

MANAGING LONGSTAYERS AT NTFGH

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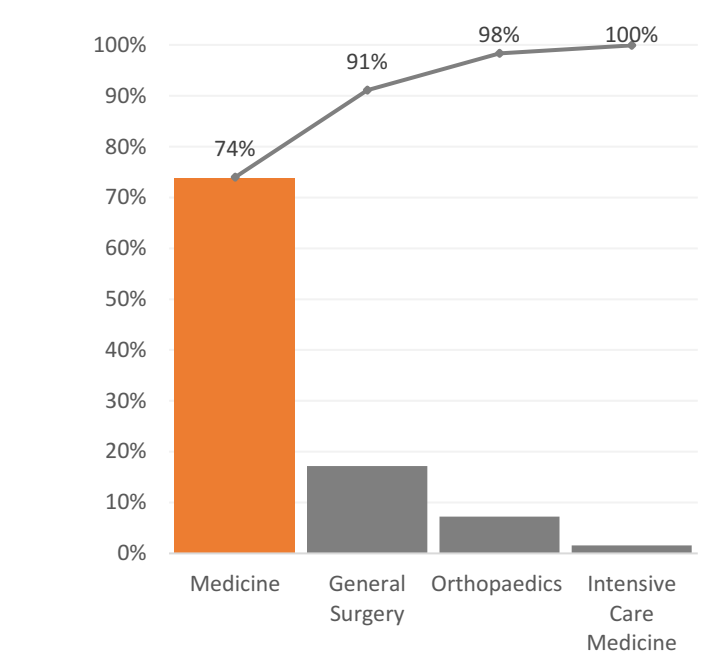
- SAFETY
- QUALITY
- PATIENT EXPERIENCE
- PRODUCTIVITY
- COST

Define Problem & Set Aim

Problem: While only 3% of all inpatients are longstayers (patients with LOS > 21 days), they occupied 1 in 4 (25%) of NTFGH's beds. Majority of the longstayers (74%) were under the care of Medicine Department. (Fig 1)



Fig 1: Pareto chart showing that 74% of the longstayers were under the care of Medicine Dept.



Aim: 30% reduction of total bed-days of longstayers from Medicine by Dec 2022.

Benefits: Reduce unnecessary prolonged hospital stays & improve patient outcomes; Optimise BOR and reduce ALOS for the hospital.

Team: Expertise from all job families (doctors, nurses, allied health, medical informatics and administrators) were brought together to form a longstayer quality improvement project (QIP) team in January 2021.

