

# CLINICAL DOCUMENTATION, CODING & SUBVENTION

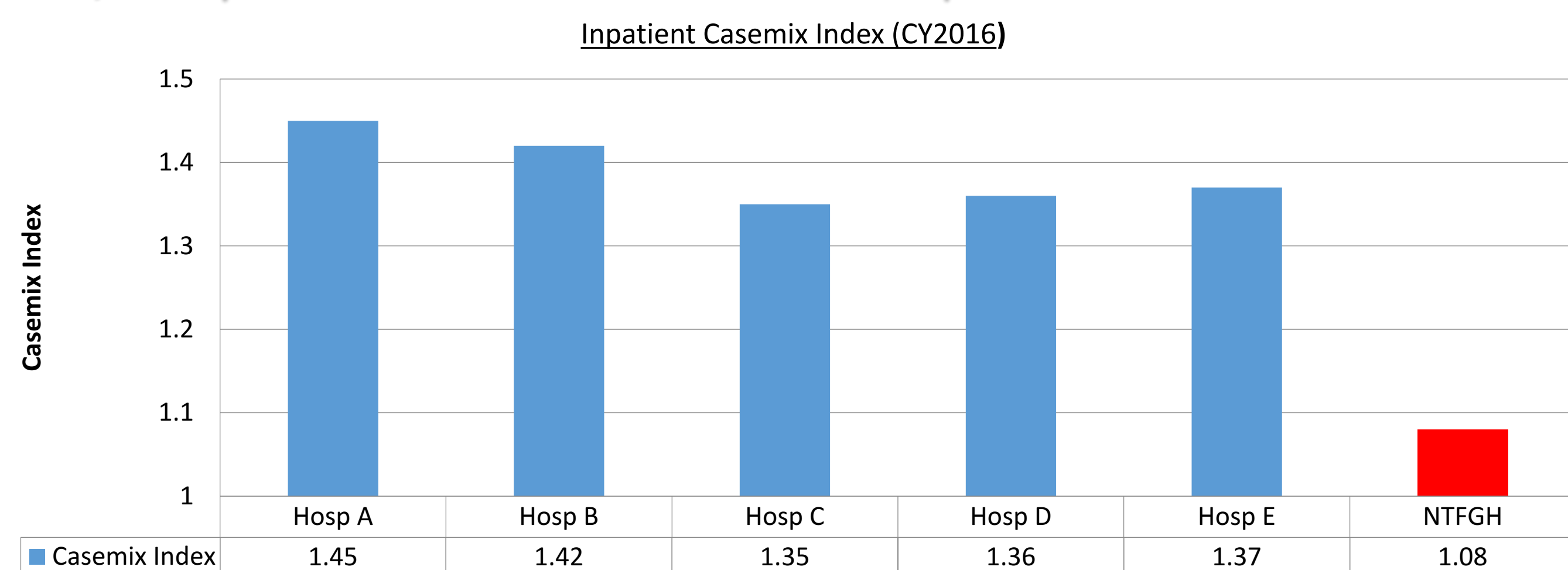
A MULTI-DEPARTMENTAL, MULTI-DISCIPLINARY COLLABORATION BY MEMBERS FROM: CLINICAL OPERATIONS, MEDICINE DIV, GENERAL SURGERY, ORTHOPAEDICS, FINANCE, MEDICAL RECORDS OFFICE, MEDICAL INFORMATICS, EPIDEMIOLOGY, CMB OFFICE

