Project Title

Clinical Documentation, Coding And Subvention

Project Lead and Members

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Project members: A/Prof Gerald Chua, Dr Lee J E, A/Prof Gamaliel Tan, Dr Tan S C. Dr Thng Yongxian, Ng Kian Swan, Jennie Sun, Cynthia Xu, H Zulkifli, Chow Siew Ying, Connie Chung, Flavian Li, Dr Jared D'Souza, Liew Mei Pheng, Yang Kok Soong, Kaliasam Manimegalai, Stephanie Teo

Organisation(s) Involved

Ng Teng Fong General Hospital

Healthcare Family Group Involved in this Project

Healthcare Administration, Medical

Applicable Specialty or Discipline

General Surgery, Geriatric Medicine

Project Period

Start date: Feb-2018

Completed date: Jun-2018

Aims

To potentially increase NTFGH's inpatient casemix index from 1.05 to 1.30 by end of FY2018, and eventually to beyond 1.40 in the long term

Background

See poster appended / below

Methods

See poster appended / below

Results

See poster appended / below

Lessons Learnt

Having a clear aim, timely performance feedback/measurement, strong leadership from CMB/Clinical HODs, enthusiastic participation from many doctors, good facilitation from administrators, tight teamwork are key contributing factors to success for quality improvement projects with clinical slant.

Conclusion

See poster appended / below

Project Category

Care & Process Redesign, Quality Improvement, Value Based Care

Keywords

Clinical Documentation, Casemix Index, Coding and Subvention, Multi-Departmental, Multi-Disciplinary Collaboration, Medical Records Office, Medical Informatics

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CLINICAL DOCUMENTATION, CODING & SUBVENTION

A MULTI-DEPARTMENTAL, MULTI-DISCIPLINARY COLLABORATION BY MEMBERS FROM: CLINICAL OPERATIONS, MEDICINE DIV, GENERAL SURGERY, ORTHOPAEDICS, FINANCE, MEDICAL RECORDS OFFICE, MEDICAL INFORMATICS, EPIDEMIOLOGY, CMB OFFICE

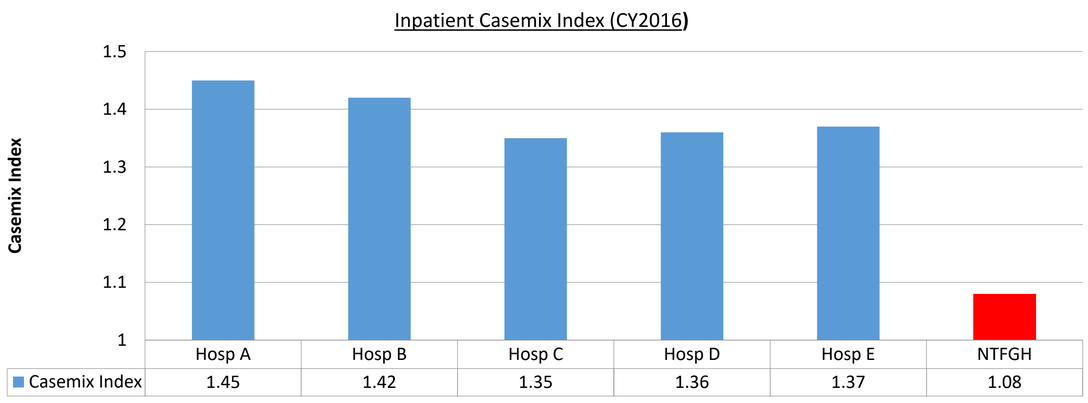
- ❑ SAFETY
- ☑ PRODUCTIVITY
- ❑ PATIENT EXPERIENCE
- ☑ QUALITY
- ❑ VALUE

Define Problem, Set Aim

Opportunity for Improvement

- NTFGH's inpatient casemix index, at 1.08, was the lowest among the restructured hospitals in CY2016
- It dropped slightly in CY2017, to 1.05
- Potentially, we have been receiving less subvention (government $$) per case, compared to other restructured hospitals

Inpatient Casemix Index (CY2016)



Aim

To potentially increase NTFGH's inpatient casemix index from 1.05 to 1.30 by end of FY2018, and eventually to beyond 1.40 in the long term