Establish Measures

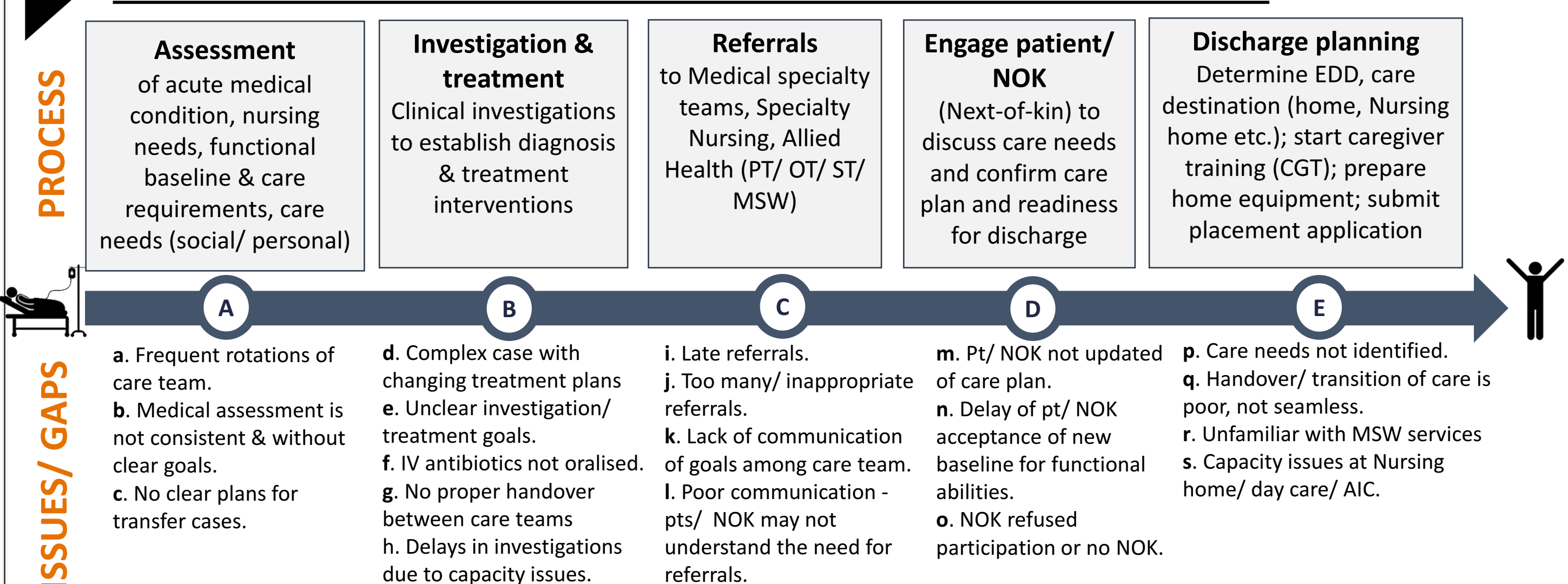
| Type of measure | Measure | Operational definition | Monitoring frequency | Data source | Baseline |
|------------------|--|---|----------------------|---|------------------------|
| Outcome | Total bed-days of discharged Longstayers | Total LOS of discharged Longstayers | Monthly | LOS Epic report | 3,170 bed-days / month |
| Process | Inflight longstayers | No. of currently admitted patients with LOS > 21 days | Weekly | Weekly snapshot data from inflight longstayers list | 60 |
| Balancing | 30 day readmission | No. of Longstayers who were readmitted within 30 days | Quarterly | 30-day readmission Epic report | 12.6% |

Analyse Problem

A rapid improvement event (RIE) was held over 2 half-days. Team members mapped out the current patient journey, identified the issues/ gaps in each process step of the journey and carried out a root cause analysis in order to generate change concepts (i.e. interventions).



