 2019

B: Goal

To increase the percentage of patients transferring from the Emergency Department to the Acute Medical Unit (EMD to AMU) within 4 hours from 38% to 60%.

E: Benefits/ Results

Start of QIP

There was an increase from 39.3 to 78.6% of patients transferred within 4 hours.

- Reduction in A&E stay leads to lower resource utilization.
- Improving patient flow into AMU enhances patient safety via earlier definitive care
- Earlier definitive care has shown to reduce overall LOS which equates to bed days saved in a year.

C: Problem Analysis

Category	Percentage
Lack of green form ownership	25%
Nurses distracted by other duties	40%
PSA multi-tasking	64%
Lack of coordination	82%
No eHMS	93%
Plans NOT ready in AMU	96%
High patient load	98%

F: Strategy for Spreading/Sustaining

- Hard structures: revision of the bed request form (Green Form) from the Emergency Department.
- Inclusion of responsibility to accept patients for admission into the routine training module for charge nurses./
- Provision of a visually enhanced AMU floor plan for the Bed Management Unit