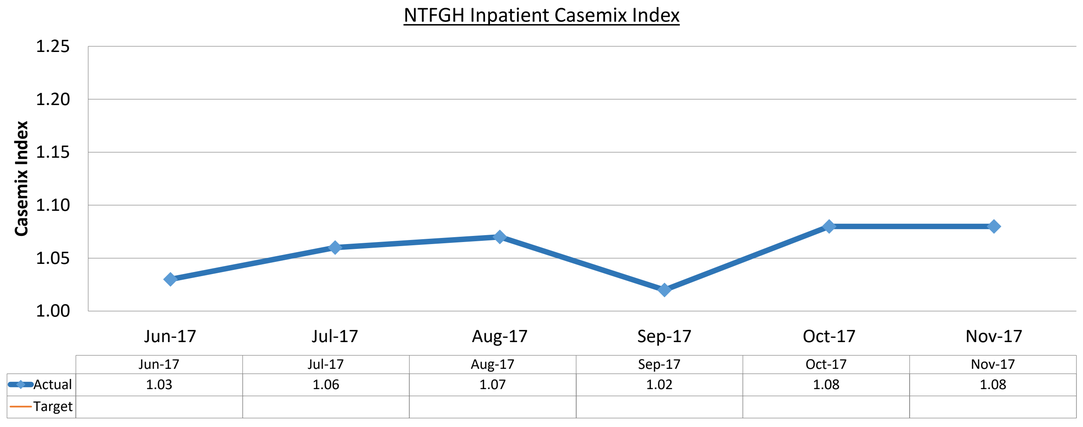
Establish Measures

Baseline Performance

Casemix index for the 6 months before commencement of project:

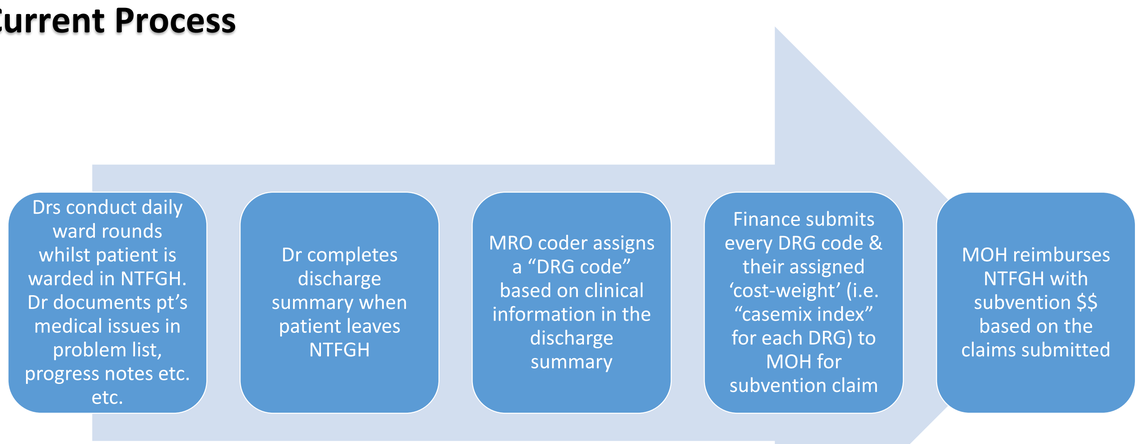
- Range: 1.02 to 1.08
- Mean: 1.05

NTFGH Inpatient Casemix Index



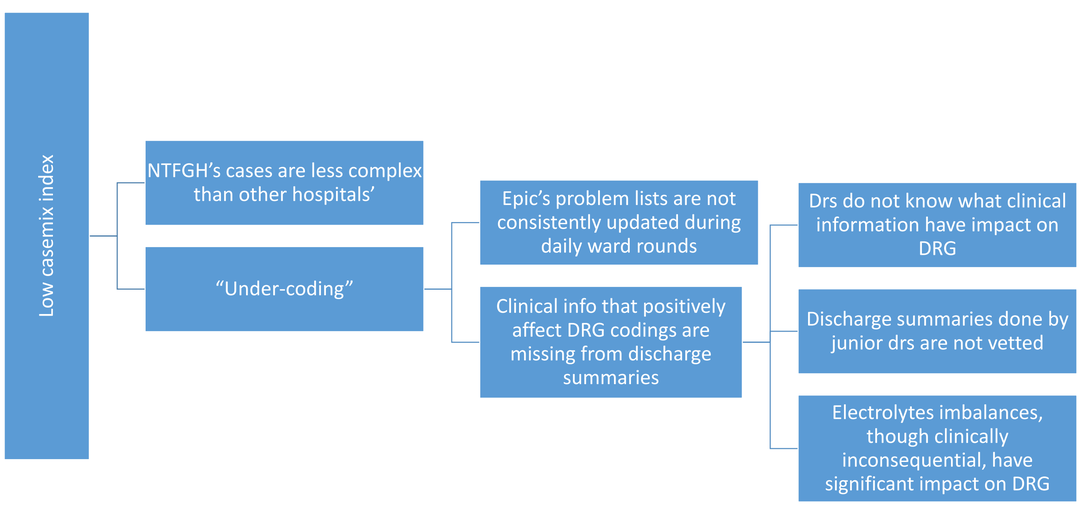
Analyse Problem

Current Process



Root Cause Analysis

We used the "5-Whys" technique to derive at probable root causes



Select Changes

Probable Solutions

- The project team met monthly to review analytical information, and to collectively brainstorm for probable solutions for each root cause.
- Solutions with highest "ease of implementation * impact (double weightage)" scores were chosen for implementation