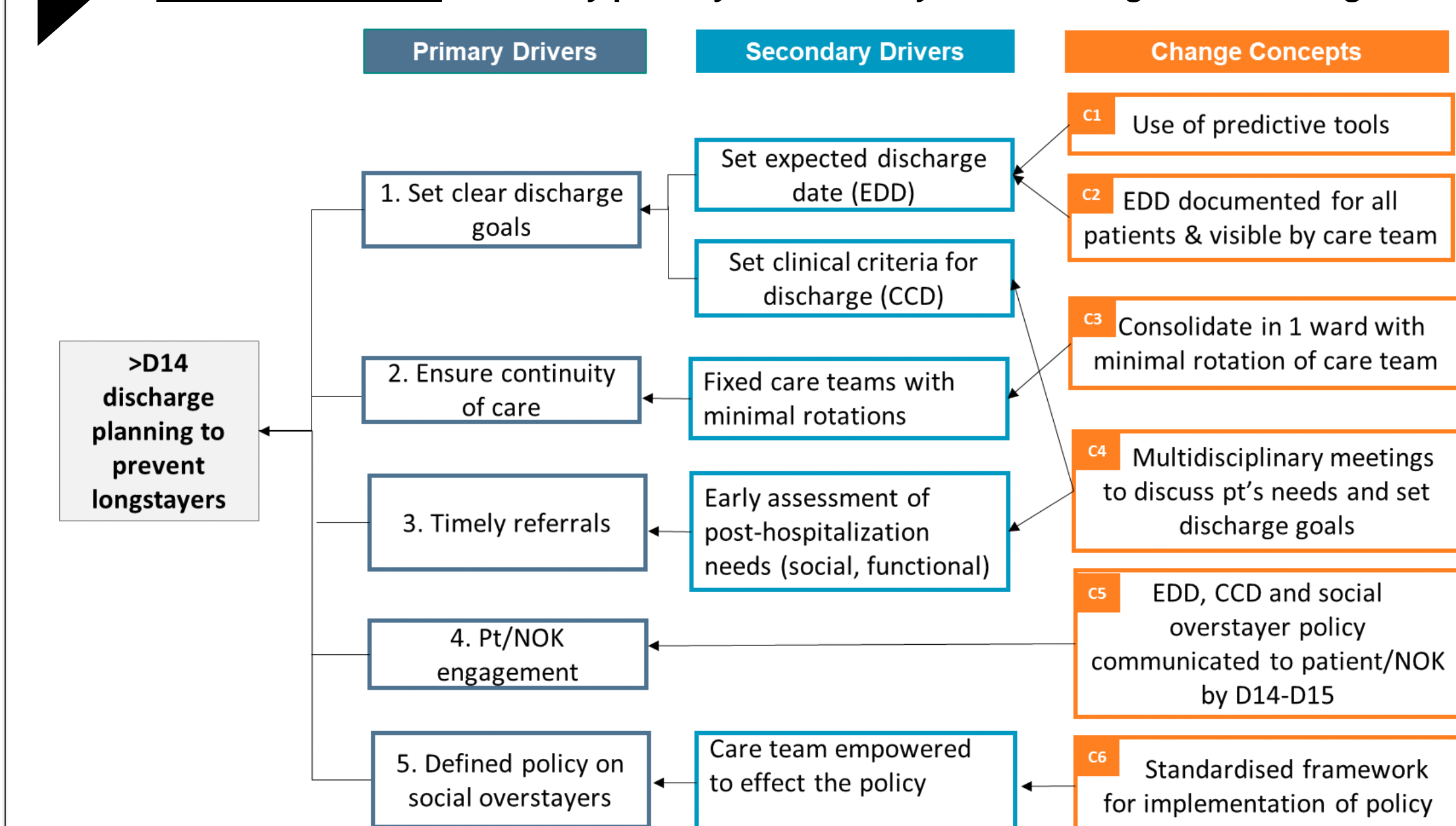
1 LONGSTAYERS PATIENT JOURNEY & IDENTIFICATION OF PROCESS ISSUES/GAPS



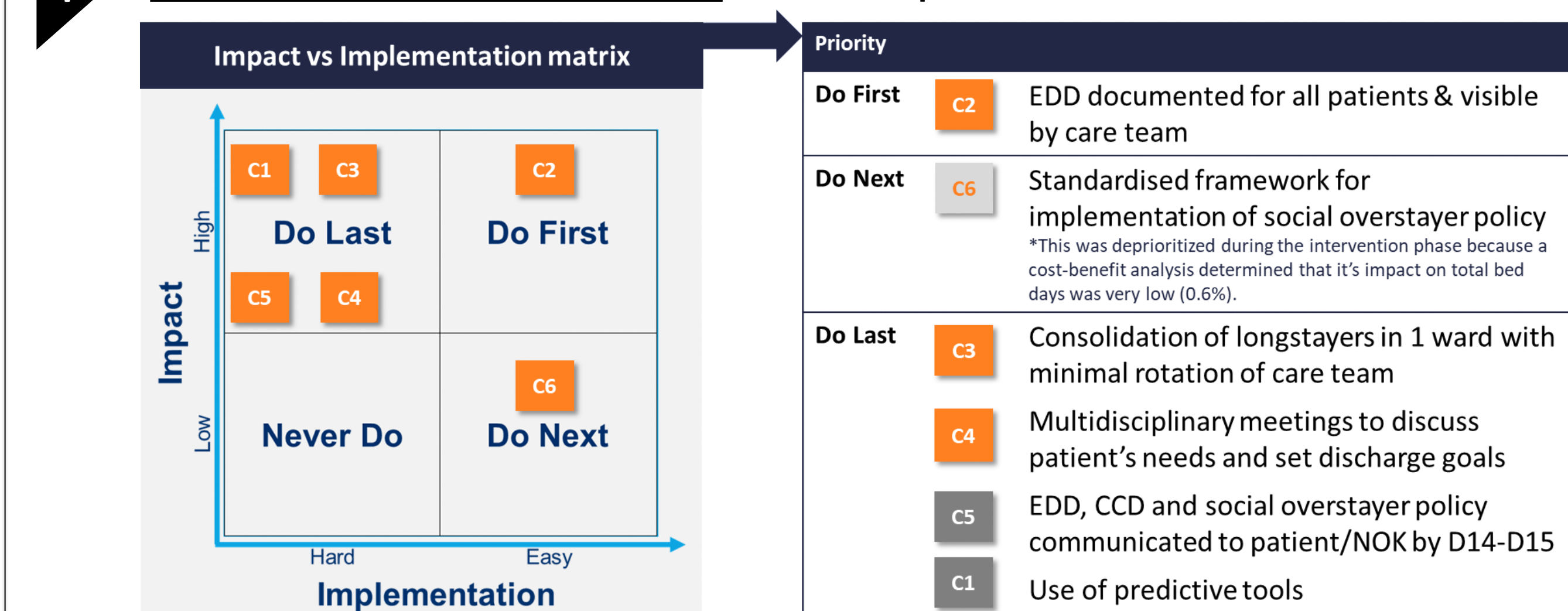
2 ROOT CAUSE ANALYSIS

| Process | Issues/ gaps | Root causes |
|---------|---|---|
| A | b. Medical assessment is not consistent & without clear goals | 1. Discharge goals not set nor communicated clearly among the care team |
| A | c. No clear plans for transfer cases | |
| B | d. Complex case with changing treatment plans | 2. No continuity of care |
| B | e. Unclear investigation & treatment goals | |
| C | k. Lack of communication of goals among care team | 3. Delayed/ inappropriate investigations & referrals |
| C | p. Care needs not identified | |
| E | a. Frequent rotations of care team | 4. Poor patient/ NOK engagement |
| E | g. No proper handover between care teams | |
| B | f. IV antibiotics not oralised | 5. Social overstay policy not enforced |
| E | q. Handover/ transition of care is poor, not seamless | |
| C | i. Late referrals | 6. Lack of resources |
| C | j. Too many/ inappropriate referrals | |
| E | r. Unfamiliar with MSW services | |
| D | m. Pt/ NOK not updated of care plan | |
| D | l. Poor communication - Patients/NOK may not understand the need for referrals or investigations | |
| D | n. Delay of pt/ NOK acceptance of new baseline for functional abilities | |
| D | o. NOK refused participation or no NOK | |
| B | h. Delays in investigations due to capacity issues | |
| E | s. Capacity issues at nursing home/ day care/ AIC | |