- 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



### 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

## 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

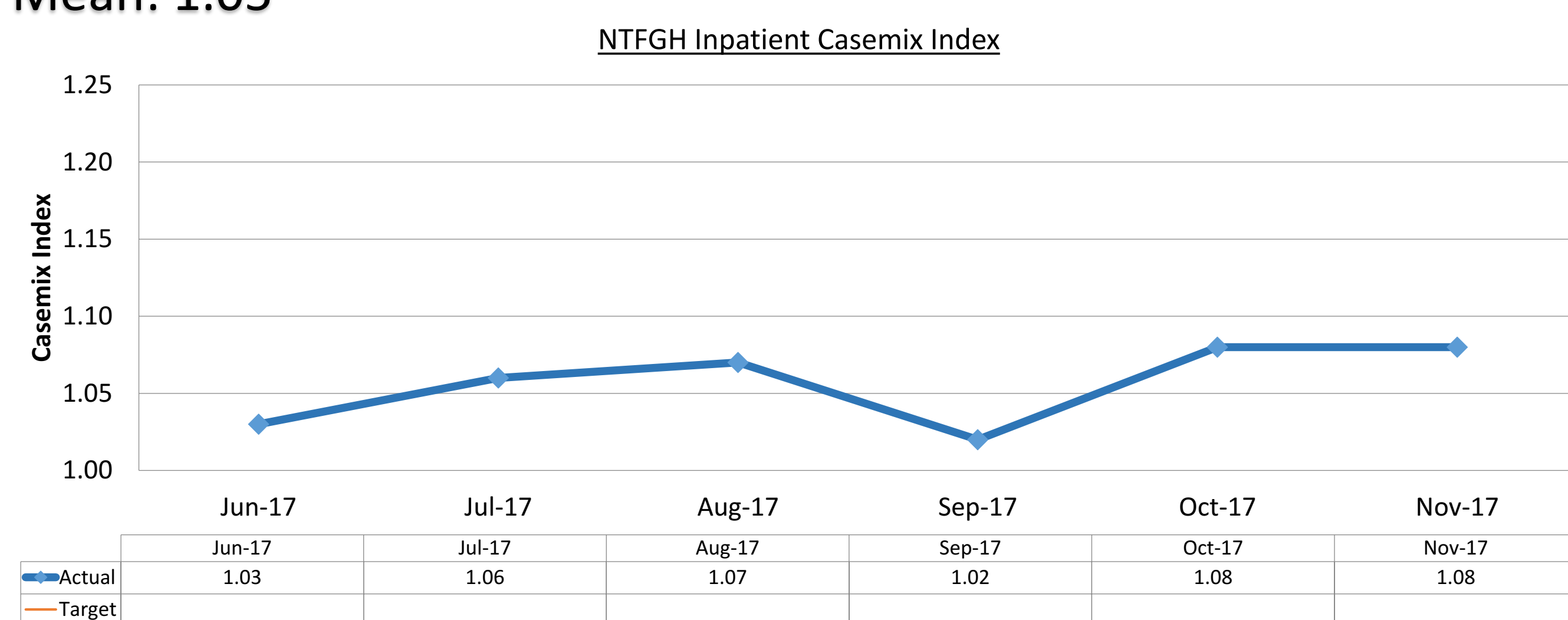
Root Causes	Potential Solutions	Ease of implementation (1=hard; 3=easy)	Impact if implemented (2=low; 6=high)	Ease * Impact
Epic's problem list not consistently updated during daily ward rounds	1 Show senior doctors on the importance and proper management of problem list, and assign responsibility of 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