Root Causes		Potential Solutions	Ease of implementation (1= hard; 3 = easy)	Impact if implemented (2=low; 6=high)	Ease * Impact
Epic's problem list not consistently updated during daily ward rounds	1	Show senior doctors on the importance and proper management of problem list, and assign responsibility of timely update to them	2	6	12
	2	Get Medical Informatics (MI) to update Epic tip sheets and training material	2	2	4
Drs do not know what clinical info has impact on DRG	3	Get doctors to conduct "audits" i.e. reviews past cases with coders to glean learnings; then share learnings with fellow drs	2	6	12
	2	Get Medical Informatics (MI) to update Epic tip sheets and training material	2	2	4
Discharges summaries done by junior drs are not vetted	4	Implement mandatory co-sign of discharge summary if it's done by HOs	1	4	4
Electrolytes imbalances though clinically inconsequential have significant impact on DRG	5	Get doctors to document all electrolytes imbalances	1	6	6
	6	Provide coders with a standing instruction to interpret certain clinical conditions based on the laboratory reference values	3	6	18

Test & Implement Changes

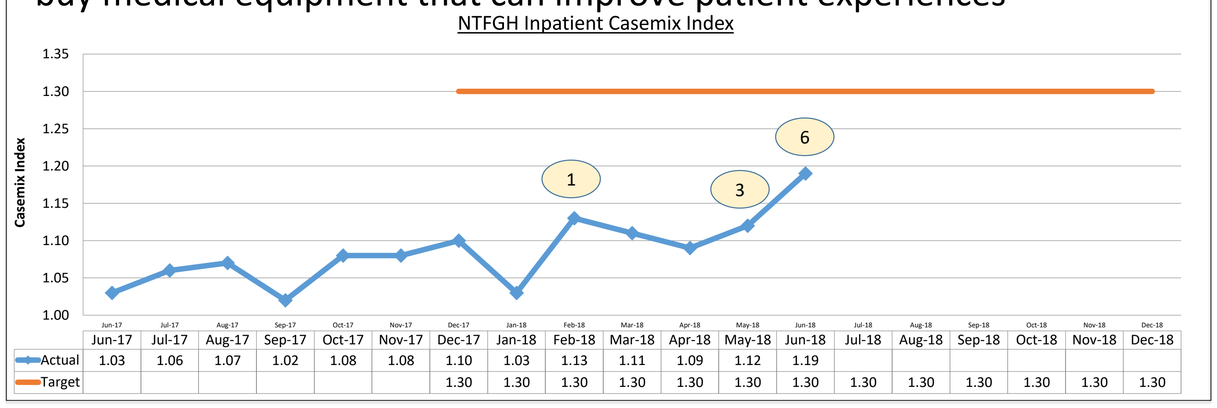
Piloting Changes

- As we hoped to see results quickly, all 3 solutions were worked on concurrently, but by different project members, and piloted in different clinical departments/areas
- Each pilot goes through the "plan-do-check-act" (PDCA) cycle where effectiveness of changes are monitored, and processes were fine-tuned until they work well :
  - Solution 1 : Piloted in Geriatric department of Medicine division
  - Solution 3 : Piloted in General Surgery department
  - Solution 6 : Piloted using 6 laboratory tests (high/low sodium, high/low potassium, acidity/ alkalinity)
- It was only upon the success of each pilot, that we implemented the solutions at/to more clinical departments/areas

Initial Results

At project mid-point, the casemix index has already improved to 1.19. There will be a corresponding increase in subvention (i.e. increase in income), which may mean more budget to start/expand medical services, buy medical equipment that can improve patient experiences

NTFGH Inpatient Casemix Index



Spread Changes, Learning Points

Spread Change

For Solutions 1 & 3, the best practices have been shared with other clinical departments for similar implementation after successful pilots -

- All clinical departments have implemented Solution 1
- 8 clinical departments have begun on Solution 3

For Solution 6, the project team is looking at doing the same for more laboratory results and some radiological results

Learnings

Clear aim, timely performance feedback/measurement, strong leadership from CMB/Clinical HODs, enthusiastic participation from many doctors, good facilitation from administrators, tight teamwork are key contributing factors to success for quality improvement projects with clinical slant.

Ng Teng Fong General Hospital
Jurong Community Hospital
Jurong Medical Centre

Members of the NUHS