3 DRIVER DIAGRAM to identify primary & secondary drivers and generate change concepts (i.e. interventions)



4 IMPACT vs IMPLEMENTATION MATRIX was used to prioritise interventions

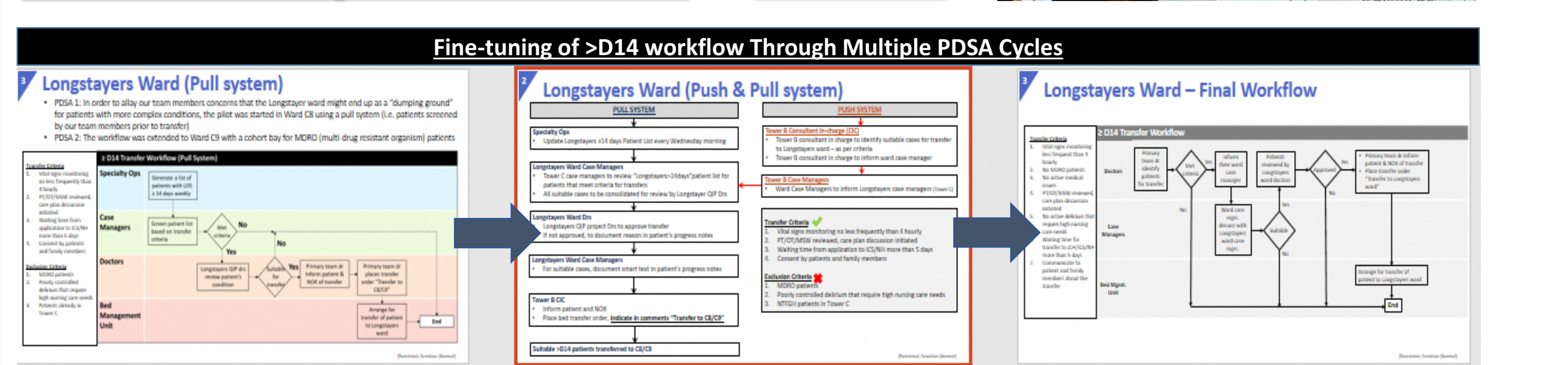
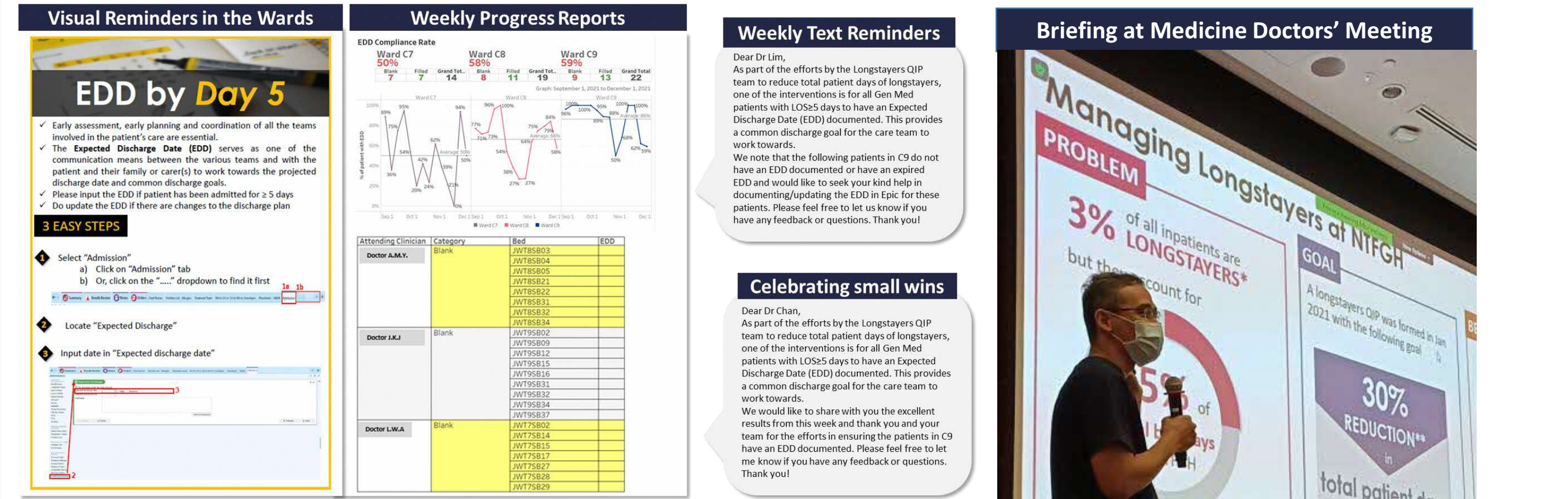


Implement & Spread Changes

PDSA cycles were carried out with progressive scale up of the interventions from a small pilot population to eventually spreading and sustaining the interventions within the target population.

