Project Title

Stroke MBI Data Compliance in Ng Teng Fong General Hospital (NTFGH)

Project Lead and Members

Project lead: Nur Hafizah Mohd Amin (Senior Occupational Therapist)

Project members:

- Abdul Rashid Jailani (Deputy Director)

- Kelly Chan Poh Choo (Senior Physiotherapist)

- Fadhlina Hassan (Assistant Nurse Clinician Case Manager)

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- Sheryl Yong (Senior Assistant Manager)

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- Lyon Loo Jun Yuan (Senior Executive)

Organisation(s) Involved

Ng Teng Fong General Hospital

Project Period

Start date: Apr 2018

Completed date: Dec 2019

Aims

To reach 70% of Modified Barthel Index (MBI) data completion in the hospital

Background

See attached

Methods

See attached

Results

See attached

Lessons Learnt

Teamwork, communication and collaboration of the different stakeholders working towards a unified goal contribute to a successful outcome.

Conclusion

Work behaviour of staff is modifiable when a collaborative effort is made to align the institution's requirements while resolving difficulties faced by staff at work.

Project Category

Care Redesign

Keywords

Care Redesign, Workflow Improvement, Quality Improvement, Improvement Tool, Fishbone Diagram, Medical Services, Allied Health, Neurology, Neurosurgery, Rehabilitation Medicine, Multi-Disciplinary Team, Ng Teng Fong General Hospital, Modified Barthel Index, Stroke Patients, Data Compliance

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MULTIDISCIPLINARY TEAM-BASED PROJECT: STROKE MBI DATA COMPLIANCE

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Define Problem, Set Aim

Context of issue:
Modified Barthel Index (MBI) is used as an outcome measure to track the functional recovery in mobility and activities of daily living (ADL) of all patients with stroke in NTFGH. It is also used as a criteria for rehabilitation triage of these patients to suitable step-down care placements e.g. community hospital.

The premorbid, admission and discharge MBI is conducted by occupational therapists (OT) and physiotherapists (PT) in the Neurology, Neurosurgery and Rehabilitation Medicine disciplines. This data is monitored by the Case Manager and Specialty Care Nurse of these disciplines, and then extracted by Specialty Operations for submission to Ministry of Health (MOH).

Problem statement:
Only 52% of MBI data in NTFGH were completed between April 2018 to March 2019. This is below the hospital's target of 100% for completion of data.

Aim of project:
Our target was to reach 70% completion by 31 December 2019.

Establish Measures

Outcome Measure:
% of completed MBI data for all stroke patients/month
(completed data for premorbid, admission and discharge MBI)

Balancing Measure:
Time saved by OT & PT lead for other direct patient-related tasks

Analyse Problem

OT, PT and Nursing (Case Manager and Specialty Care Nurse) brainstormed on root causes for missing MBI data

Based on the Fishbone Diagram, 2 main root causes were identified:
1. Lack of standardization for referrals
This is linked to late referrals and an absence of referrals to either OT, PT or both disciplines.

2. Unclear expectations
This is linked to therapists' uncertainty in filling up MBI in different scenarios such as medically unstable patients, inaccurate retrospective entry after patients were discharged and inability to find discharged patients.

Select Changes

To address factor 1:
Multidisciplinary team meeting held

Solution:
Consensus for doctors to
• Refer to therapists early and
• For blanket referrals to both OT and PT for all patients with stroke

To address factor 2:
Solutions:
1. Combined OT and PT MBI re-orientation for both new and static staff for each rotation, with explanation on the rationale of MBI administration

2. Standardized MBI scoring guide, patient case studies and test on how to score correctly to improve inter-rater reliability

3. Standardization of work processes were also established, including:
• Therapists' having their own patient list to avoid missing discharged patients
• Correct workflow given to therapists on how to fill in retrospective MBI data accurately after discharge
• Covering therapists to ensure completion of MBI for OT/PT who were away
• Coordination on documenting MBI between OT and PT to ensure the total score will be tallied on electronic EPIC interface
• Communication between Case Manager and therapists during instances of incomplete MBI

Test, Implement & Spread Changes

Plan
Objective:
• To test a change on the standardization of the process of filling up premorbid, admission and discharge MBI for all PT and OT