## Establish Measures

### Baseline Performance

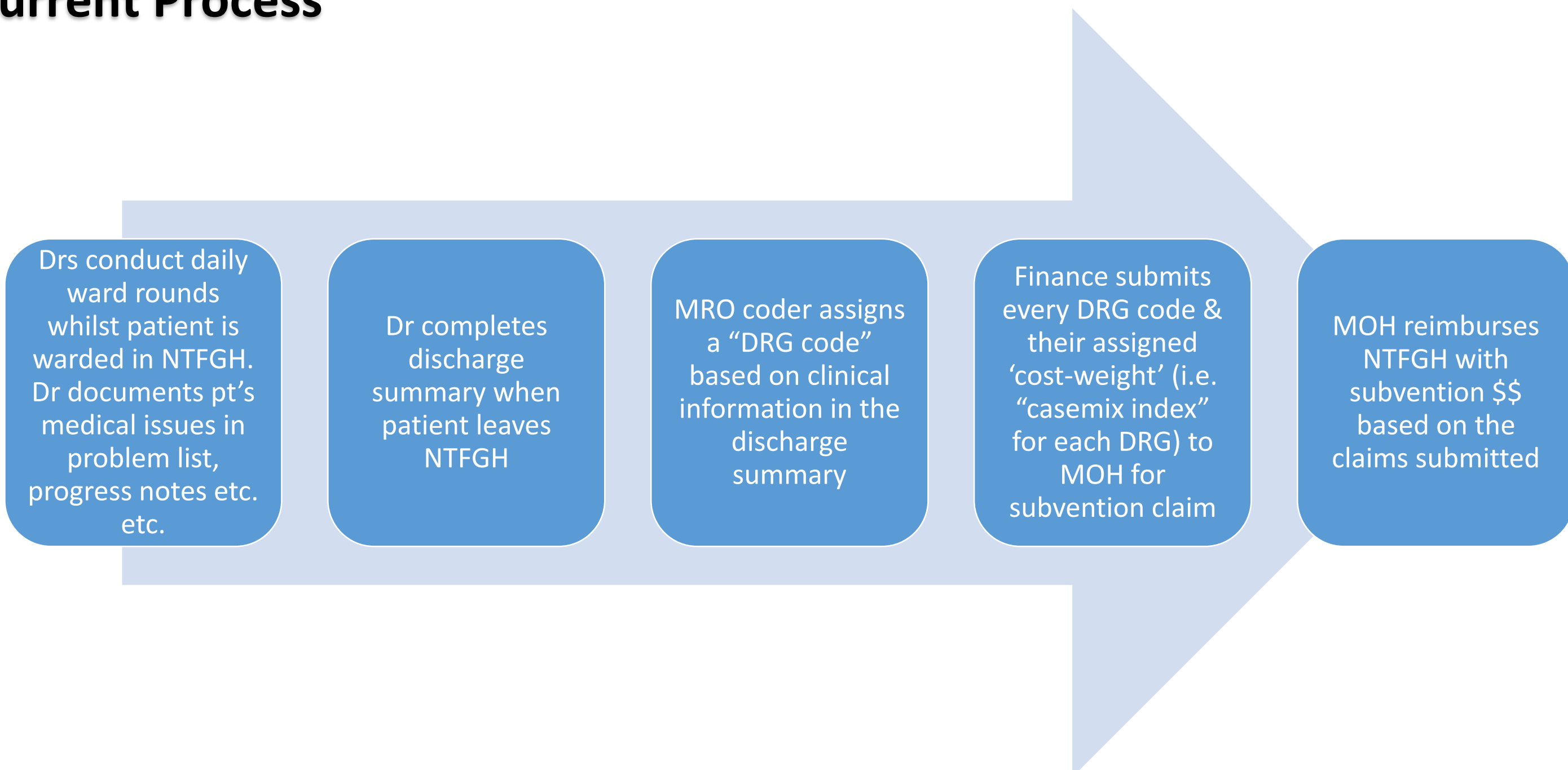
Casemix index for the 6 months before commencement of project:

- Range: 1.02 to 1.08
- Mean: 1.05



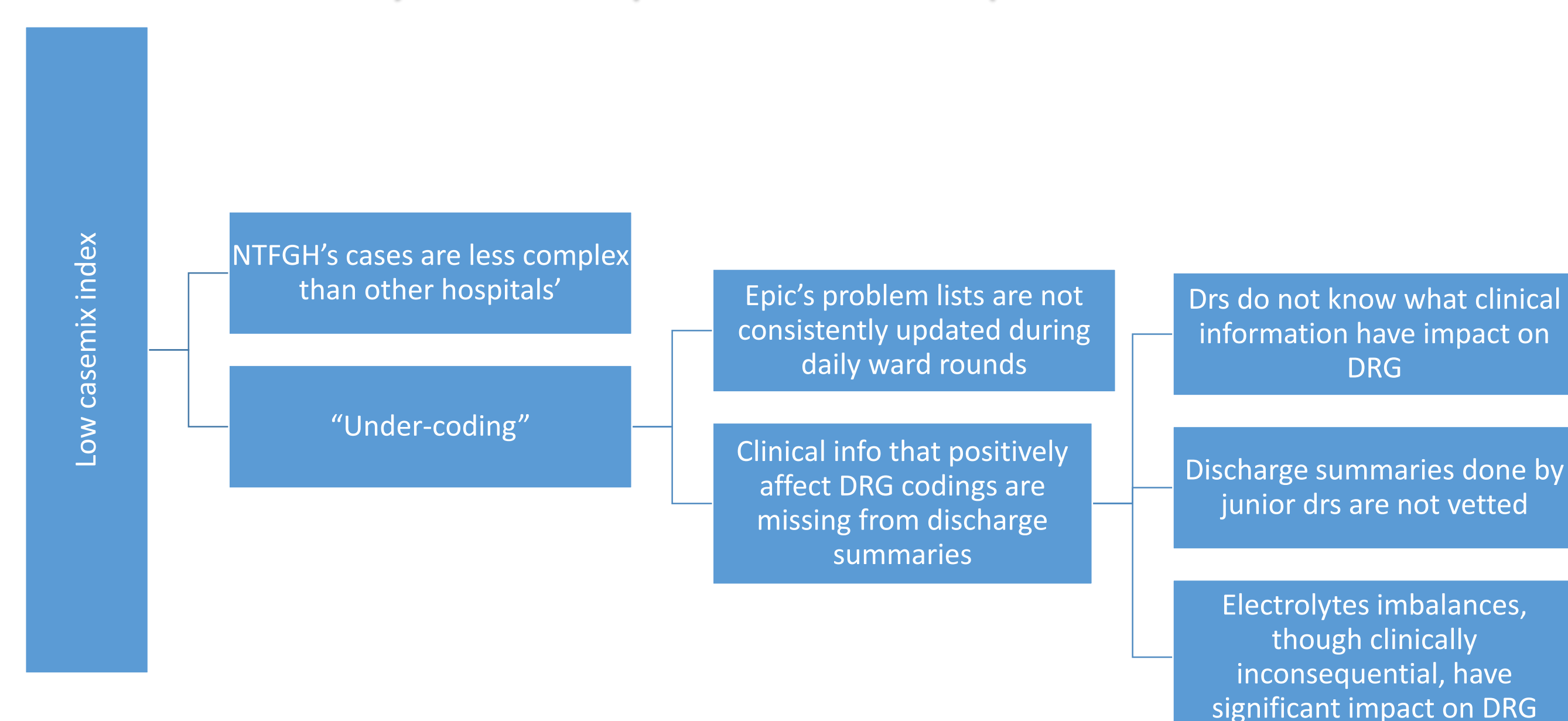
## Analyse Problem

### Current Process



### Root Cause Analysis

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



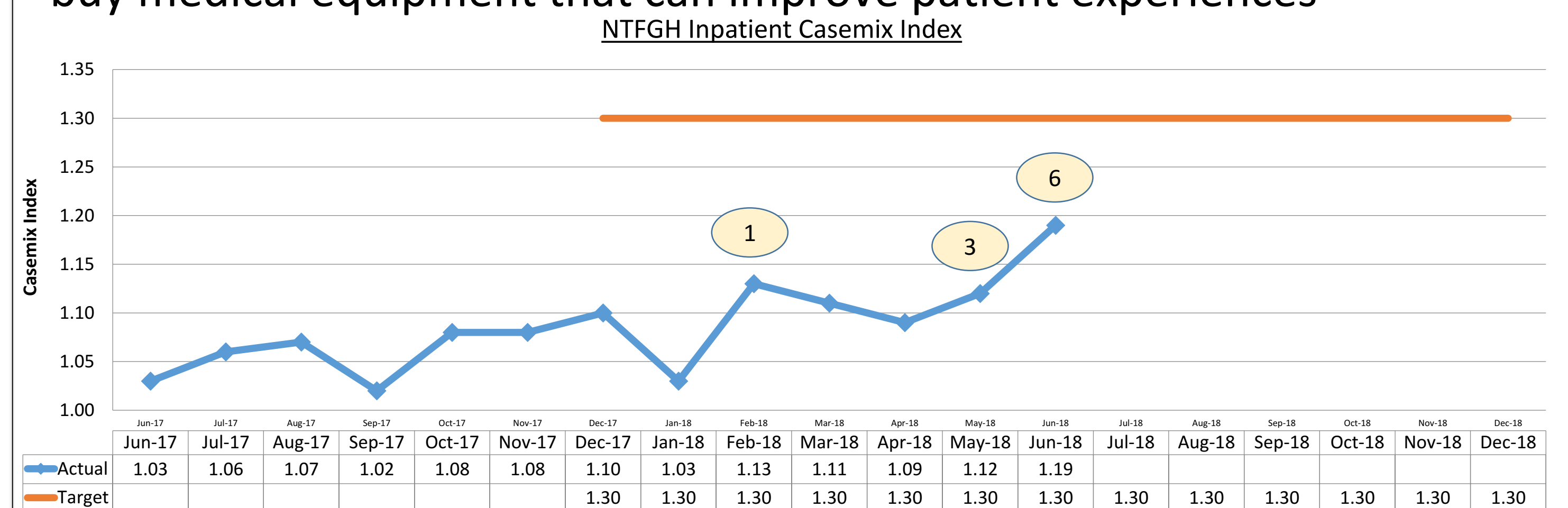
## Test & Implement Changes

### 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



## 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.