| Intervention | Plan | Do | Study | Act |
|---|---|---|--|---|
| C2 Expected Discharge Date (EDD) | PDSA 1 Start with 3 doctors from project team | <ul style="list-style-type: none"> Issues with care team not being able to see EDD in their patient lists Resolved by working with MI to create a tipsheet that was circulated to the different functional groups | <ul style="list-style-type: none"> Doctors' feedback was that it was easy to document EDD Feedback from the rest of the care team was that EDD is helpful in planning for patient's discharge | <ul style="list-style-type: none"> Scale up pilot from 3 doctors to all doctors on rotation in Ward C7, C8 & C9 |
| | PDSA 2 Implement in pilot wards (C7, C8, C9) for EDD to be documented by Day 5 for all General Medicine (GM) patients | <ul style="list-style-type: none"> Compliance rate was observed to be dependent on reminders by case managers. Difficulty sustaining compliance among the doctors. Visual reminders were placed in the wards Weekly progress reports & reminders sent to CICs Quarterly reminders during Medicine seniors' meeting | <ul style="list-style-type: none"> Average compliance of 70% achieved As a result, total bed days in the pilot wards were reduced compared to other General Medicine wards | <ul style="list-style-type: none"> Seek approval from management to fully roll out EDD intervention Include this as Dept of Medicine doctor's team bonus KPI for FY23 |
| | PDSA 3 Spread to all patients in Medicine Department | <ul style="list-style-type: none"> EDD was included as a team bonus indicator for Medicine Department in FY23 | <ul style="list-style-type: none"> 100% compliance rate was sustained over 3 months. | - |
| C3 Consolidation of >D14 patients | PDSA 1 Consolidate >D14 patients in Ward C8 & C9 using a pull system | <ul style="list-style-type: none"> Each week, a list of >D14 GM patients was reviewed by the C8 & C9 case managers Cases which met the workflow's inclusion criteria were reviewed by the doctors in the Longstayers project team Suitable patients were transferred to C8 or C9 | <ul style="list-style-type: none"> An average of 1-2 patients were being transferred on a weekly basis | <ul style="list-style-type: none"> Expand workflow to include a push system for primary care team in Tower B to refer patients for the workflow |
| | PDSA 2 Expand workflow to include a push system | <ul style="list-style-type: none"> >D14 Push & Pull system Addition of a push system that allowed primary care team to refer patients to be transferred to C8 & C9 | <ul style="list-style-type: none"> There were more patients that were referred via push system compared to the pull system | <ul style="list-style-type: none"> Push system was less resource intensive as case managers did not have to actively screen >D14 case on a weekly basis Push system was higher yielding as more patients were being referred via this workflow In order to ensure sustainability, the consolidation of patients will be via the push system in the long run |
| | PDSA 3 Expand MDM to include >D21 patients in Ward B13 | <ul style="list-style-type: none"> MDM for >D14 patients in C7, C8 & C9 without a discharge plan or who have issues with their discharge plan | <ul style="list-style-type: none"> 7 MDMs held for 28 patients | <ul style="list-style-type: none"> To include all patients >D21 in the weekly MDM discussions so that progress for all patients can be tracked and bottlenecks can be identified early |
| C4 Multi-disciplinary Meetings (MDM) | PDSA 1 Weekly MDM for >D14 GM patients in Ward C7, C8 & C9 without a care plan | <ul style="list-style-type: none"> With the inclusion of all >D21 patients, the number of patients being discussed increased 25 on average each week | <ul style="list-style-type: none"> It was observed that Ward B13 had the highest number of longstayers outside of the pilot wards of C7, C8 and C9 This might have been due to C8 being reverted to a normal ward due to the high BOR situation and all MRSA patients were consolidated in B13 instead | <ul style="list-style-type: none"> Expand MDM to include >D21 patients in B13 |
| | PDSA 2 Weekly MDM for all GM patients >D21 in Ward C7, C8 & C9 | <ul style="list-style-type: none"> Despite covering more patients and more wards, workload for MDM was still manageable. Able to conclude weekly MDM within 1 hour. | <ul style="list-style-type: none"> With the inclusion of B13 patients, Gen Med MRSA patients warned in B13 benefitted from this expansion. | <ul style="list-style-type: none"> MDM was made BAU for >D21 GM patients in C7, C8, C9 and B13 |
| | PDSA 3 Expand MDM to include >D21 patients in Ward B13 | - | - | - |