Do
• Interventions conducted including MBI re-orientation, standardize MBI scoring and work processes on 4 July 2019
  • Staff were actively asking questions for clarifications, in agreement of all of the suggestions and responded positively to the change
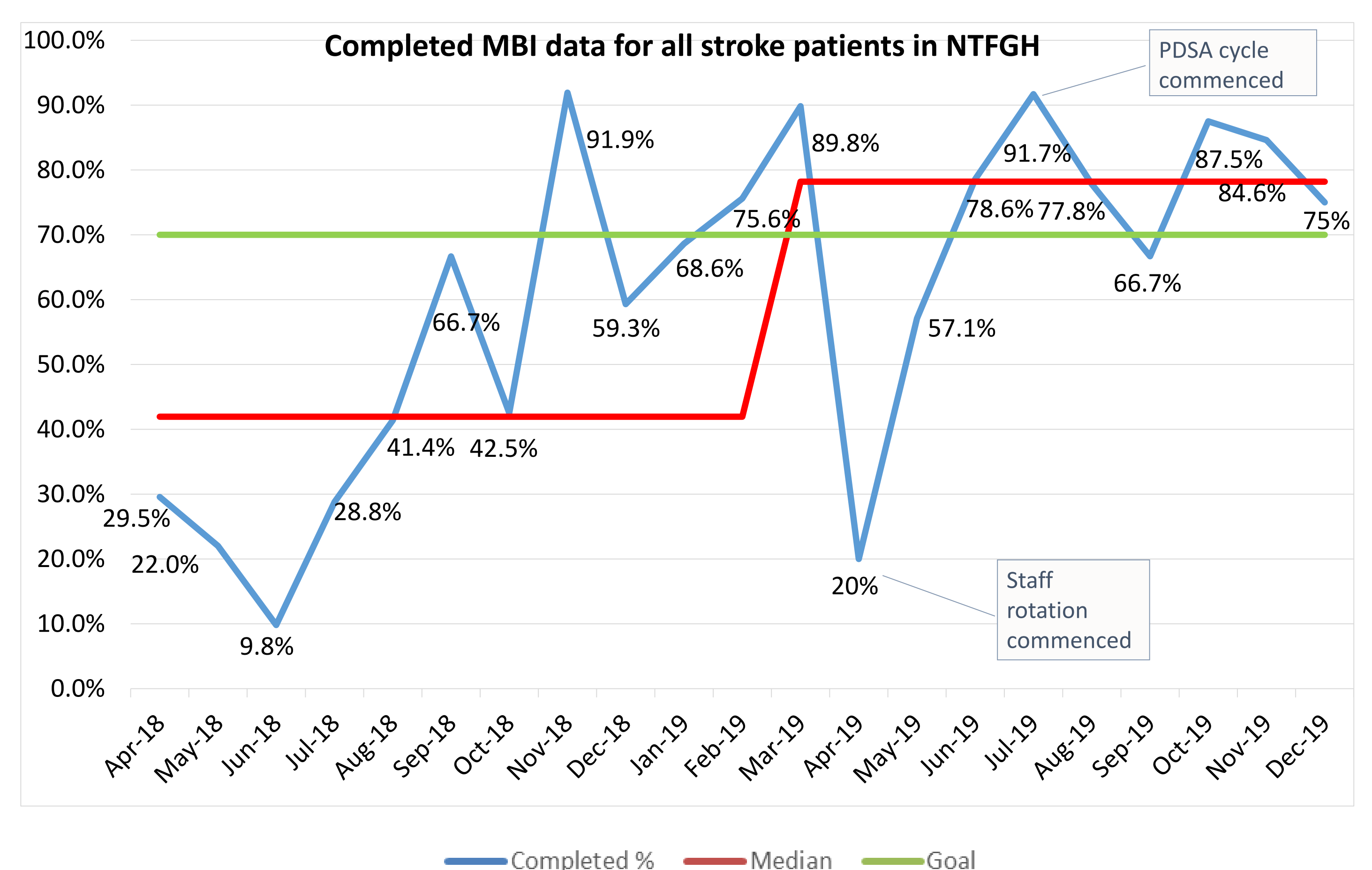
Act
• Team will continue to adopt this work process
• It can be translated to patients with stroke under other disciplines e.g. Geriatrics, and other similar outcome measures required under MOH's One-Rehab plan

Study
• Results were compared at t1 (baseline for April 2018 to March 2019) and t2 (post-intervention for July 2019 to Dec 2019)

Outcome Measure:
Improvement of completed MBI from **52% to 71%**

Balancing Measure:
Total time saved : **300 min/month**

Completed MBI data for all stroke patients in NTFGH

PDSA cycle commenced

Staff rotation commenced

29.5%, 22.0%, 9.8%, 28.8%, 41.4%, 42.5%, 66.7%, 91.9%, 59.3%, 68.6%, 75.6%, 89.8%, 20%, 57.1%, 91.7%, 78.6%, 77.8%, 66.7%, 87.5%, 84.6%, 75%

Apr-18, May-18, Jun-18, Jul-18, Aug-18, Sep-18, Oct-18, Nov-18, Dec-18, Jan-19, Feb-19, Mar-19, Apr-19, May-19, Jun-19, Jul-19, Aug-19, Sep-19, Oct-19, Nov-19, Dec-19

— Completed % — Median — Goal

Learning Points

Teamwork, communication and collaboration of the different stakeholders working towards a unified goal contribute to a successful outcome.

Staff work behaviour is modifiable when a collaborative effort is made to align the institution's requirements while resolving difficulties faced by staff at work.

Ng Teng Fong General Hospital

Jurong Community Hospital

Jurong Medical Centre