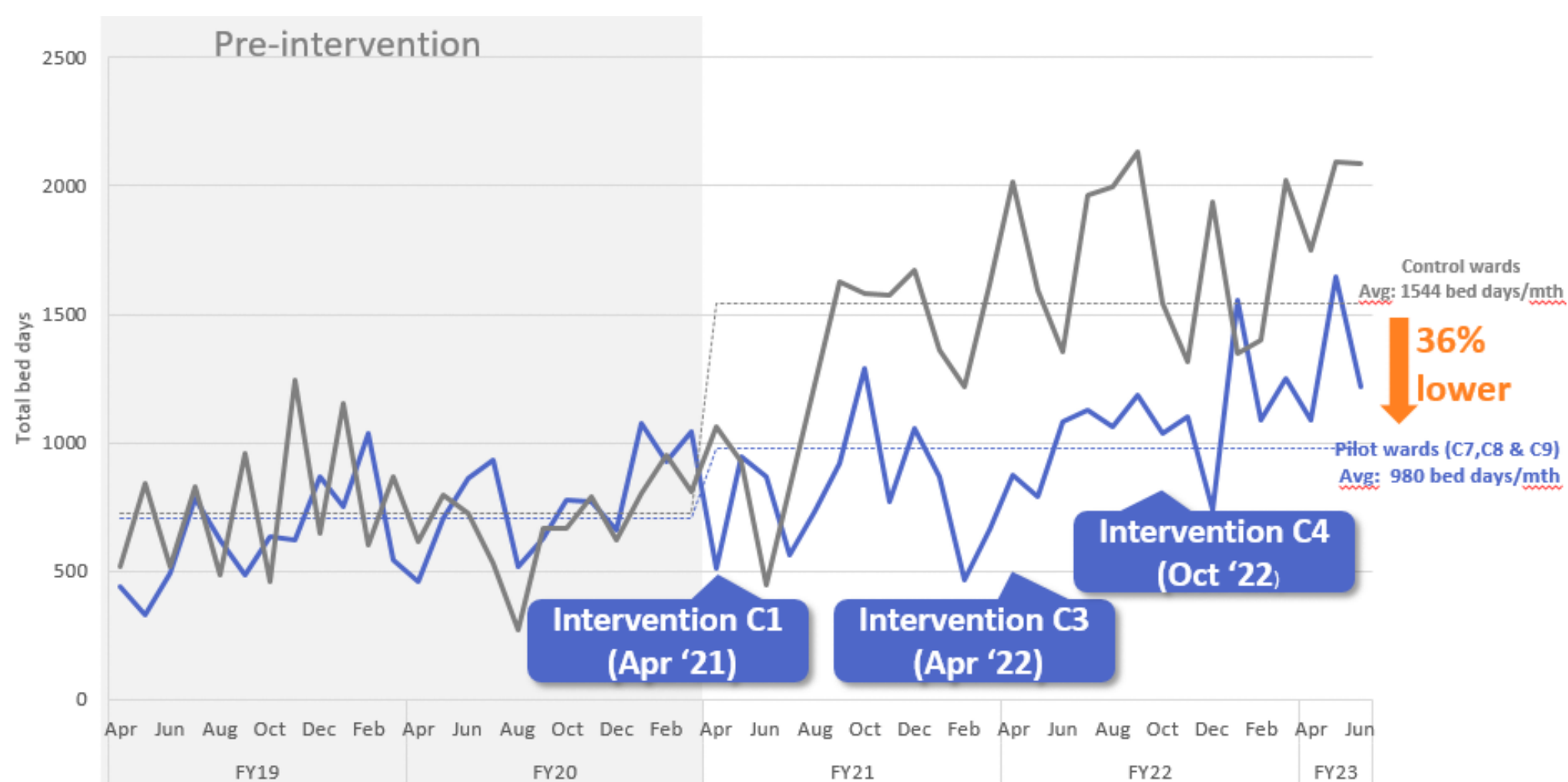
Some examples of actions carried out:



Results

Upon successful implementation of the interventions,

- Total bed-days of patients in C7, C8 & C9 (pilot) wards was **36% lower** compared to all other General Medicine (control) wards.
- 564 bed-days** were saved each month as a result.
- Results continued to be **sustained** in the control phase in FY23.



Learning Points

Starting with the end in mind
The team was mindful to create system level changes (e.g. creation of new workflows and processes) and to mainstream these interventions to ensure long term sustainability, & giving the right care right, first time, every time.

Teamwork makes a dream team
The success of this project can be attributed to having a multi-disciplinary team who believed in the goal of the project. Our team members were open and willing to share their thoughts, and often challenged the status quo which led to better solutions.

